

# SELF STUDY REPORT CYCLE – I

*for submission to the*  
**National Assessment and  
Accreditation Council,  
Bangalore**



**HERITAGE INSTITUTE OF TECHNOLOGY, KOLKATA**

**AN AUTONOMOUS INSTITUTION UNDER MAKAUT (formerly WBUT)  
(A PRIVATE SELF-FINANCED INSTITUTION)**

**(AN INITIATIVE OF KALYAN BHARTI TRUST)**

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# **HERITAGE INSTITUTE OF TECHNOLOGY**

## **SELF STUDY REPORT**

**for submission to  
the National Assessment and Accreditation Council, Bangalore**

### **Institutional Data & Analysis**

**May 2016**



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# **PART - A**

# **EXECUTIVE SUMMARY**

## **EXECUTIVE SUMMARY**

Inspired by the noble cause of education and philanthropic zeal, a group of 22 like minded industrialists of Kolkata established in 1990 the Kalyan Bharti Trust (KBT) a public charitable foundation, primarily to promote and provide higher education in the country and in the state of West Bengal in particular. KBT founded Heritage Institute of Technology, Kolkata (HITK) in 2001 to create a Centre of Excellence in education in Eastern India. The objective is to be a leader in technical education in the country and to be at par with the best institutes in the world. Since inception HITK has attracted the best possible faculty and has created one of the finest infrastructures available in West Bengal. All its eligible B.Tech. programs were accredited by NBA in 2013 (CSE for 5 years and others for 2 years). It has been granted autonomous status by UGC for a period of 6 years with effect from the Academic Year 2014-2015. It is also recognized U/s 2(f) of the UGC Act. A harmonious integration of the value traditions and modern outlook is the guiding principle behind the development of the academic environment that constitutes the basic philosophy of the Institute.

The Institute located in lush green surroundings offers 3 programmes

(i) B.Tech. programme in Applied Electronics & Instrumentation Engineering, Biotechnology, Chemical Engineering, Civil Engineering, Computer Science & Engineering, Electronics & Communication Engineering, Electrical Engineering, Mechanical Engineering, Information Technology disciplines

(ii) M.Tech. programme in Applied Electronics & Instrumentation Engineering, Biotechnology, Computer Science & Engineering, Electronics & Communication Engineering, Electronics & Communication Engineering – VLSI disciplines. The Instituted has recently received approval from AICTE for a new M.Tech. programme in Renewable Energy from the Academic Year 2016-2017

and

(iii) Master in Computer Applications programme.

Heritage Institute of Technology was selected as one out of 25 self-financed institutes initially selected for grant of Technical Education Quality Improvement Programme (TEQIP) Phase – II under Sub-component 1.1 funded by World Bank and monitored by MHRD, Govt. of India and received Rs. 5.00 crore project grant. A further grant of Rs. 1.00 crore is in the pipeline.

As per Careers 360 Outlook group technological colleges ranking in West Bengal April 2015 the Institute is graded as AAA+.

In its silent pursuit to be recognized as a point of reference, a catalyst, a facilitator, an engine for growth and to establish itself as a leader both national and international levels in technical education, HITK has prepared its Self Study Report as the first step towards National Accreditation and Assessment Council (NAAC) accreditation, which lays emphasis on Institutional developments with reference to quality initiative, quality sustenance and quality enhancement



**Criterion – I : Curricular Aspects**

After obtaining the autonomous status in 2014, the curricular structure and syllabus for B.Tech. and M.Tech. programmes for all disciplines have been reframed. All students joining in the first year classes of B.Tech. and M.Tech. programmes of HITK in 2014 and afterwards are following the new autonomous college syllabus. Students who joined HITK prior to 2014 as well as MCA students currently studying in the MAKAUT syllabus. Although the affiliating University, based on UGC recommendations granted autonomous status to B.Tech. and M.Tech. programmes of the Institute w.e.f. Academic Year 2014-2015, the autonomous status for MCA programme has been granted w.e.f. Academic Year 2016-2017.

The new autonomy syllabus have been framed for B.Tech. programme in 9 (nine) disciplines and M.Tech. programme in 6 (six) disciplines keeping in view the Institute's Mission, Vision and Programme Educational Objectives (PEOs) and Programme Outcomes (POs) in mind. All major stake holders (alumni, parents, faculty, employees) and experts are consulted during the process of framing of the syllabus in a dynamic, democratic and continuous process. Workshops are held with experts from academic institutions and industry and faculty members for preparing the draft syllabus. The same is placed before the Boards of Studies and recommended for approval by the Academic Council.

Different new programmes have been introduced in the last four years in both B.Tech and M.Tech level. To develop the skills of the students to gain success in the present day competitive world, many compulsory skill development courses are introduced in the curriculum like. Verbal Ability, Reasoning & Logic, Data Interpretation, Industry Oriented Mini-project, Advanced English Communication and Soft Skills Lab and Theory classes and Comprehensive Viva-Voce at the end of four years. A compulsory subject "Indian Culture and Heritage" have been introduced at the B.Tech. level. Intensive soft skill and technical / aptitude training is conducted prior to start up of campus season. Feedback is obtained from the students during the semester for every course. There is an online feedback system which is conducted centrally by the HR Department. Feedback forms are filled by the outgoing students of B. Tech and M. Tech as well as alumni to improve the current practices with reference to the curriculum, performance of teachers, teaching-learning process, curriculum, syllabus and infrastructure of the college in a structured format comprising of a standard questionnaire. Feedback is also obtained through personal interaction of the final-year students with Student Counsellors and Mentors. The suggestions / comments from the faculty members, alumni and industry experts and the feedback of the students are considered while framing the syllabus during the Departmental BOS. The syllabus is proposed to be revised every two to three years.

**Criterion – II : Teaching Learning and Evaluation**

The Institute strictly adheres to the norms laid down by different central authorities regarding admission of students to different courses . The students newly admitted undergo an orientation schedule which gives them a holistic view of their respective courses and also the institute. Various measures are taken to ensure a student centric learning, like teaching through power point presentations besides conventional teaching methods using chalk and board. Resources from the internet like video lectures efficiently enhance the teaching – learning mechanism. Remedial

classes are arranged for strengthening the knowledge and skill of weak students. The institute possesses a well equipped library which boasts of an excellent collection of textbooks and reference books and national & international journals of repute. The departments organize national and international seminars and workshops at regular intervals which increases the exposure of the students.

The Controller of Examinations section ensures that there is transparent examination system. The institute follows a continuous evaluation procedure with two internal tests followed by the end semester examination. Moderation of the question papers for the end semester examinations are done by external experts.

The Human Resource department of the institute looks after the recruitment of faculty members, technical assistants and non-teaching staff. Here again, the institute stick to relevant policies for the same. Recruitments are done by Selection Committees with external experts. A new faculty member has to mandatorily undergo an induction programme to know about the institute and their respective job responsibilities. A centralised faculty feedback system is at place to monitor the performance of faculty members. Faculty members are encouraged through awards. The institute also organizes faculty development programmes at regular intervals for the development of the faculty members.

### **Criterion – III : Research, Consultancy and Extension**

The institution has a research committee which constantly monitors and addresses the issues of research and research projects of the Institute. Researchers and Eminent scientists from different universities are invited to the Institute frequently to interact with faculty members and students on the latest state-of-the art of research.

Provision is made in the Institute budget and also in TEQIP budget for research, organize seminar/conferences, workshops, purchase new software and library books. Besides meeting expenditure for participation of faculty members in National and International Conferences/Seminars in the form of registration fees, travel expenses, research paper publication is also made from the budget. A major part of the expenditure on the above head has recently been made from TEQIP-II budget.

Financial provisions are also made in the Institute budget for supporting students for UG project work and research projects by providing registration fees, travel allowances per student for their paper publication in journal / conferences. There is a provision in the institution for providing seed money to the faculty for research. Faculties are encouraged to apply to AICTE, DST, UGC, other Government Departments, and other organizations for research funding. The Institute itself have the resources to provide seed money. TEQIP-II project is actively considering grant of seed money to faculty members for innovative projects.

In part of Institute social responsibility our Institute comes forward by involving their faculty and students for Rotaract Club activities.

There are many activities are carried out by the team of “Rotaract Club” that not only developed their capacity of taking responsibility they also can learn the values of life.

An added advantage is that our college has “Memorandum of Understanding” nationally and internationally with other institutions and agencies. The MOUs have



contributed in enhancing quality teaching-learning research and development activities of the college

#### **Criterion – IV : Infrastructure and Learning Resources**

The Institute is located on 22,742 sq.m. land on a lush green campus with huge physical infrastructure to accommodate all departments properly. The major part of the Institute consists of 126 highly equipped laboratories, 62 class rooms and 26 tutorial rooms along with boys' and girls' hostel separately. The Institute owns a huge library on 1858 sqm. area with total seating capacity 250. The library has a rich collection of 45804 books, 172 print journals, 3500 CD/DVDs, 642 electronic (ebooks, eJournals) and also lecture videos from NPTEL. All the computers at the campus are connected with Gigabit LAN where every student can access a dedicated computer to do their project and laboratory assignments. In the Institute, every faculty is provided with a dedicated computer. Institute owns many softwares and every building at the campus are having WiFi facility. All the facilities are maintained regularly. The total no. of 1627 computers with internet facility, LAN and Wi-Fi facility. It has a good collection of various softwares.

#### **Criterion V : Student Support and Progression**

HIT-K was set up with a view to create a Centre of Excellence in technical education in Eastern India. Since inception, HIT-K has been fortunate to attract the best possible faculty and has created one of the finest infrastructure available in West Bengal.

Academic results has improved considerably in last 5 years. The 'Pass Percentage' touched almost 100% among students in the last year. Most of the students got selected in Campus Interviews but many of them opt for higher studies. Almost 60% of students who appeared for different competitive examinations last year were successful. The institute provides comprehensive coaching classes for different aspects which serve the future needs of various competitive examinations. The support system at H.I.T.K College offers various avenues for wholesome development of the learner's professional, emotional and physical wellbeing and success. English Communication Labs are provided to improve students' communication skills, presentation skills, and verbal skills etc., as compulsory courses. Infosys "CAMPUS-CONNECT" training is provided to every student by subject experts from Infosys to improve their computer literacy. The college also make certain unique and well intended efforts to motivate each of the students to involve in sports and cultural activities. We have a Career Counseling and Placement cell to help students aspire for their careers. Percentage of students placed have increased during the last 5 years.

The institute signed a MOU with New Jersey Institute of Technology (NJIT) for a student exchange program. Under this program a total of 95 students of 2<sup>nd</sup> and 3<sup>rd</sup> year B.Tech. classes have been benefited during the period 2008 to 2015 and the program has shown tremendous success.

Moreover, the institute has a MOU with Ruby General Hospital for emergency medical assistance both for students and staff.

The institute offers tuition fees waiver/ free ships for financially backward meritorious students. Number of students receiving 100% scholarships have increased from 2012 to 2016 and have reached 115 in 2016. Moreover, many UG and PG students received financial assistance from the state government. Financial Assistance is also provided to the students who participate in various competitions/conferences in India and abroad.

There is an elected Students' Council constituted with sub-committees like Cultural, Academic, Magazine, Games and Sports & various Clubs to encourage and organize various co-curricular activities.

The college has a strong alumni association. All the outgoing students automatically become members of the association. The alumni are members of the BOS, and contribute their expertise in designing of course curriculum. They also provide feedback to the college overall development. H.I.T.K college has a Grievance Redressal Cell (GRC) exclusively for students (both boys and girls separately). The college has the anti-ragging committee and woman's cell as per Govt. norms.

Every year the college collects feedback from students of outgoing batch and current student on various issues relating to academic and infrastructural development etc. The prospectus cum handbook of the college is updated annually which consists of various details regarding functions of the college and course requirements.

#### **Criterion VI : Governance, Leadership and Management**

The organization has a strong governing body that explicitly adheres to the vision and mission of the Institute, thereby fostering continuous growth, development and excellence amongst one and all.

The Institute has an efficient and participative managerial body with defined functional areas and they review and assess the functions and responsibilities by conducting meetings with all its stakeholders at stipulated intervals.

The Institute has various statutory committees where decision for handling several academic and administrative issues is taken by the Board of Governors, Advisory Council, Academic Council, Boards of Studies and other statutory and non-statutory bodies. The meetings of the Board of Governors, Academic Council, Boards of Studies are held regularly.

The College has evolved various effective knowledge development strategies among students for national development, fostering global competencies, enhancing entrepreneurial and professional skills and promoting use of technology with a quest for excellence. The College also promotes value orientations and traditions and prepares dynamic and caring citizens to meet the challenges of global society.

The Institute has a formal policy to ensure and maintain quality through **Internal Quality Assurance Cell**. The Institute gives importance to feedback obtained from parents, students and alumni.



The College has an Anti-Ragging Committee and Anti-Ragging Squad as per Supreme Court recommendations along with Grievance Redressal Committee and Internal Complaints Committee for the Sexual Harassment of Women at Workplace.

The Institute fulfills various societal requirements by conducting campaigns and programs through its Rotaract Club, Social Awareness & Community Service Club.

The Institute ensures complete transparency in budgeting, and expenditure. The monthly expenditure and budget utilization reviews and finalization of external audited balance sheet are done regularly.

Thus the Institute continuously enhances its quality to reach its vision and mission.

### **Criterion VII: Innovations and Best Practices**

Heritage Institute of Technology has been extremely attentive towards putting into action innovative and best practices that continue to uplift the performance, credibility, and go a long way in establishing the goodwill of the institute.

From displaying a strong environmental consciousness, evident through ecological activities pursued within campus premises, to adopting measures with a view to enhance the teaching learning environment, the college is making every sincere effort to do justice to its autonomous status acquired in 2014. With the freedom to design the curriculum, the degree awarding departments have made the most of this opportunity by incorporating courses aimed at enhancing not only domain knowledge and skills of the students but also aimed at ensuring their holistic grooming. The Communicative English classes in the 2year and Personality Development classes in the 3year course structure are testimony of our efforts to groom the students in a holistic manner.

The new examination system under autonomy has proved to be highly effective in ensuring holding examinations in time and declaration of results in time. Further to this, TEQIP - envisaged for transformation of the Technical Education System with the World Bank Assistance – has highly benefitted faculty of the institute and motivated them in their pursuance of research activities.

The institute has confidence in taking its responsibility to provide an atmosphere of positivity and growth to all its stakeholders.

# **PART - B**

## **PROFILE OF THE INSTITUTION**

## **PROFILE OF THE INSTITUTION**

### **1. Name and Address of the Institution:**

<b>Name</b>	:	<b>HERITAGE INSTITUTE OF TECHNOLOGY, KOLKATA</b>
<b>Address</b>	:	994 Madurdaha, Chowbaga Road, Anandapur, P.O. East Kolkata Township, Pin-700 107
<b>City</b>	:	Kolkata <b>State</b> : West Bengal
<b>Website:</b>	:	<a href="http://www.heritageit.edu">www.heritageit.edu</a>

### **2. For communication:**

<b>Designation</b>	<b>Name</b>	<b>Telephone with STD Code</b>	<b>Mobile</b>	<b>Fax</b>	<b>Email</b>
Principal	Prof. (Dr.) Pranay Chaudhuri	O: (033)2443-0454/56/57 R: (033) 6450-1121	9830014571	(033)2443-0454	<a href="mailto:principal@heritageit.edu">principal@heritageit.edu</a>
Vice Principal					
Steering Committee Coordinator	Prof.(Dr.) S.Biswas	O: (033)2443-0454/56/57 R: (033) 2426-4725	9231509082	(033)2443-0454	<a href="mailto:dydirector@heritageit.edu">dydirector@heritageit.edu</a>

### **3. Status of the Autonomous College**

- i. Government ☐
- ii. Private ☒
- iii. Constituent College of University ☐

### **4. Name of University to which the College is Affiliated**

MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WEST BENGAL  
(Formerly known as West Bengal University of Technology)

[Enclosure B1 & B1A]

### **5. a. Date of Establishment, prior to the grant of 'Autonomy': (28/06/2001)**

AICTE Letter: Enclosure B2

### **b. Date of grant of 'Autonomy' to the college by UGC: (19/06/2014)**

[ i) UGC Letter: Enclosure B3 ii) MAKAUT Letter Enclosure B4 for Autonomy attached

iii) MAKAUT Letter Enclosure B4/1 for Autonomy attached

### **6. Type of Institution**

#### **a. By Gender**

- i. For men ☐
- ii. For Women ☐
- iii. Co-education ☒

#### **b. By Shift**

- i. Regular ☒
- ii. Day ☐
- iii. Evening ☐

#### **c. Source of funding**

- i. Government ☐
- ii. Grant-in-aid ☐
- iii. Self-financing ☒
- iv. Any other (Please specify) ☐



**7. It is recognized minority Institution?**

Yes

☐

No

☒

If you specify the minority status (Religious / linguistic/ any other) and provide documentary evidence. N/A

**8. a. Details of UGC recognition:**

Under Section	Date, Month & Year (dd-mm-yyyy)	Remarks (if any)
i. 2 (f)	21-01-2010	Order no. F.No 8-349/2006(CPP-I)
ii. 12 (B)		

(Enclose the Certificate of recognition / approval): Certificate attached [Enclosure B5]

**b. Details of recognition / approval by statutory / regulatory bodies other than UGC ( AICTE, NCTE, MCI, DCI, PCI, RCI etc.)**

Under Section	Day, Month and Year (dd-mm-yyyy)	Validity	Programme / Institution	Remarks
F.No. Eastern/1-2811681310/2016/EOA	25-04-2016	One Year	Institution	Yearly approval / sanction by AICTE, New Delhi
F.No. Eastern/1-2811764541/2016/EOA	05-04-2016			

(Enclose the Certificate of recognition / approval): Certificate attached [Enclosure B6 & B6A]

**9. Has the College been recognized**

a. By UGC as a 'College with Potential for Excellence' (CPE)?

Yes

☐

No

☒

N.A.

If yes, date of recognition: .....(dd/mm/yyyy)

N.A.

b. For its contribution / performance by any governmental agency?

Yes

☐

No

☒

If yes, Name of the agency: .....and

Date of recognition: .....(dd/mm/yyyy)

N.A.

N.A.

**10. Location of the campus and area:**

Location\*

Urban

Campus area in sq.mts. or acres

5 acres (sq.mts.)

Built up area in sq.mts.

40327 sq.mts

(\* Urban, Semi-urban, Rural, Tribal, Hilly Area, Any others specify)

**11. Does the College have the following facilities on the campus (tick the available facility)? In case the College has an arrangement with other agencies in using such facilities provide information on the facilities covered under the agreement.**

• Auditorium / seminar complex: | ☒

• Sports facilities

i. Play ground

☒

- |                   |    |
|-------------------|----|
| ii. Swimming pool | No |
| iii. Gymnasium    | ✓  |

• **Hostel**

- |                    |   |
|--------------------|---|
| i. Boys' hotels    | ✓ |
| ii. Girls' hostels | ✓ |

• **Residential facilities**

- |                            |    |
|----------------------------|----|
| i. for teaching staff      | No |
| ii. for non teaching staff | No |

- **Canteen:** Yes: Canteen area of 550 sqm with seating capacity of 250.

• **Health centre**

- |                            |    |
|----------------------------|----|
| i. First aid facility      | ✓  |
| ii. Impatient facility     | No |
| iii. Outpatient facility   | ✓  |
| iv. Ambulance facility     | No |
| v. Emergency care facility | ✓  |

*Health centre staff:-*

- |                     |            |
|---------------------|------------|
| i. Qualified Doctor | Part- time |
| ii. Qualified Nurse | No         |

• **Other facilities**

- |                  |    |
|------------------|----|
| i. Bank          | ✓  |
| ii. ATM          | ✓  |
| iii. Post Office | No |
| iv. Book shops   | ✓  |

• **Transport facilities**

- |                 |   |
|-----------------|---|
| i. for students | ✓ |
| ii. for staff   | ✓ |

- **Power house:**

✓
---

- **Waste management facility:**

✓
---

**12. Details of programmes offered by the Institution for the academic year 2015-16.**

Sl.No.	Programme Level	Name of the Programme / Course	Duration	Entry Qualification	Medium of Instruction	Sanctioned / Approved Student Intake	No. of students admitted
1.	UG (B.Tech)	Applied Electronics & Communication Engineering	4 years	a) 10+2 & rank in WBJEE / JEE (Main) b) Diploma / B.Sc & Jelet	English	a) 60 + 3 (5% TFW*) b) 12 in Second year (Lateral entry)	63

Sl.No.	Programme Level	Name of the Programme / Course	Duration	Entry Qualification	Medium of Instruction	Sanctioned / Approved Student Intake	No. of students admitted
2.		Biotechnology	4 years		English	a) 60 + 3 (5% TFW) b) 12 in Second year (Lateral entry)	60
3.		Civil Engineering	4 years		English	a) 120 + 6 (5% TFW) b) 24 in Second year (Lateral entry)	126
4.		Chemical Engineering	4 years		English	a) 60 + 3 (5% TFW) b) 12 in Second year (Lateral entry)	62
5.		Computer Science & Engineering	4 years		English	a) 180 + 9 (5% TFW) b) 36 in Second year (Lateral entry)	186
6.		Electronics & Communication Engineering	4 years		English	a) 180 + 9 (5% TFW) b) 36 in Second year (Lateral entry)	188
7.		Electrical Engineering	4 years		English	a) 60 + 3 (5% TFW) b) 12 in Second year (Lateral entry)	63
8.		Information Technology	4 years		English	a) 60 + 3 (5% TFW) b) 12 in Second year (Lateral entry)	63
9.		Mechanical Engineering	4 years		English	120 + 6 (5% TFW) b) 24 in Second year (Lateral entry)	126
Total						945 + (180 Lateral in Second year)	937
*TFW stands for Tution Fee Waiver							
1.	PG (M.Tech)	Applied Electronics & Communication Engineering	2 years	B.Tech. / B.E.	English	18	08
2.		Biotechnology	2 years	B.Tech. / B.E.	English	18	08
3.		Computer Science & Engineering	2 years	B.Tech. / B.E.	English	36	16
4.		Electronics & Communication Engineering	2 years	B.Tech. / B.E.	English	18	18
5.		Electronics & Communication Engineering (VLSI)	2 years	B.Tech. / B.E.	English	18	11

Sl.No.	Programme Level	Name of the Programme / Course	Duration	Entry Qualification	Medium of Instruction	Sanctioned / Approved Student Intake	No. of students admitted
6.		Information Technology	2 years	B.Tech. / B.E.	English	18	02
7	PG (MCA)	Master in Computer Applications	3 Years	BCA	English	60	60
<b>Total</b>						186	123

### 13. Does the Institution offer self-finance Programmes?

Yes ☒ No ☐

If yes, how many?

### 14. Whether new programmes have been introduced during the last five years?

Yes ☒ No ☐

If yes  
Number

Sl.No	Academic Session	Name of the Programme	Intake Capacity
<b>(B.Tech)</b>			
1.	2012-13	B.Tech in Electrical Engineering	60
2.	2011-12	B.Tech in Mechanical Engineering	60
3.	2011-12	B.Tech in Civil Engineering	60
<b>(M.Tech)</b>			
4.	2011-12	M.Tech in VLSI	18
5.	2011-12	M.Tech in IT	18

### 15. List the departments: (Do not list facilities like library, Physical Education as department unless these are teaching departments and offer programmes to students)

Particulars	Numbers	Numbers of Students
Science	Under Graduate	NA
	Post Graduate	
	Research Centre (s)	
Arts	Under Graduate	NA
	Post Graduate	
	Research Centre (s)	
Commerce	Under Graduate	NA
	Post Graduate	
	Research Centre (s)	
Any other	Under Graduate: B.Tech	B.Tech: 3713
	H & S Supporting Dept.	NA
	Post Graduate : M.Tech	M.Tech: 159
	Post Graduate MCA	MCA: 162

### 16. Are there any UG and / or PG programmes offered by the College, which are not covered under Autonomous status of UGC? Give details. ?

Autonomous status was granted to all B.Tech and M.Tech programmes with effect from academic year 2014-15 and for MCA programme with effect from academic year 2016-17.

**17. Number of Programmes under** (Programme means a degree course like BA,MA, B.Sc, M.Sc, B.Com etc.): **3** (B.Tech, M.Tech and MCA Programmes)

- |                     |   |
|---------------------|---|
| a. annual system    |   |
| b. semester system  | ✓ |
| c. trimester system |   |

**18. Number of Programmes with**

- |   |   |
|---|---|
| a. Choice Based Credit System   |   |
| b. Inter / multidisciplinary approach   |   |
| c. Any other (Complete semester pattern from I year to final year as per approved course structure, each subject having prescribed credits. | ✓ |

**19. Unit cost of Education**

(Unit cost = total annual recurring expenditure (actual) divided by total number of students enrolled)

a.	including the salary component	Rs. 77431.80
b.	excluding the salary component	Rs. 22595.92

**20. Does the College have a department of Teacher Education offer NCTE recognized degree programmes in Education?**

Yes      No      |      ✓

If yes,

- a. How many years of standing does the department have?

.....N.A.....Years

- b. NCTE recognition details (if applicable) Notification

No.: .....N.A.....

Date: .....N.A.....(dd/mm/yyyy)

- c. Is the department opting for assessment and accreditation separately?

Yes      ☐      No      |      ✓

**21. Does the College have a teaching department of Physical Education offering NCTE regonized degree programmes in Physical Education?**

Yes      ☐      No      ☒

If yes,

- a. How many years of standing does the department have?

.....N.A.....Years

- b. NCTE recognition details (if applicable) Notification

No.: .....N.A.....

Date: .....N.A.....(dd/mm/yyyy)

- c. Is the department opting for assessment and accreditation separately?

Yes      ☐ NA      No      ☐ NA

**22. Whether the College is offering professional programme?**
 Yes ☒ No ☐

If yes, please enclose approval / recognition details issued by the statutory body governing the programme. AICTE & MAKAUT approvals are enclosed

**23. Has the College been reviewed by any regulatory authority? If so, furnish a copy of the report and action taken there upon.**

- a) AICTE : Certificate attached [Enclosure B6, B6A]  
 b) NBA : Reports attached [Enclosure B7, B8, B9]  
 c) MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WEST BENGAL  
 (Formerly known as West Bengal University of Technology) [Enclosure B1]  
 d) Grant of TEQIP-II Project [Enclosure B10]

**24. Number of teaching and non-teaching positions in the College**

Position	Teaching Faculty						Non-Teaching Staff (Technical Assistants)		Administrative Staff	
	Professor		Associate Professor		Assistant Professor					
	*M	*F	*M	*F	*M	*F	*M	*F	*M	*F
Sanctioned by the UGC / University/ State Government										
<i>recruit</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>yet to recruit</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sanctioned by the Management / Society or other authorized bodies	28		51		166		110		51	
<i>recruited</i>	14	3	16	2	121	86	60	39	38	9
<b>Total</b>	17		18		207		99		47	
<i>yet to recruit</i>	3						11		4	
<b>Total</b>	245						110		51	

\* M- Male \*F-Female

**25. Qualification of the teaching staff**

Highest Qualification	Professor		Associate Professor		Assistant Professor		Total
	Male	Female	Male	Female	Male	Female	
Permanent teachers							
D.Sc. / D.Litt.	1						1
Ph.D.	12	3	10	2	28	26	81
M.Phil.							
PG (M.Tech / ME/ M.Sc. MA)	1		6		93	60	160
Temporary teachers							
Ph.D.							
M.Phil.							
PG							
Part-time teachers							
Ph.D.							
M.Phil.							
PG							
Total	14	3	16	2	121	86	242



26. Number of Visiting Faculty / Guest Faculty engaged by the college. 10

27. Students enrolled in the College during the current academic year, with the following details.

Students	UG		PG		Integrated masters		M.Phil.		Ph.D.		Integr-ated Ph.D.		D.Lit./ D.Sc		Certifi-cates		Diploma		PG Diploma	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
From the state where the College is located	2075	632	143	156	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
From other states of India	744	184	9	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NRI Students	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Foreign Students	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	2819	816	191	175	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

28. Dropout rate in UG and PG (average for the last two batches)

UG 4.41%

PG 8.57%

29. Number of working days during the last academic year. 241

30. Number of teaching days during the last academic year 180

31. Is the College registered as a study centre for offering distance education programme for any University?

Yes | | No | ✓

If yes, provide the

a. Name of the University | NA

b. Is it recognized by the Distance Education Council

Yes | | No | ✓

c. Indicate the number of programmes offered. | NA

32. Provide Teacher-student ratio for each of the programme / course offered.

Sl.No.	Programme/ Courses	Teacher Student Ratio
1.	B.Tech in AEIE	1:15
2.	B.Tech in BT	1:15
3.	B.Tech in ChE	1:15
4.	B.Tech in CE	1:15
5.	B.Tech in CSE	1:15
6.	B.Tech in EE	1:15
7.	B.Tech in ECE	1:15
8.	B.Tech in IT	1:15
9.	B.Tech in ME	1:15
10.	B.Tech 1 <sup>st</sup> Year Common Courses	1:16.36

Sl.No.	Programme/ Courses	Teacher Student Ratio
11.	M.Tech in AEIE	1:12
12.	M.Tech in BT	1:12
13.	M.Tech in CSE	1:12
14.	M.Tech in ECE	1:12
15.	M.Tech in ECE (VLSI)	1:12
16.	M.Tech in IT	1:12
17.	MCA	1:12

### 33. Is the College applying for:

Accreditation: Cycle 1 ☒ Cycle 2 ☐ Cycle 3 ☐ Cycle 4 ☐

Re-Assessment : ☐

### 34. Date of accreditation\* (applicable for Cycle 2, Cycle 3, Cycle 4 and re-assessment only)

N.A.  
 Cycle 1: .....(dd/mm/yyyy) Accreditation outcome / results  
 Cycle 2: .....(dd/mm/yyyy) Accreditation outcome / results  
 Cycle 3: .....(dd/mm/yyyy) Accreditation outcome / results

\* Kindly enclose copy of accreditation certificate(s) and peer team report(s)

Cycle 1 refers to first accreditation; Cycle 2 and beyond refers to re-accreditation

### 35. a. Date of establishment of Internal Quality Assurance Cell (IQAC)

18<sup>th</sup> February 2016

### b. Date of submission of Annual Quality Assurance Reports (AQARs)

- (i) AQAR for year .....N.A..... on .....(dd/mm/yyyy)
- (ii) AQAR for year .....N.A..... on .....(dd/mm/yyyy)
- (iii) AQAR for year .....N.A..... on .....(dd/mm/yyyy)
- (iv) AQAR for year .....N.A..... on .....(dd/mm/yyyy)

Any other relevant data, the College would like to include

### Visit by Luminaries:

Bharat Ratna Late Prof. (Dr.) A.P.J. Abdul Kalam  
 Former President of India on the occasion of 10<sup>th</sup>  
 Commemorative Celebration on 05.07.2011



Dr. Ei-Ichi Negishi, 2010 Nobel Laureate in Chemistry addressing members of management, faculty, staff and students on 04.01.2013 at the Heritage Institute of Technology, Kolkata

Dr. Yunan Tshe Lee, 1986 Nobel Laureate in Chemistry addressing the members of management, faculty, staff and students of the Heritage Institute of Technology on 06.01.2013



### International Conferences:

- International Conference on “Applied Algorithms” (ICAA 2014) held on 13<sup>th</sup> and 15<sup>th</sup> January, 2014 at Heritage Institute of Technology, Kolkata. (Proceeding published in Springer Verlag.)



- International Conference on “Electronics Communication and Instrumentation” (ICECI 2014) held on 16<sup>th</sup> and 17<sup>th</sup> January, 2014. Heritage Institute of Technology, Kolkata. (Proceeding published in IEEE Explorer.)



- International Conference on “Advances in Bioprocess Engineering and Technology” (ICABET 2016) held on 20<sup>th</sup> to 22<sup>nd</sup> January, 2016 at Heritage Institute of Technology, Kolkata. (Proceeding published in Elsevier)



### **TEQIP-II Project:**

- The Institute received funding in TEQIP-II Project under subcomponent 1.1 “Strengthening Institutions to Improve Learning Outcomes and Employability of Graduates” (Total project amount received Rs. 5 Crores). (Further, an additional grant of Rs 1.00 Crore is in the pipe line)

# **PART - C**

## **CRITERIA WISE**

### **EVALUATION REPORT**

**Criterion – I : Curricular Aspects**

**Criterion – II : Teaching-Learning and Evaluation**

**Criterion – III : Research, Consultancy and Extension**

**Criterion – IV : Infrastructure and Learning Resources**

**Criterion – V : Student Support and Progression**

**Criterion – VI : Governance, Leadership & Management**

**Criterion – VII : Innovations and Best Practices**

## **CRITERION-I: CURRICULUAR ASPECTS**

### **1.1 Curriculum Design and Development**

#### **1.1.1 How are the institutional vision / mission reflected in the academic programmes of the College?**

Heritage Institute of Technology was established in the year 2001. From inception this college has taken cognizance of major developments in the global scenario of scientific and technological advancements and has continuously strived under the able leadership of the authority to instill the skills required by the industry and society at large in its students. The curriculum design, development and implementation process at Heritage Institute of Technology has always been done keeping in mind the of the local, regional and national manpower requirements.

The curriculum is designed and implemented according to the vision and mission of Heritage Institute of Technology.

#### **Vision of Heritage Institute of Technology:**

To prepare dynamic and caring citizens to meet the challenges of global society while retaining their traditional values.

#### **Mission of the College:**

- To prepare students with strong foundation in their disciplines and other areas of learning.
- To provide an environment for critical and innovative thinking, and to encourage life-long learning.
- To develop entrepreneurial and professional skills.
- To promote research and developmental activities and interaction with industry.
- To inculcate leadership qualities for serving the society.

#### **1.1.2 Describe the mechanism used in the design and development of the curriculum? Give details on the process. (Need Assessment, Feedback, etc)**

The academic programmes have been designed and developed after consultations with all the stake holders while keeping the vision and mission statements of the institute as the guiding principle. The process followed by the Institution is:

- Curriculum of reputed Institutes like IITs, NITs etc are considered.
- Structured feedback from alumni, students, parents, industry, and employers are taken.
- Wide range discussions are held within the Department about the inputs received from various agencies. General guidelines from the Academic council on the basis of Institution's Vision and Mission are impetus for the entire process.
- Workshops are held in the departments of the faculty members in presence of external experts from reputed universities as well as from the industry.
- Based on this Course structures are reviewed and modified every two year, new subjects and Labs are introduced.
- The recommendations of the Department then forwarded to BoS.
- Meetings of Board of Studies (BoS) of various departments. The BoS members include representatives from University, industry, alumni apart from Department Head and faculty members.
- Recommendations of the BoS is approved by the Academic Council.
- Meetings of the Academic Council. The Council consists of representatives from reputed universities, industries, research organizations, Principal of Heritage Institute of Technology and Head of all the departments.



**1.1.3. How does the College involve industry, research bodies, and civil society in the curriculum design and development process? How did the College benefit through the involvement of the stakeholders?**

The Academic Council and the Board of Studies (BoS) are two important academic bodies of the institution. The members of these bodies meet regularly and confer on key issues to steer the curriculum in a suitable direction so that it can meet the global industrial and research needs.

The Academic Council and Board of Studies discussions are held between all the stake holders on curriculum design and development. This also involves the feedbacks taken from the students, their performance, placement achievements, feedback from faculty etc.

The recommendations made by BoS are then discussed at Academic Council and suitable decisions are made. The decisions taken in the Academic Council regarding curriculum design and development are communicated to the entire staff and students through circulars and displaying notices on the notice board and through institutional electronic mail. The necessary alterations are included in the syllabus book, course files and institute's website ([www.heritageit.edu](http://www.heritageit.edu)).

The strategic meetings between Principal with Heads of Departments as well as at department level are conducted to ensure that all the requirements including infrastructure, laboratory equipment, recruitment of qualified faculty members and technical assistants, library resources etc. are available before the commencement of the course work.

Open courseware videos of renowned universities like MIT are made available to the faculty to facilitate them to develop higher standard course material replenished with latest information on the subject. Many leading technical journals from reputed publishers and books are available in the institute library for access by faculty members.

Having a properly designed curriculum helps in preparing a comprehensive almanac in consultation with all the stakeholders. The almanac indicates the dates of commencement of the course work, schedule of mid /end exams, vacation periods, date for declaration of results etc. The academic calendar facilitates the departments to schedule their own activities like organizing seminars, workshops, conferences, faculty development programs.

**1.1.4. How are the following aspects ensured through curriculum design and development?**

- Employability
- Innovation
- Research

**Employability:**

- Employability is one of the prioritized concern in designing and developing the curriculum of the institute. The Institution follows a rigorous exercise in designing the curriculum. Continuous alteration and modification of the existing courses, introduction of new courses to meet the requirements of the global market, industry and society are done. The courses are so designed that the students are able to apply their knowledge in real time problems and carry out research in emerging and new areas. The structure of the postgraduate programmes are highly specialized and application based to enhance the employability of the students.
- The curriculum development emphasizes on application orientation, in addition to soft skill development and communication skills. Practical syllabi are designed to include latest techniques and methodologies to increase detailed hands on experience of the students. Each department has one or more research Laboratories which help industry related projects, M.Tech research projects. We do not have any doctoral programmes as yet.
- The college has set up a Training and Placement cell which maintains professional relations with the representatives of industry. The representatives of various industries are invited to the college campus to interact and their inputs are considered in the curriculum development.

Feedbacks from the employers are taken into account during curriculum design so as to overcome any reported shortcoming.

#### **Innovation:**

##### **The innovation aspects are ensured through:**

- Problem based learning
- Data collection and analysis for theory and laboratory
- Internship at reputed research laboratories
- Multi disciplinary projects for encouraging students
- Majority of the experiments are framed as per syllabus, designed with flexibility in mind
- Industry collaborative projects

##### **Research:**

Some of the topics in curriculum relate to areas of active research world wide and many of our M.Tech level research works are based on industrial problems.

#### **1.1.5. How does College ensure that the curriculum developed addresses the needs of the society and have relevance to the regional / national developmental needs?**

The Heritage Institute of technology, Kolkata interacts with experts from industry, research bodies and civil societies in the process of curriculum development, revision and implementation. The Institute has introduced several courses like Chemistry, Physics, Mathematics, Environment Engineering, etc. to provide training in specific skills, impart knowledge of ecology and environment, raise employment potential and fulfill global demands resulting in community development.

The teaching of Managerial Economics, Management Science subjects has been initiated with the objective of providing knowledge and training in the understanding and development of national living standards and providing leadership.

A compulsory subject "Indian Culture and Heritage" has been introduced in the 2<sup>nd</sup> year B.Tech programme.

The provision of co-curricular activities in a variety of spheres aims at self-development and inculcating values like tolerance, cooperation, courage, helping attitude, sporting spirit, scientific attitude, respect for others etc. and enhancing abilities like communication, vocal delivery, precision etc. The participation in cultural activities is aimed at preservation of heritage and culture, de-stressing of students and breaking the monotony of regular college life. All this is expected to promote intellectual, academic, social, personal and value development among students besides training them in certain skills leading to better employment, understanding their surroundings including ecology, environment, society and world as a whole.

Some of the projects completed by the students illustrated below have direct relevance to societal needs.

S.No	Department	Name of the Project on Regional/ National needs	Regional Need/National Need
1	Chemical Engineering	Preparation of Nitro-p -dichlorobenzene via nitration of p-dichlorobenzene	Regional Need
2		Conversion of Deproteinized Whey to Ethanol	National Need
3		AICTE-MODROBS	National Need
1	CSE	Advanced Bio-metric Authentication Methods (Guide: Poulami Das)	National
2		Secured Telnet over Z-modem based communication (Guide: Arindam Chatterjee)	Regional
3		Missing value estimation in DNA microarray Gene expression data using machine learning and statistical methods (Guide: SujaySaha)	National

S.No	Department	Name of the Project on Regional/ National needs	Regional Need/National Need
4		Computational challenges in Next Generation Genome sequencing data involving machine learning (Guide: SandipSamaddar)	National
5		Fast and efficient algorithms for dilution of expensive reagents/samples in Bio-chip (Guide: NilinaBera)	National
6		Combinatorial Auctionsfor Player Selection in the Indian Premier League(IPL) (Guide: AmitavaBagchi)	Regional
7		Judging quality of English text using Soft Computing (Guide: Dinabandhu Bhandari)	Regional
8		Detection of Hierarchical community structures from social networks (Guide: Partha Basuchowdhuri)	National
9		Top-K query retrieval of combinations with Sum-of-Subsets ranking (Guide: SubhashisMajumder)	National
1	ECE	NOISE CONTENT BASED AUTOMATIC TUNING OF THE FRONT-END MODULE OF THE COGNITIVE RADIO RECEIVER & ENERGY MANAGEMENT WITH REMOTELY ACTIVATED SWITCH APPROACH This M.Tech. project was completed by Shri Avishek Nag in 2014. It was designed with the objective of better utilization of radio frequency spectrum, which has become a precious and scarce resource for wireless communication.	1.National Need
2		DTMF BASED RADIO OPERATED CONTROL OF UNMANNED LEVEL CROSSINGS ON RAIL LINES A group of B.Tech. students (Chiraag Kumar, Nikita Kar and two others) are developing this project.	2. Regional and National Need

**1.1.6. To what extent does the College use the guidelines of the regulatory bodies for developing or restructuring the curricula? Has the College been instrumental in leading any curricular reform which has created a national impact?**

Heritage Institute of Technology is affiliated to MAKAUT, West Bengal has received autonomous status from the University Grant Commission. The Institution follows all the general guidelines issued by the University for Curriculum structure and syllabus of various subjects. AICTE Guidelines and model course component are also followed. Overall course structure and syllabi therein is in sync with the reputed engineering institutes and Universities of India like IITs and NITs. However, many new subjects specially value added courses, English language skill or soft skill laboratories etc. have been added taking into consideration the demands of the present time. Many interdisciplinary subjects have been introduced to make learning a more wholesome exercise. In restructuring the curriculum, courses like Environmental Engineering etc have been added which have National impact.

**1.2 Academic Flexibility**

**1.2.1 Give details on the following provisions with reference to academic flexibility:**

- Core/Elective options
- Enrichment courses
- Courses offered in modular form
- Credit transfer and accumulation facility
- Lateral and vertical mobility within and across programmes and courses

**a) Core/Elective options**

Adequate number of core, professional elective and free elective subjects are offered to students.

**Enrichment Courses**

Training Programmes, Certificate courses and Remedial Classes are organized every year by the Training and Placement Cell as well as the Finishing School every year by involving Industry Experts and Faculty Members from Reputed Institutes. Such programmes are organized for the benefit of the students and the outcome of these programmes is the placement of a significant number of students in the Campus Recruitments. In addition to this, Faculty Development Programmes as well as Pedagogy Trainings are organized for the faculty members. Industrial visits are arranged regularly.

The following are the details of some Enrichment courses organized during 2014-2015 for the benefit of students and faculty members. There are many such programmes under this section which are not listed due to space constraint.

Sl. No.	Programme	Period	Organizing Department	Resource Persons	Participants
1	Workshop on UNIX Basic Commands and Shell Programming	28 <sup>th</sup> – 31 <sup>st</sup> October and 7 <sup>th</sup> November, 2014	ECE	Mr. Dipendu Mishra Mr. Kaushik Ghosh Mr. Titas Roychowdhury Ms. Indrani Kundu	108
2	Workshop on Android Applications	24 <sup>th</sup> March – 1 <sup>st</sup> April, 2014	ECE	Mr. Rajmohan De Sarkar, Mr. Charanjib Bhattacharyya Mr. Amitava Chatterjee Mr. Dipanjan Bhattacharya	147
3	Student Development Programme	6 <sup>th</sup> November, 2015	AEIE	Panchanan Pramanik, Professor, Department of Chemistry, IIT Kharagpur Biswajit Ghosh, Professor, Department of Energy Studies, School of Energy Studies	129
4	A Presentation on CIVIL Engineering Structure and it's Design aspects	5 <sup>th</sup> November 2014	CE	Mr. Sumantra Sengupta, M/s STUP Consultant	37
5	BT workshop on Technical Writing and communication skill under finishing School	8 <sup>th</sup> , 9 <sup>th</sup> , 13 <sup>th</sup> , 14 <sup>th</sup> , 15 <sup>th</sup> October, 2015	BT	Ms. Jayati Chatterjee	53
6	Workshop on Android Application	16, 17, 19, 24, 25, April & 3rd May, 2014	CSE	Mr. Raja Ghosh	101
7	Energy Conservation: Our Challenge is Your Opportunities	19 <sup>th</sup> February	CHE	Mr. Sarabindu Mohanta	53
8	Special Training Session (Communication and presentation skill)	29th -31st October, 2014	Humanities	B. Techguru	114
9	Workshop on Application Development in Android Platform	23rd - 27th September, 2013	IT	Mr. Gaurav Dutta Choudhury, C-DAC, Kolkata	87
10	Workshop on C & Embedded C programming Language	22nd Feb – 3rd March, 2014	IT	Mr. Gaurav Dutta Chowdhury, C-DAC, Kolkata	21
11	Industry Orientation Programme	30th & 31st October & 3rd November 2014	TPO		42

**c) Courses offered in modular form**

Each department divides the core courses in program specific modules as per AICTE norms. Each programme specific module has a combination of courses including a number of interdisciplinary courses. All the courses under Autonomy are offered are in modular form and included in the curriculum in the correspondings departments which is uploaded in the institute's website. Students of third year and fourth year B.Tech and MCA is currently undergoing the syllabus of the MAKAUT which is available in the University website also in modular form.

**d) Credit Transfer and accumulation facility**

The State Government has a policy of transfer of a candidate from one College to another College within the University. In such special cases, a candidate is admitted in College in compliance with the guidelines of the University. All credits earned during the tenure of study in the previous Institutes are then transferred to the current Institute to continue the process of accumulation of credit points. A ceiling of 1% exists for such cases.

Regulations of the College and the affiliating University permit the accumulation of credits from I year to IV year for B. Tech and I year to II year for M. Tech programmes to award the degree based on the minimum credits earned by the students and on successful completion of essential courses. Finally the University will award degrees to the qualified students even for Autonomous Colleges.

**e) Lateral and Vertical mobility within and across programmes and courses**

Lateral mobilities is provided for the B.Tech programme to the top 10% students at the end of the first year.

The college has to follow all admission rules which are prepared by the State Council of Higher Education. Lateral mobility is not permitted as per Government direction. However, Vertical mobility is automatic for any student to enter in to second, third and fourth year based on eligibility of earning minimum credits at the end of each year.

There are core and interdisciplinary electives and the student can select from given set of electives depending upon his/her interest.

**1.2.2 Have any courses been developed specially targeting international students? If so how successful have they been? If 'no', explain the impediments.**

No

The institute has not applied for foreign students under PIO (Persons of Indian Origin) scheme.

**1.2.3 Does the College offer dual degree and twinning programmes? If yes, give details.**

No.

**1.2.4 Does the College offer self-financing programmes? If yes, list them and indicate if policies regarding admission, fee structure, teacher qualification and salary are at par with the aided programmes?**

Yes. The College has been established as a self-financing autonomous Private College. As such the following list of courses are self-financing.

**I. UG: B. Tech**

1. B. Tech in Applied Electronics and Instrumentation Engineering (AEIE)
2. B. Tech in Chemical Engineering (ChE)
3. B. Tech in Computer Science and Engineering (CSE)
4. B. Tech in Electronics and Communication Engineering (ECE)
5. B. Tech in Mechanical Engineering (ME)
6. B. Tech in Civil Engineering (CE)
7. B. Tech in Electrical Engineering (EE)
8. B. Tech in Biotechnology (BT)
9. B. Tech in Information Technology (IT)

**II. PG: M. Tech**

1. M. Tech in Applied Electronics and Instrumentation Engineering (AEIE)
2. M. Tech in Computer Science and Engineering (CSE)
3. M. Tech in Electronics and Communication Engineering (ECE-VLSI)

4. M. Tech in Electronics and Communication Engineering (ECE-Communications)
5. M. Tech in Biotechnology (BT)
6. M. Tech in Information Technology (IT)

### III. PG: MCA Master in Computer Application

The College itself cannot make any admission policy and admissions are made on the basis of the policies laid down by the Government. The fee structure is regulated by the State Government and is subjected to revision after a stipulated period of time. Qualifications of the faculty members are strictly as per the AICTE norms.

#### 1.2.5 Has the College adopted the Choice Based Credit System (CBCS)? If yes, how many programmes are covered under the system?

No. The College has semester system from 1<sup>st</sup> year to 4<sup>th</sup> year with credits assigned to each subject. However, there are free and professional electives (both core and interdisciplinary) where the students have the choice to opt a particular elective from a given list in the assigned semester.

#### 1.2.6 What percentage of programmes offered by the College follows:

- Annual system: 0%
- Semester system: 100%
- Trimester system: 0%

#### 1.2.7 What is the policy of the College to promote inter-disciplinary programmes? Name the programmes and what is the outcome?

The College offers a number of interdisciplinary subjects between the B. Tech branches as approved by the BOS. The curricular and syllabi are framed by consulting the academic/R & D/industry experts from different disciplines. The inter disciplinary subjects are marked as “pre electives” and as per curricular structures students of one department can take and earn credit points by studying subjects offered by other departments.

### 1.3 Curriculum Enrichment

#### 1.3.1 How often is the curriculum of the College reviewed for making it socially relevant and/or job oriented /knowledge intensive and meeting the emerging needs of students and other stakeholders ?

The revision of the syllabus is a continuous process which is carried out by the Board of Studies of the Institution. The university curriculum is normally revised every 5 years however the curriculum under autonomy is proposed to be revised every 2 years. The paper codes and many points /sub-points are incorporated based on GATE syllabus. This is, however, is more applicable for Autonomy syllabus.

*\* Once in every five years, the curriculum is reviewed by the University.*

#### 1.3.2 How many new programmes have been introduced in UG and PG level during the last four years ? Mention details.

The following are the details of new programmes introduced over the last 4 years.

#### B.Tech (UG) Programme :

Academic Year	Name of the Programme	Intake
2011-12	Civil Engineering	60
2011-12	Mechanical Engineering	60
2012-13	Electrical Engineering	60

**M.Tech (PG) Programme :**

Academic Year	Name of the Programme	Intake
2006-07	AEIE	18
2007-08	Bio Tech	18
2006-07	CSE	36
2009-10	ECE (Communication)	18
2011-12	ECE (VLSI)	18
2011-12	IT	18

\*Initially, the number of seats were 18 but from the academic year 2011-12, the number of seats increased to 36

**1.3.3 What are the strategies adopted for revision of the existing programmes? What percentage of courses underwent a major syllabus revision?**

The feedback essentially comes from the Alumni, Industry and Employees of our Alumni in respect of introducing new courses. These are discussed by the BOS with each Department and are considered with necessary modifications. In the revision during the year 2015 for Autonomous syllabus for the 1<sup>st</sup> and the 2<sup>nd</sup> year, almost majority of the courses underwent a major syllabus revision. Subsequently the second revision took place for the Autonomous syllabus for the 3<sup>rd</sup> year in the March 2016.

**1.3.4 What are the value-added courses offered by the college and how does the college ensure that all students have access to them?**

- The Training and Placement (TPO) Cell of the College organizes skill development, personality development and communication skills improvement programmes, as value added courses to the students.
- Many Campus recruitment training programmes are conducted every year to enhance capabilities the leadership capabilities of the students to improve their chances of getting employed.
- Communication Skills lab courses for all branches are introduced in the curriculum to improve the leadership qualities and interaction capabilities of the students

**1.3.5 Has the College introduced any higher order skill development in consonance with the national requirements as outlined by the National Skills Development?****Corporation and other agencies?**

To develop the skills of the students to gain success in the present day competitive world, the following compulsory skill development courses are introduced in the curriculum

1. Verbal Ability
2. Reasoning & Logic
3. Data Interpretation
4. Industry Oriented Mini-project
5. Advanced English Communication and Soft Skills Lab and Theory Classes
6. Comprehensive Viva-Voce at the end of four years

All these courses are compulsory and these could be introduced only due to the autonomous status of the College. The following Skill Development programmes are organized by the TPO Cell for the benefit of the students

Programmes organized by the Placement Cell:

SI No.	Programme	Period	For the benefit of
1.	Personality Development & Grooming by HLS India	15 Aug 2010 to 15 Sep 2010.	All Final Year Students 2011 YOP
2.	Technical Skills programme - Aptitude, Logical Reasoning/Technical and Mock Technical Interviews by Ardent Computech Private Limited.	2 Sept. 2010 to 3 Oct. 2010	All Final Year Students 2011 YOP



SI No.	Programme	Period	For the benefit of
3.	Presentation Pre placement Talk by BOCI India Limited	6 <sup>th</sup> Oct 2010	Final Year – Chemical Engg students 2011 YOP
4.	Pre Placement Talk by Philips Carbon Black	6 <sup>th</sup> Nov 2010	Final year AEIE and Chemical Engg students 2011 YOP
5.	Pre Placement Talk by Paharpur Cooling Towers	4 <sup>th</sup> Dec 2010	Final Yr Chemical Engg students 2011 YOP
6.	Pre Placement Talk and Presentation by Infosys Technologies Ltd	3 <sup>rd</sup> Jan 2011	All Final Year Students 2011 YOP
7.	Pre Placement Talk and Presentation by Wipro Technologies Ltd	5 <sup>th</sup> Jan 2011	All Final Year Students 2011 YOP
8.	Personality Development and Grooming by HLS India	23 <sup>rd</sup> July to 6 <sup>th</sup> Aug 2011	All Final Year Students 2012 - YOP
9.	Industry Orientation Programme by Ardent Computech Private Limited	20 <sup>th</sup> July to 15 <sup>th</sup> Aug 2011	All Final Year Students 2012 YOP
10.	Aspiring Minds Computer Adaptive test (AMCAT) Quant/Apt/Logical/Verbal/Domain	8 <sup>th</sup> August 2011	All Final Year Students 2012 YOP
11.	Pre Placement Talk by Infosys Technologies Limited	21 Aug 2011	All Final Year Students YOP 2012
12.	Pre Placement Talk by Wipro Technologies Limited	22 Aug 2011	All Final Year Students YOP 2012
13.	Mission 10X – Faculty Development Programme by WIPRO	5 Sep 2011	
14.	Pre Placement Talk by ITC Infotech India Limited	6 Sep 2011	All registered Students YOP 2012
15.	Ardent / Globsyn/ CMC Limited JEE/Oracle/Asp.Net with C#/JAVA/Php and MySQL/VLSI Design and Simulation/Hardware Net working with Project	18 June to 14 July 2012	All final year students YOP 2013
16.	Industrial Readiness Intervention Schedule Aptitude/Logical Reasoning, Technical / Mock Technical Interviews	23 July to 24 Aug 2012	All final year students YOP 2013
17.	Personality development and soft skills covering grooming, communication group discussion and interview techniques by HLS India.	13 Aug to 29 Aug 2012	All final year students YOP 2013
18.	Faculty Development Programme – Cloud Computing, Big Data.r	21 August 2012	
19.	Technical Online test based on C, C++, JAVA etc.	Sept 2012	All final year students YOP 2013
20.	Pre Placement Talk Tata Consultancy Services	9 Sept 2012	All final year students YOP 2013
21.	Pre Placement Presentation Capgemini	7 October 2012	All final year students YOP 2013
22.	Pre Placement Presentation	April 2013	All final year students YOP 2013
23.	TCS Seminar on Recent Trends in Information Technology	29 Aug 2013	All final and pre final year students YOP 2013 & 2014
24.	TCS Seminar on Smart Grid	29 Jan 2014	All final and pre final year students YOP 2014 & 2015
25.	TCS Seminar on Smart Grade and Big Data	17 Jan 2014	For final year and pre final year students
26.	On line Aptitude Test by CMC Limited	27 Jan 2014	For unplaced students to improve their employability
27.	CMC , HCL, IBM, Globsyn , Logicvilla Technologies etc – Software Industrial training	June 2014	For 2015 batch students
28.	ERTL, Galaxay Biotech, Human Genome Research Centre, Kiswok, Marathon, Stone India, Mackintosh Burn, Bridge & Roof West Bengal Irrigation Dept, Garden Reach Ship Builders are some of the companies where students have under gone training..	July 2014	For 2015 batch students
29.	TCS Seminar on Digital Technology Trend	27 Aug 2015	All final and pre final year students
30.	B.Tech Guru.com – Online portal for Aptitude learning and assessment. Sponsored by TEQIP. Coordinated by Humanities Dept.	Available to students all year around.	All students of all branches and batches. Certificate for partaking in mock test.

Intensive soft skill and technical / aptitude training is conducted prior to start up of campus season. Students in the first and second year are given grooming sessions and group discussion training.

The Humanities Department conducts soft skill and communication class room programmes in line with WBUT curriculum.

In addition corporate companies like TCS are invited and they conduct seminars on relevant topics for the benefit of the senior students.

Students are also connected to the Infosys Campus Connect, TCS Campus Commune through which they continue to get guidance and training inputs from these organizations.

We have a Microsoft Innovation Centre which will be utilized by the students for various grades of training and certification programmes of Microsoft.

Summer training for students of pre final year which is in line with WBUT requirement is also specially arranged through reputed organizations on specified technical and skill programmes to improve their employability prospects.

Programmes are also organized under the aegis of TEQIP for employability enhancement of students in technical and soft skill areas, especially tailored to the employer demands from time to time.

Special training to unplaced students to aid their selection by recruiters.

Conducted employability evaluation tests through organizations like CMC, Aspiring Minds etc. to identify the areas of individual weakness and address them suitably while conducting training programmes as above.

Encourage activities pertaining to robotics and participation by HITK students in robotics completion, both within and outside the campus. A robotics society – IrobotiX - has taken shape at the Institute.

The Institute has a Photography, Film and Drama Club – Prabhasvana.

There is a Social Awareness & Community Service Club (SPARSH).

To fulfill societal commitment, Rotaract Club of the Institute (UDAAN) under the parent body Rotary Club of Mahanagar has been established, in addition to an active cell of NSS.

To encourage entrepreneurship activities, an E-Cell (OORJA) has been formed for coordinating with National Entrepreneurship Network (NEN)

## **1.4 Feedback System**

### **1.4.1 Does the College have a formal mechanism to obtain feedback from students regarding the curriculum and how is it made use of?**

Yes, we collect feedback from the students during the semester for every course. There is an online feedback system which is conducted centrally by the HR Department. Feedback forms are filled by the outgoing students of B. Tech and M. Tech as well as alumni to improve the current practices with reference to the curriculum. Feedback is obtained regarding the performance of teachers, teaching-learning process, curriculum, syllabus and infrastructure of the college in a structured format comprising of a standard questionnaire. Feedback is also obtained through personal interaction with the final-year students with Student Counselors and Mentors. The suggestions / comments from the faculty members, alumni and industry experts while framing the autonomy syllabus during the Departmental BOS. The relevant feedbacks from the students are kept in mind while designing the structure of the syllabus.

### **1.4.2 Does the College elicit feedback on the curriculum from national and international faculty? If yes, specify a few methods adopted to do the same-(conducting webinar, workshop, online forum discussion etc.). Give details of the impact on such feedback.**

Yes, the institution takes informal feedback from National faculty like professors from State Universities CU, JU, BESU, etc, IITs, & R&D organizations. The departments are advised periodically by experts from National Institutes during their visits to the institution for expert lectures, seminars, conferences, etc. The interaction of members of the faculty with the students, parents, alumni,

academic peers, recruiters from industries and companies, experts in their fields while attending seminars, conferences, workshops, etc. act as key elements for curriculum revision which in turn are presented by the HODs to the members of the BOS for consideration. Such interaction has resulted in updating the curriculum as per the industry requirement and future scope of research. Before framing the syllabi, each department refers through the curriculum of NITs, IITs and other reputed Institutions available in their respective websites.

#### **1.4.3 Specify the mechanism through which alumni, employers, industry experts and community give feedback on curriculum enrichment and the extent to which it is made use of.**

The experts invited for curriculum design workshops are members of the industries, many of which employ our students. Even the BoS members include industry experts who ensure that the curriculum is designed based on the requirements of the industry of the present time. The alumni are invited for reunions organized by the institute and their feedback is taken. The outgoing students are also required to give exit feedbacks which are later analyzed and if suitable their suggestions are incorporated in the curriculum too.

#### **1.4.4 What are the quality sustenance and quality enhancement measures undertaken by the institution in ensuring effective development of the curricula?**

The BOS & Academic Council has senior faculty from renowned academic institutions, scientist from R&D organization and Experts from Industry in different disciplines who will review and validate the curriculum proposed by the academic Departments. The final exam results are thoroughly analyzed and corrective measures are chalked out so that the Institutional Vision and Mission are achieved. The process of assessment of Programme Outcomes (POs), Programme Education Objectives (PEOs) and Course Outcomes (COs) are very effectively carried out through the assesment tool of Rubrics.

### **SWOC Analysis**

#### **Strengths**

- Outcome based curriculum and syllabi, teaching-learning and assessment and evaluation to achieve the programme outcomes and programme educational objectives to maintain national as well as global standards.
- Flexibility in the syllabus and curriculum to accomodate a wide range of educational activities such as industrial visits, internships, cultural programmes, etc
- A number of programs organized by the Training and Placement Cell mainly for the final and pre-final year students to enhance their skills in accordance with the national requirements.

#### **Weaknesses**

- No control on quality of student intake.
- Limited entrepreneurship inculcating courses at the UG as well as the PG levels.
- Absence of Dual Degree and student exchehang programmes

#### **Opportunities**

- New multidisciplinary programmes in the emerging areas of science and technology both at the UG and PG levels.
- Introduction of courses in collaboration with the industries at the UG level.
- Utilization of MOUs signed with various national and International Institutes, industries and research organizations.

### **Challenges**

- The establishment of infrastructure facilities for the design and implementation oriented courses
- Enhancement of Industry-Institute Interaction.
- Periodic Revision of the Curriculum under the autonomous curriculum to cope up with the contemporary needs.
- Industrial training of teachers.
- To introduce curriculum flexibility for both fast and slow learners.

## **CRITERION II: TEACHING-LEARNING AND EVALUATION**

### **2.1 Student Enrolment and Profile**

#### **2.1.1 How does the College ensure publicity and transparency in the admission process?**

##### **Publicity:**

- Admission to undergraduate programmes (B Tech 1st year and B Tech 2nd year lateral entry) is conducted through an independent body entitled “West Bengal Joint Entrance Examinations Board” (WBJEEB).
- They notify the schedule of a state level examination, viz. “ WBJEE”, in all leading regional & english dailys and also in their official website: <http://www.wbjeeb.nic.in> From the merit list of the exam admissions are made.
- The students are admitted to the UG and PG courses through the single window online counselling by WBJEEB and WBUT, respectively.

In order to ensure publicity and to acquire information about the institute and its academic activities, following steps are taken:

- The Institute maintains a website with detailed information.
- The Institute entertains enquiry through its website.
- The Institute publishes Prospectus, Leaflets, and Pamphlets for circulation.
- The Institute participates in some Education Fairs/Career Fairs within the state.

##### **Transparency:**

The Institution follows the guidelines for admission process provided by the Higher Education Department, Government of West Bengal and the affiliating university, MAKAUT.

#### **2.1.2 Explain in detail the process of admission put in place for UG, PG and Ph.D.programmes by the College. Explain the criteria for admission (Ex. (i) merit, (ii) meritwith entrance test, (iii) merit, entrance test and interview, (iv) common test conducted by state agencies and national agencies (v) others followed by the College?**

The entire process of admission is controlled by the Higher Education Department, Government of West Bengal and the affiliating University MAKAUT, formerly known as WBUT.

##### **Admission Procedure & Other Formalities**

##### **➤ Bachelor of Technology (B. Tech) (4-year duration)**

Eligibility for Admission:

- H.S. (10+2) examination with Physics, Chemistry and Mathematics.
- Qualified in Joint Entrance Examination conducted by West Bengal Joint Entrance Examinations Board / Central Board of Secondary Education and recommended by the WBJEE Board
- 80% seats to be filled up by WBJEE candidates, 10% by JEE (Main) candidates and 10% under Management Quota (amongst WBJEE or JEE (Main) rank holders)

- Diploma holder students should qualify JELET for getting admission in the 2nd year (lateral entry) with an additional intake of 20% of the approved intake.
- Master of Technology (M.Tech.) (2-year duration)
- Admissions are made from candidates allotted by MAKAUT as per eligibility criteria prescribed by them (which is a relevant AICTE recognized Bachelor's Degree in Engineering / Technology or equivalent).
- All applicants for admission to M.Tech. Program except those having valid GATE score should sit for a written test (PGET) conducted by MAKAUT.
- However, those having GATE score have to fill in the application form and submit the same to MAKAUT along with prescribed fee.
- Master of Computer Application (MCA) (3-year duration)
- Candidates have to pass Bachelor's Degree in any discipline under (10+2+3) system with Mathematics and having at least 50% marks in the graduation level.
- Candidates should qualify the Joint Entrance Examination (JEEA). There is a provision of up to 10% of seats to be filled up through Management Quota.

**2.1.3 Does the College have a mechanism to review its admission process and student profiles annually? If yes, what is the outcome of such an analysis and how has it contributed to the improvement of the process?**

The admission process is totally under the control of WBJEEB and the affiliating University MAKAUT as per the guideline framed by State Government. Institute follows rules, regulations and guidelines laid down by the state government.

However, the Institute has an Admission Cell who reviews the admission process and observes the rank of the students admitted to different branches.

**Outcome:**

These observations serve as an input to understand the market trend.

**Improvement of the process:**

Depending upon the outcome, the management of the Institution makes decision about the admission strategy to increase intake and introduction of new courses.

**2.1.4 What are the strategies adopted to increase / improve access to students belonging to the following categories**

- SC/ST
- OBC
- Women
- Different categories of persons with disabilities
- Economically weaker sections
- Outstanding achievers in sports and extracurricular activities

The admission process is entirely under the guideline of State Government and institute follows rules and regulations as laid down by the State Government.

### **SC/ST/OBC:**

The institute has a provision for admission of 1 SC and ST candidate in each branch for B.Tech programmes.

### **Women**

The institution does not discriminate on the basis of gender and encourages gender equality.

### **Differently Abled**

Though, the Institution does not have reservations for physically challenged and differently-abled students, but they are treated affectionately and sympathetically.

### **Economically weaker sections**

The Tuition Fee Waiver (TFW) Scheme of AICTE has been implemented by the Higher Education Department, Government of West Bengal for economically backward meritorious students of West Bengal from the academic session of 2011-12. This Institution offers the admissions under said TFW Scheme.

The selection of candidates for the Tuition Fee Waiver Scheme shall be decided on the basis of merit and preference of eligible students in the WBJEEM. Students must be domiciled in West Bengal and the total annual Family Income of the student from all sources must be less than Rs. 2.50 lakhs (Rupees two lakhs and fifty thousand) only.

### **Minority community**

The Institution guides and facilitates the students from minority community for Merit-Cum-Means Scholarship (MCM) from WBMDFC, a Statutory Corporation of Govt of West Bengal. Meritorious (minimum 50% marks at 10+2 level) and needy students belonging to minority communities and domicile of West Bengal with age not more than 32 years are also encouraged to avail the interest free Education Loan up to Rs 50,000 per year from WBMDFC.

### **Any other**

- Student's Welfare Committee (SWC) of the Affiliating WBUT extends the fee waiving relief to the students facing hardship during the studentship in the case of the causalities viz. i) Death of Parent /Guardian / Earning Member of the family and ii) Accident faced during their studentship.
- The students can get Indian Railway train-fare concession from this Institution when travelling to and from their home or for purpose of educational tours.

## **2.1.5 Furnish the number of students admitted in the College in the last four academic years.**

### **B.TECH**

Categories	2011-2012		2012-2013		2013-2014		2014-2015		2015-2016	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
<b>SC</b>	1	-	1	-	1	-	1	-		
<b>ST</b>	1	-	1	-	1	-	1	-		
<b>OBC</b>	-	-	-	-	-	-	-	-	-	-
<b>GEN</b>	1510	581	1825	624	2140	720	2580	764	2814	809

**M.TECH**

Categories	2011-2012		2012-2013		2013-2014		2014-2015		2015-2016	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
SC		-		-		-		-		
ST		-		-		-		-		
OBC	-	-	-	-	-	-	-	-	-	-
GEN	97	86	120	113	111	101	100	93	71	81

**MCA**

Categories	2011-2012		2012-2013		2013-2014		2014-2015		2015-2016	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
SC		-		-		-		-		
ST		-		-		-		-		
OBC	-	-	-	-	-	-	-	-	-	-
GEN	106	55	106	59	91	71	91	82	76	86

**2.1.6 Has the College conducted any analysis of demand ratio for the various programmes offered by the College? If so, indicate significant trends explaining the reasons for increase / decrease.**

Programmes	Number of applications	Number of students admitted	Demand Ratio (%)
B.Tech	Admissions are done centrally based on WBJEE, Government makes admission	3344	> 100
M.Tech	Admissions are done through Post Graduate Entrance Test (PGET) conducted by MAKAUT followed by a centralised counselling conducted by the same .	193	76.5
MCA		161	89.4

**History of increase/ decrease / introduction of seats of various programmes of study**

<u>Year</u>	<u>Description</u>	<u>Reasons for increase/ decrease introduction of seats of various programmes</u>
2011	<p><b><u>Introduction of B.Tech. in</u></b></p> <ul style="list-style-type: none"> <li>➤ Mechanical Engg. (ME)</li> <li>➤ Civil Engg. (CE)</li> </ul> <p>with <b>60</b> intake in each</p> <p><b><u>Introduction of M.Tech. in</u></b></p> <ul style="list-style-type: none"> <li>➤ Electronics &amp; Communication Engg. – VLSI</li> <li>➤ Information Technology</li> </ul> <p>with <b>18</b> intake in each</p> <p><b><u>Increase in intake in</u></b></p> <ul style="list-style-type: none"> <li>➤ B.Tech. in ECE from 120 to 180</li> <li>➤ M.Tech. in CSE from 18 to 36</li> </ul>	Market Demand
2012	<p><b><u>Introduction of B.Tech. in</u></b></p> <ul style="list-style-type: none"> <li>➤ Electrical Engg. (EE)</li> </ul> <p>with <b>60</b> intake</p> <p><b><u>Increase in intake in</u></b></p>	Market Demand



	➤ B.Tech. in CSE from 90 to 120	
2013	<b>Closure of M.Tech. in</b> ➤ Chemical Engg (ChE)	Arising out of poor demand in view of good job market.
2014	➤ Increase in intake of B.Tech (CE) from 60 to 120 ➤ Increase in intake of B.Tech (ME) from 60 to 120	Market Demand
2015	<b>Increase in intake in</b> ➤ B.Tech. in CSE from 120 to 180	Market Demand

**2.1.7 Was there an instance of the College discontinuing a programme during last four years? If yes, indicate the reasons.**

Yes.

In 2013, the M.Tech programme in Chemical Engineering was discontinued, due to poor demand in view of good job market.

**2.2 Catering to Student Diversity**

**2.2.1 Does the College organize orientation / induction programme for freshers? If yes, give details of the duration of programme, issues covered, experts involved and mechanism for using the feedback in subsequent years.**

All newly admitted students to the Heritage Institute of Technology are to attend and participate in the **Freshers' Orientation Programme**. The Programme, called **COMPASS** – (*Campus Orientation Meetings to Prepare for Academic and Social Success*), takes place in the campus.

It is a two-day-long series of activities planned to acquaint the students with the campus community and ease the transition to the new environment.

During the organization programme the students get:

1. Holistic view of the institution specifically the teaching learning process.
2. Head of departments and teachers from different departments address the students. They discuss the curricular structure and examination system.
3. The students get to know about the location of important infrastructural facilities.

In the first week of the commencement of the programme, the faculty members of every department meet the students to assess the knowledge and skills through assignments and interactions on basic sciences, mathematics and others areas which are required for the existing programme and identify the slow, medium and advanced learners. Accordingly, the faculty members plan, strategise and design the effective teaching-learning environments. To impart basic skills of communication in English through intensive practice, the affiliating University MAKAUT designs a paper entitled "English Language & Communication" in the 1st semester syllabus.

**2.2.2 Does the College have a mechanism through which the "differential requirements of student population" are analysed after admission and before the commencement of classes? If so, how are the key issues identified and addressed?**

No.

**2.2.3 Does the College provide bridge /Remedial /add - on courses? If yes, how are they structured into the time table? Give details of the courses offered, department wise/ faculty-wise?**

**Bridge course:**

Yes

- Bridge courses are essential for most of the students to acquire additional skills.

- Skill Development programmes, Personality Development Programmes, Technical and Aptitude and mock evaluations and online tests, English and communication skills, and domain knowledge are some of the common bridge courses.
- These are mostly offered by Training & Placement Cell and faculty of English. External experts are also involved.

### **Remedial Class**

- Remedial classes, or special classes, are conducted for slow learners.
- As the lateral entry students join late with the regular students, such courses are also conducted for lateral entry students.

### **Add - on courses:**

- Intensive soft skill and technical / aptitude training is conducted prior to start of campus recruitment season.
- Students in the first and second year are given grooming sessions and group discussion training.
- The Humanities Department conducts soft skill and communication class room programmes in line with WBUT curriculum.
- In addition corporate companies like TCS are invited and they conduct seminars on relevant topics for the benefit of the senior students.
- Students are also connected to the Infosys Campus Connect, TCS Campus Commune through which they continue to get guidance and training inputs from these organizations.
- We have a Microsoft Innovation Centre which will be utilized by the students for various grades of training and certification programmers of Microsoft.
- Summer training for students of pre final year which is in line with WBUT requirement is also specially arranged through reputed organizations on specified technical and skill programmes to improve their employability prospects.
- Programmes are also organized under the aegis of TEQUIP for employability enhancement of students in technical and soft skill areas, especially tailored to the employer demands from time to time.
- Special training to unplaced students to aid their selection by recruiters.
- Conducted employability evaluation tests through organizations like CMC, Aspiring Minds etc. to identify the areas of individual weakness and address them suitably while conducting training programmes as above.
- Encourage activities pertaining to robotics and participation by HITK students in robotics completion, both within and outside the campus. A robotics society – IrobotiX - has taken shape at the Institute.
- The Institute has a Photography, Film and Drama Club – Prabhasvana
- There is a Social Awareness & Community Service Club (SPARSH).
- To fulfill societal commitment; Rotaract Club of the Institute (UDAAN) under the parent body Rotary Club of Mahanagar has been established, in addition to an active cell of NSS.
- To encourage entrepreneurship activities, an E-Cell (OORJA) has been formed for coordinating with National Entrepreneurship Network (NEN)

### **2.2.4 Has the College conducted a study on the incremental academic growth of different categories of students; - student from disadvantaged sections of society, economically disadvantaged, physically handicapped and slow learners etc.? If yes, give details on how the study has helped the College to improve the performance of these students.**

The institution has a regular scheme of helping economically disadvantaged students in the form of full free studentship to partial monetary help towards admission and semester fees. During continuation of such benefits to the economically disadvantaged students, a continuous vigil is made and a survey is conducted about the sustained academic growth of these students.

For slow learners, unable to keep pace with the rest of the students, evidenced by results of poor class test, practical classes and sessionals are offered additional remedial classes in the specific subjects at the end of each semester. These classes are arranged by respective

departments as per specific requirement of the department. These efforts definitely help the slow learners.

Since process of admission to our Institute takes place as per regulation of the affiliating university and we have so far not received any such directives from the University for implementing special supports for disadvantaged sections of society and physically challenged students during admission or in terms of financial benefit during their studies. Accordingly our institution has so far not conducted any study on their incremental academic growth.

### **2.2.5 How does the institution identify and respond to the learning needs of advanced learners?**

Marks scored by students in class tests and semester end exam in the first half of the academic year helps in identifying the advanced learners.

- The advanced learners are greatly appreciated, valued and in some cases rewarded so that they may further progress and branch out their talents and skills. They are advised to improve their academic proficiency and quality more particularly by consulting numerous advanced textbooks, monographs, conference proceedings and published research articles.
- Intensive coaching is also provided to these students before the exam.
- The advanced learners are encouraged to take part in seminars/symposia/ workshops to achieve awareness of modern advancement in technology, industry and research.
- Teachers play the role of mentors in improving the academic achievement of these students.

### **2.2.6 How does the institution cater to the needs of differently-abled students and ensure adherence to government policies in this regard?**

All academic buildings of the institute have entry ramps and lifts a few toilets are provided for differently abled students.

During laboratory/practical classes special care is taken for imparting proper training to them.

## **2.3 Teaching-Learning Process**

### **2.3.1 How does the College plan and organise the teaching, learning and evaluation schedules? (Academic calendar, teaching plan and evaluation blue print, etc.)**

- The college inculcates in its students the discipline in maintaining the schedule of the class.
- The teachers strictly adhere to the academic and evaluation plan as notified.

#### **Academic Plan:**

- The principal notifies the academic calendar at the beginning of the year.
- The academic calendar is same for 2nd to 4th year year and 2nd year M.Tech (continuing batch). However, it differs to small extent for 1st year B.Tech and M.Tech students, as their admissions are regulated by central authorities.
- The academic calendar is strictly adhered to by the teachers.
- The calendar includes the schedule for commencement of classes, internal tests, practical exams and end semester examinations.

#### **Teaching and Evaluation plan:**

- At the beginning of each semester, lecture plans are prepared by faculty members and strictly followed through the semester.
- The students are informed of the academic plan and examinations through college website. The syllabuses for different courses are posted in the website for their ready reference.
- Examination schedules are announced by the controller of examinations.
- To maintain transparency, answer scripts of internal tests are shown to the students. The final marks of the internal tests are then sent to the controller of examinations through the head of the department.

**2.3.2 Does the College provide course outlines and course schedules prior to the commencement of the academic session? If yes, how is the effectiveness of the process ensured?**

- The concerned teacher prepares the lecture plan.
- On the first day of the class, the teacher explains the course structure and scope of the topics to be covered.
- The students are informed on the syllabus through college website.
- For laboratory courses the students are given a detailed schedule of the experiments to be performed and outlines of the methods to be followed.
- The Head of the department reviews syllabus coverage in Department Academic Committee (DAC) meetings.
- The plan ensures that the teacher can reschedule a certain missed class.
- Any student who has missed some class, understands what he has to make up.
- The teaching plan ensures control on the total syllabus and its timely completion.

**2.3.3 What are the courses, which predominantly follow the lecture method? Apart from classroom interactions, what are the other methods of learning experiences provided to students?**

- In most theoretical courses, the lecture method is followed.
- Lectures are explained on green boards. Some classes have OHP(Over Head Projectors) / LCD projectors which forms another convenient medium to impart instructions.
- Students are encouraged to participate in seminars / conferences and contribute through poster and paper presentations.
- Students are motivated to learn through different open courseware made available by reputed international institutions.
- Seminars/Workshops on recent developments in technology & management are frequently organized with speakers from academia and industry
- An Industry-Institute-Partnership Cell has been set up for strengthening Industry-Institute Interaction in the teaching-learning process, with financial grant from AICTE.
- An Entrepreneurship Development Cell has been set up for encouraging entrepreneurship activities, with financial grant from AICTE.
- Industrial visit and inter semester industrial training.

**2.3.4 How is 'learning' made more student-centric? Give a list of participatory learning activities adopted by the faculty that contribute to holistic development and improved student learning, besides facilitating life-long learning and knowledge management.**

The demand of this generation is to have a holistic approach to education and technical knowledge. This in turn aims at a pattern of learning which is more student centred, so that the students understand the purpose of knowledge and skills they acquire apart from regular examinations. As a result the college encourages in the following ways a more student centred learning:

- Regular student seminar presentations
- Student associations with reputed organisation in the form of establishment of student chapters like ACM.
- Presentation of technical papers in conferences and seminars of repute.
- Research projects in collaboration with other institutes.
- Students conduct technical fests giving them a hands on experience of practical work.
- Internships in industries and training institutes during summer and winter recess.

**2.3.5 What is the College policy on inviting experts / people of eminence to provide lectures / seminars for students?**

- All the departments invite people of eminence for lectures and seminars for students.
- The college has a Science club which organizes lectures by eminent scientists.

- Many students are also part of student chapters of important technical organizations which in turn enables them to invite experts for seminars.

**2.3.6 What are the latest technologies and facilities used by the faculty for effective teaching? Ex: Virtual laboratories, e-learning, open educational resources, mobile education, etc.**

- Apart from regular board work in classes, faculty members also adopt various innovative methods for effective teaching in the form of power point presentations, video lectures etc.
- Faculty members also refer to open course wares made available by reputed international and national institutes.
- The library has an online catalogue which helps students to browse books of their interest.
- Students can access e-journals and e-books made available by the digital library facility.
- Every department is equipped with laptops and projectors to help students gain access to innovative learning.

**2.3.7 Is there a provision for the services of counsellors / mentors/ advisors for each class or group of students for academic, personal and psycho-socio guidance? If yes, give details of the process and the number of students who have benefitted.**

Yes, there is a mechanism of allotting mentors to different groups of students for academic, personal and psycho-socio guidance. This helps students to overcome inhibitions and face challenges.

The details of the process are entailed below:

- Students in each class are divided into groups of 20 and each group is assigned two faculty members as mentors.
- The mentors are selected from their respective subject teachers and departmental faculty members.
- The mentors prepare a register which consists of the details of the mentees.
- The mentors meet the students of their groups at appropriate intervals.
- The students also approach their mentors seeking guidance on relevant issues.

A sample copy of the mentor's list is displayed below:

**MENTORS' LIST 2015-2016**

Stream	Roll Nos.	MENTORS	
		Non-Departmental Teachers involved in teaching 1st yr subjects	Name of the Departmental Faculty
		Name	Name
1st yr AEIE	001-021	Prof. Anandalok Audhya	Prof. Surajit Bagchi
1st yr AEIE	022-042	Prof. Arindam Das	Prof. Arabinda Kumar Pal
1st yr AEIE	043 to rest	Prof. Reshma Sengupta	Prof. Pradip Saha
1st yr BT	001-021	Prof. Ritu Mukherjee(Mishra)	Prof. Nandan Kumar Jana
1st yr BT	022-042	Prof. Aditi Bhunia Chakraborty	Prof. Nababithi Goswami
1st yr BT	043 to rest	Prof. Sudipta Dey	Prof. Dipanabr Chaudhuri
1st yr ChE	001-021	Prof. Jhumpa Bhadra	Prof. Debajyoti Goswami
1st yr ChE	022-042	Prof. Kasturi Guha Thakurata	Prof. Arindam Mandal
1st yr ChE	043 to rest	Prof. Abhyuday Mallick	Prof. Pramita Sen
1st yr CE	001-021	Prof. Ruma Roychowdhury	Prof. Rudraprasad Roychowdhury
1st yr CE	022-042	Prof. Mousumi Mullick	Prof. Monideepa Paul
1st yr CE	043-063	Prof. Arpita Paul	Prof. Prithwish Saha
1st yr CE	064-084	Prof. Rituparna Ghosh	Prof. Ankush Majumdar
1st yr CE	085-105	Prof. Arpita Suchismita	Prof. Kaustav Bakshi
1st yr CE	106 to rest	Prof. Puja Basu Chaudhuri	Prof. Sushovan Sarkar
1st yr CSE	001-021	Prof. Kasturi Sanyal	Prof. Sandip Samadder
1st yr CSE	022-042	Prof. Saptaparna Roy	Prof. Somenath Sengupta
1st yr CSE	043-063	Prof. Sudipta Sarkar	Prof. Arpita Talukder
1st yr CSE	064-084	Prof. Swarnali Sharma	Prof. Sabyasachi Banerjee
1st yr CSE	085-105	Prof. Sumana Barman	Prof. Amitava Acharya
1st yr CSE	106-126	Prof. Partha B. Chowdhuri	Prof. Arindam Chatterjee
1st yr CSE	127-147	Prof. Nilanjana G. Basu	Prof. Nilina Bera

Stream	Roll Nos.	MENTORS	
		Non-Departmental Teachers involved in teaching 1st yr subjects	Name of the Departmental Faculty
		Name	Name
1st yr CSE	148-168	Prof. Sujay Saha	Prof. Mahuya B. Kar
1st yr CSE	169 to rest	Prof. Shilpi Saha	Prof. Lopamudra Dey
1st yr EE	001-021	Prof. Shinjinee Das Gupta	Prof. Sanjib Kumar Kundu
1st yr EE	022-042	Prof. Dipankar Chakraborty	Prof. Bivash Mondal
1st yr EE	043 to rest	Prof. Reetwik Bhadra	Prof. Jayita Sarkar
1st yr ECE	001-021	Prof. Sudepto Sen	Prof. Posiba Mostafa
1st yr ECE	022-042	Prof. Dibyendu Mal	Prof. Tania Das
1st yr ECE	043-063	Prof. Somjit Datta	Prof. Anisha Halder Roy
1st yr ECE	064-084	Prof. Sandip Chatterjee	Prof. Sabyasachi Chatterjee
1st yr ECE	085-105	Prof. Annesha Maity	Prof. Debanjali Sadhu
1st yr ECE	106-126	Prof. Md. Shahnawaz	Prof. Amrita Banerjee
1st yr ECE	127-147	Prof. Susovan Mandal	Prof. Shib Sankar Bhowmick
1st yr ECE	148-168	Prof. Soumya Kanti Raj	Prof. Madhumita Mukherjee
1st yr ECE	169 to rest	Prof. Tapas Chakrabarti	Prof. Abhishek Das
1st yr IT	001-021	Prof. Tanmay Das	Prof. Joydev Hazra
1st yr IT	022-042	Prof. Jyotishman Chatterjee	Prof. Uttam Kumar Dash
1st yr IT	043 to rest	Prof. Rajib Biswas	Prof. Susobhan Baidya
1st yr ME	001-021	Prof. Ajanta Das	Prof. Ritwik Mandal
1st yr ME	022-042	Prof. Nirman Ganguly	Prof. Prasanta Mondal
1st yr ME	043-063	Prof. Moulipriya Sarkar	Prof. Hareram Lohar
1st yr ME	064-084	Prof. Sudipta Roy	Prof. Sumanta Banerjee
1st yr ME	085-105	Prof. Arkadeb Mukhopadhyay	Prof. Amalendu Biswas
1st yr ME	106 to rest	Prof. Raju Das	Prof. Sudip Kumar Halder

**2.3.8 Are there any innovative teaching approaches/methods/practices adopted/put to use by the faculty during the last four years? If yes, did they improve the learning? What methods were used to evaluate the impact of such practices? What are the efforts made by the institution in giving the faculty due recognition for innovation in teaching?**

Yes.

- Faculty members regularly refer to open course wares available in the form of video lectures.
- Resources like NPTEL are frequently used.
- Industrial tours are conducted at regular intervals.
- Students participate in national and international seminars.
- Students gain hands on experience through projects.

The students are evaluated through departmental seminars, where they present their work. They speak on the methodology and their own contribution. These practices have ensured a holistic learning on part of the students besides traditional text book learning. It also ensures that the spirit of teamwork is instilled in them.

The college recognizes the contribution of faculty members through awards of excellence in teaching and research. The faculty members are encouraged to attend faculty development programmes and they share their experience on new skills acquired through seminars organized in the department.

**2.3.9 How does the College create a culture of instilling and nurturing creativity and scientific temper among the learners?**

The UGC and MAKAUT have sanctioned autonomy to the institute. This has helped in introduction of new programmes which in turn has helped in motivating creativity and scientific temper among students.

The following mechanisms are also at place in the college:

- Students are encouraged to write technical papers in conferences and seminars.
- Faculty members are involved with students in preparing technical papers in journals and conferences.
- Students are encouraged to deliver lectures in departmental seminars.

- Students organize technical fests with participation of students from other colleges. The competitive spirit entails creativity.
- Students are encouraged to engage in projects collaborating with other institutions.

**2.3.10 Does the College consider student projects a mandatory part of the learning programme? If so, for how many programmes is it made mandatory? \* Number of projects executed within the College \* Names of external institutions associated with the College for student project work**

**\* Role of the faculty in facilitating such projects**

Yes in our institute we consider project work is a very important part of students' learning programme, both at the UG and PG level. Therefore student project work covering 2 semesters (7th and 8th semester for UG students and 3rd and 4th semester for PG students) have been made mandatory in the course curriculum.

Individual projects are undertaken by the students of small groups under the guidance of faculty members. The projects undertaken are judicious mix of theoretical as well as practical work and the quality and grade of the project of the work is adjudicated by an internal faculty team along with an expert external member. Quite a few output of these project works are published in national and international journals and conferences. A number of practical projects, as working models are preserved in the respective labs.

Quite a large number of these project works are carried out in collaboration with senior faculty members working in similar domain of research in IITs, Universities or in National Institutes. Our students are regularly winning summer trainee fellowship under Indian Academy of Sciences to peruse six month research projects work in highly reputed Research Institutes of India

Yes, the project is a part of the curriculum and this mandatory subject is in the final year for all engineering streams.

**2.3.11 What efforts are made to facilitate the faculty in learning / handling computer-aided teaching/ learning materials? What are the facilities available in the College for such efforts?**

- Faculty members regularly refer to learning materials made available by institutions of national and international repute.
- Digital library facilities are utilized.
- Access to e-journals and e-books complements regular teaching.
- Each department has a seminar room equipped with projectors.
- Students have access to internet facilities through wi-fi and also conventional methods.
- Computer labs have required software for applications and instructional facilities.

**2.3.12 Does the College have a mechanism for evaluation of teachers by the students / alumni? If yes, how is the evaluation used in achieving qualitative improvement in the teaching-learning process?**

Yes

- Mechanism of evaluation of teacher is done by obtaining feedback from students
- The Institution has an online feedback system to evaluate the teachers by students at the end of each semester.
- Feedback is analyzed by Departmental HOD and by the Principal
- Necessary counselling is done to faculty by the HOD of respective departments.

**2.3.13 Does the institution face any challenges in completing the curriculum within the planned time frame and calendar? If yes elaborate on the challenges encountered and the institutional approaches to overcome these.**

- In general there are no challenges faced by the college in completing the curriculum.
- However, common delays in the admission process delays commencement of classes for new entrants.
- In cases where there are delays, the academic calendar is suitably modified without sacrificing instructional days.
- Provision of extra classes are made to makeup syllabus shortfall if any.

### 2.3.14 How are library resources used to augment the teaching-learning process?

Library supports the teaching –learning process in the following ways

- Books are procured as per the requirements of the students and teachers.
- Books are catalogued and processed and the bibliographic information are notified to the library members through the alerting services through LAN / e-mail.
- Through OPAC (Online Public Access Catalogue), the members are made aware of the present status of the books / journals.
- Newly processed books are highlighted through “Display of New Arrivals” at the entrance point of the library.
- Content pages of the currently received issues of journals are scanned and notified to all the departments.
- All the departmental libraries are connected through LAN/ Library Management System software.
- Online journals and online databases can be availed in the digital library and also on the DESK of the teachers through IP authentication system. Services from NPTEL and DELNET are also made available to all users.
- Central Library (about 20 thousand square feet), with Wi-Fi enabled reading room offers good ambience (fully AC and with modern lighting system) to its members.
- New issues of journals are displayed.
- All the books and bound volumes and loose issues of journals are available for browsing to the members in the library through Open Access System.
- Reprographic (Xerox) and scanning services and printout services from online resources are available.
- One core book for each paper is issued to the students for the whole period of a semester. The bar-coded automated issue –return system of the books saves the time of the users.
- After the admission of new batch of students, they are made acquainted with the library systems and services through Library Orientation Programme, and handed over a booklet entitled “Know Your Library”.
- User friendly services, definitely with human touch, from both printed and online resources are rendered to the students and teachers for easy accessibility and availability of the resources in order to augment the teaching –learning process.

### 2.3.15 How does the institution continuously monitor, evaluate and report on the quality of teaching, teaching methods used, classroom environments and the effect on student performance.

The college has the following mechanisms to monitor teaching and learning process:

- Student feedback system.
- Regular department academic committee meetings to discuss on syllabus coverage, problems in classroom management and other aspects involved in teaching
- Self appraisal by teachers.
- **Institute quality assurance cell** has been established to monitor and report on various aspects affecting student performance.

## 2.4 Teacher Quality

### 2.4.1 What is the faculty strength of the College? How many positions are filled against the sanctioned strength? How many of them are from outside the state?

Sanctioned strength = 245

Current Strength = 242

Outside State – Nil



HITK FACULTY STRENGTH												
Sanctioned Faculty Strength								Existing Faculty Strength				
	Department	Student	Faculty	Prof	ASP	AP	Faculty Sanctioned (required as per AICTE)	Department	Prof	ASP	AP	Total faculty strength
1	AEIE	216	15	2	3	10	15	AEIE	1	3	11	15
2	BT	216	15	2	3	10	15	BT	2	1	13	16
3	ChE	180	12	1	2	9	12	ChE	4	0	8	12
4	CSE	432	30	3	6	21	30	CSE	3	4	25	32
5	ECE	612	42	6	10	26	42	ECE	3	3	35	41
6	IT	216	15	2	3	10	15	IT	1	1	13	15
7	CE	240	16	2	4	10	16	CE	1	1	14	16
8	ME	240	16	2	4	10	16	ME	1	2	13	16
9	EE	180	12	1	2	9	12	EE	1	1	10	12
10	ME	900	10	1	2	7	10	ME	0	0	7	7
11	EE		10	1	2	7	10	EE	0	0	3	3
12	MATHS		10	1	2	7	10	MATHS	0	0	12	12
13	CHEM		10	1	2	7	10	CHEM	0	0	10	10
14	PHY		10	1	2	7	10	PHY	0	1	9	10
15	HUM		10	1	2	7	10	HUM	0	0	13	13
16	MCA	180	12	1	2	9	12	MCA	0	1	11	12
	<b>TOTAL</b>	<b>3612</b>	<b>245</b>	<b>28</b>	<b>51</b>	<b>166</b>	<b>245</b>		<b>17</b>	<b>18</b>	<b>207</b>	<b>242</b>

#### 2.4.2 How are the members of the faculty selected?

- Advertisement of the post is published in leading newspapers and, wherever necessary, may request employment exchange / placement consultants for sending name of the persons eligible for the post.
- The requisite qualifications and experience for faculty and staff shall be as per AICTE norms, as detailed in Schedule – A, shall be followed.
- The Competent Authority will scrutinise the applications and decide the selection process modalities as may be considered fit and proper for different category of vacancies. However, the BOG may appoint experienced and highly competent experts (academicians and executives) as Advisors / Adjunct Professors / Emeritus Professors or in Administration for growth and development of the Institute.
- Selection is done by properly constituted Selection Committee(s) with University's Nominee and external subject experts.

#### Procedure for Selection - Selection Committee for teaching staff shall comprise the following members:

- Chairman of the BOG or his nominee – Chairman
- Director/Principal of the Institute – Convenor
- Head or DC of the concerned academic department or his nominee not below the rank of a Professor
- A nominee of the West Bengal University of Technology not below the rank of Professor in a Technical Institute
- A nominee of AICTE not below the rank of Professor
- For Lecturer: Two subject experts, not holding any office of profit in the Institute, out of which one must be present

- For Asstt. Professors / Professors : Three subject experts, not holding any office of profit in the Institute, out of which two must be present

**Procedure for Selection - Selection Committee for all other categories of staff shall comprise the following members:**

- Chairman of the BOG or his nominee – Chairman
- Director/Principal of the Institute or his nominee – Convenor
- Two experts of the relevant functional area, not holding any office of profit in the Institute, from Government Departments, Government undertakings, Institutes of Higher learning and Industrial houses.
- A senior teacher of the concerned department in case of technical staff.
- Quorum for any meeting of the Selection Committee shall be 1/3rd of the total number of members of the Committee plus one.
- In case of any difference of opinion amongst the members of Selection Committee on any issue, it shall be referred to the Director/Principal whose decision shall be binding on all concerned.

**2.4.3 Furnish details of the faculty**

Highest Qualification	Professor		ASP		AP		TOT
	M	F	M	F	M	F	
Permanent Teachers							
D.SC. / D.Litt.	1	-	-	-	-	-	1
Ph.D	12	3	10	2	28	26	81
M.Phil.	-	-	-	-	-	-	0
PG (M.Tech./M.Sc. / M.A.)	1	-	6	-	93	60	160
<b>Total</b>	<b>14</b>	<b>3</b>	<b>16</b>	<b>2</b>	<b>121</b>	<b>86</b>	<b>242</b>

**2.4.4 What percentage of the teachers have completed UGC-CSIR-NET, UGC-NET, and SLET exams? In that what percentage of teachers are with PG as highest qualification?**

Number of teachers ratified in UGC-CSIR-NET, UGC-NET, and SLET are 97 out of 239 = 41%  
Faculty with UGC-CSIR-NET, UGC-NET, and SLET are with PG as highest qualification = (97-38) = 59 = 60%

**2.4.5 Does the College encourage diversity in its faculty recruitment? Provide the following departments-wise details.**

Yes, the College encourage diversity in its faculty recruitment.

Department wise details:

Department	% of faculty who are product of the same College	% of faculty from other Colleges within the State	% of faculty from other States	% of faculty from abroad
AEIE	2% approx	98%	-	-
BT	1% approx	99%	-	-
ChE	-	100%	-	-
CSE	1% approx	99%	-	-
ECE	2% approx	98%	-	-
IT	-	100%	-	-
CE	-	100%	-	-

Department	% of faculty who are product of the same College	% of faculty from other Colleges within the State	% of faculty from other States	% of faculty from abroad
ME	-	100%	-	-
EE	-	100%	-	-
ME	-	100%	-	-
EE	-	100%	-	-
MATHS	-	100%	-	-
CHEM	-	100%	-	-
PHY	-	100%	-	-
HUM	-	100%	-	-
MCA	-	100%	-	-

**2.4.6 Does the College have the required number of qualified and competent teachers to handle all the courses for all departments? If not, how do you cope with the requirements? How many faculty members were appointed during the last four years?**

We have qualified and competent teachers but the shortage we cope up by recruiting competent and qualified teachers as Guest faculty.

YEAR	No of Guest Faculty
2011-2012	18
2012-2013	18
2013-2014	17
2014-2015	10
2015-2016	23

**2.4.7 How many visiting Professors are on the rolls of the College?**

Ten (10)

**2.4.8 What policies/systems are in place to recharge teachers? (Eg: providing research grants, study leave, nomination to national/international conferences/Seminars, in service training, organizing national/international conferences etc.)**

1. Departments are encouraged to organize national/international seminars for increased exposure.
2. Faculty development programmes are organized at regular intervals.
3. Study leaves are granted to faculty members for pursuing higher studies and also to gain professional exposure.
4. Faculty members are encouraged to visit national and international seminars and conferences.
5. The institute rewards faculty members for excellence in teaching and research.

**2.4.9 Give the number of faculty who received awards / recognitions for excellence in teaching at the state, national and international level during the last four years.**

The institute has the provision of giving awards for outstanding teaching and outstanding research accomplishments. However, faculties received awards like DST first track, reviewer recognition, fellow of society etc. in the last four years.

**2.4.10 Provide the number of faculty who have undergone staff development programmes during the last four years. (Add any other programme if necessary 2011-2015)**

**Number of faculty**

Academic Staff Development Programmes	Number of faculty
Refresher courses	32
HRD programmes	25
Orientation programmes	27
Staff training conducted by the College	86
Staff training conducted by University/other Colleges	47
Summer / winter schools, workshops, etc.	136
Any other (please Specify)	-

**2.4.11 what percentage of the faculty have**

- been invited as resource persons in Workshops/Seminars/Conferences organized by external professional agencies 6%
- participated in external Workshops/Seminars/Conferences recognized by national/ international professional bodies 52.5%
- presented papers in Workshops / Seminars / Conferences conducted or recognized by professional agencies 40%
- teaching experience in other universities / national institutions and others 10%
- industrial engagement 1%
- international experience in teaching 1.4%

**2.4.12 How often does the College organize academic development programmes for its faculty, leading to enrichment of teaching-learning process?**

- Curricular Development
- Teaching-learning methods
- Examination reforms
- Content / knowledge management
- Any other (please specify)

**Curricular Development**

It is generally held once in a year. For a new faculty, faculty development programme is held for one day.

**Teaching-learning methods**

- Teacher prepares the lesson plan and accordingly the lectures will be designed after adhering to the syllabus.
- Teacher explains the utility and application of the subject taught in the due course of career of the students.
- Reference books, text books and their usefulness are covered.
- Classroom teaching with chalks and conventional methods are followed on different topics taught.
- LCD/OH projectors are used during discussion at the time of seminars and classes, where the students and teachers are discussing on advanced topics.
- Exposure to external sources of information like e-journals/journals, open sources are advised by the teachers to the students during the execution of the projects.
- College arranges Faculty Development Programmes (FDP) for the teachers in order to ensure the elevation in the teaching-learning process on an average twice a year.

**Examination reforms**

- For Theory Papers –  
Internal evaluation marks 30% comprising of

- Attendance 5%
- Home assignment and Viva Voce 10%
- Two Class Tests 15%
- End Semester Examination – 70% marks
- For Practical Examinations
  - Sessional marks – 40%
  - End Semester Examination – 60%
- Special Supplementary Examination for 1<sup>st</sup> and 2<sup>nd</sup> semester courses are held within 30 days of publication of 2<sup>nd</sup> semester results. Similarly Special Supplementary Examination for 7<sup>th</sup> & 8<sup>th</sup> semester courses will be held within 30 days of publication of 8<sup>th</sup> semester result.

### **Content / knowledge management**

- Conducting workshops/seminars
- Conducting Guest lectures
- Conducting conferences
- 

### **Any other (please specify)**

The college encourages pedagogy training for the faculty members in different institutes to enrich the teaching methodology among the faculty members.

### **2.4.13 What are the teaching innovations made during the last five years? How are innovations rewarded?**

- The concepts of outcome based education have been brought in all departments. Faculties are aware of the Programme Educational Objectives (PEOs) and Programme Outcomes (POs) in order to ensure the course outcomes served.
- Course files are maintained with the lesson plan and rubrics.
- Assessments are evaluated through weightage given to indirect and direct assessment tools.
- Placements are carried out rigorously and the employer's feedbacks are collected in order to identify the performance of the students after pass-out
- Curriculum revision has been done after every four years through workshop chaired by HOD followed by BOS.

### **2.4.14 Does the College have a mechanism to encourage**

**\* Mobility of faculty between institutions for teaching?**

**\* Faculty exchange programmes with national and international bodies?**

**If yes, how have these schemes helped in enriching quality of the faculty?**

- Yes. The faculties are permitted to take adhoc classes in different university.
- Yes. It is partly entertained by permitting the faculty members to go to other institutes for curriculum development. Prof. (Dr.) Pramita Sen had gone to IISC Bengaluru for Post Doctoral in the academic year 2015-16.

## **2.5 Evaluation Process and Reforms**

### **2.5.1 How does the College ensure that all the stakeholders are aware of the evaluation processes that are operative?**

- Evaluation process is a part of the academic regulations designed by the college and the statutory bodies.
- Statutory bodies like BOS followed by academic council followed by BOG to formulate the course curriculum and evaluation procedure and if any sort of modifications required in the academic procedures.
- All the students are notified with the course files and printed booklet on curriculum and regulations. Through them parents are also aware of the evaluation system.

**2.5.2 What are the major evaluation reforms initiated by the College and to what extent have they been implemented in the College? Cite a few examples which have positively impacted the evaluation management system?**

- At each semester two class tests are taken from where 25 marks are added to the final semester. Internal 5 marks are assigned to the attendance. Average of these two class test marks is taken along with the attendance are considered as the internal assessment with the semester marks.
- Free/Professional electives have been included in 3rd and 4th year. Free electives are kept open to all branch students.
- If a student misses any of the class tests he/she will be given a chance to sit for the class test again solely after discussing with the concerned teacher(s).
- Moderation of the semester papers will be done by the external based on the recommendation from Departmental HOD.

**2.5.3 What measures have been taken by the institution for continuous evaluation of students and ensuring their progress and improved performance?**

- Continuous evaluation strategy to ensure continuous reading by the students.
- Evaluation is assessed through two class tests, assignments, tutorials and one semester examination at the end of the half academic year.
- The calendar is distributed at the beginning of the session.
- For students scoring low marks in the 1st class test are assessed and additional inputs are given at the time of remedial classes.
- Average of two class tests' marks is taken along with the attendance are considered as the internal assessment with the semester marks.
- Laboratory classes are assessed with the observations and analysis submitted by the students immediately in the next class after performing the experiments.
- Learning from laboratory classes are evaluated with viva and evaluation of the reports on observations and analysis on the experiments performed then and there.

**2.5.4 What percentage of marks is earmarked for continuous internal assessment? Indicate the mechanisms strategized to ensure rigour of the internal assessment process?**

**B. Tech. (UG)**

- Theoretical: 30% marks from internal assessment and 70% marks from semester examinations
- Laboratory: 40% marks from internal assessment and 60% marks from semester examinations

**M. Tech. (PG)**

- Theoretical: 30% marks from internal assessment and 70% marks from semester examinations
- Laboratory: 40% marks from internal assessment and 60% marks from semester examinations

**MCA**

- Theoretical: 30% marks from internal assessment and 70% marks from semester examinations
- Laboratory: 40% marks from internal assessment and 60% marks from semester examinations
- Within an academic year two semester examinations (odd followed by the even semester) are taken along with four class tests (internal assessments).
- Two class tests are taken within the semester and 30% of the average/best of two marks obtained by the students in the class test are added with the rest 70% of the marks obtained in semester examination.
- 40% marks in the semester examination is considered as the pass mark for a student.
- At the 8th semester (UG) a grand viva 100 marks is given
- At the 4th semester (PG) marks carried in thesis is 100 and grand viva 100.
- Seminar presentation is carrying marks 100
- Project marks are given based on the 40% of the internal assessment along with 60% of the external assessment.

**2.5.5 Does the College adhere to the declared examination schedules? If not, what measures have been taken to address the delay?**

- College adheres to the dates assigned by the University for carrying out the examination. In general for a particular year one regular subject will be held in a day. Under autonomy the examination dates are being assigned by the COE of the college.
- In any case, deferred examination because of sudden reason will be held on dates fixed by the University or the COE (under autonomy) of the college.

**2.5.6 What is the average time taken by the College for declaration of examination results? Indicate the mode / media adopted by the College for the publication of examination results e.g., website, SMS, email, etc.**

- Under autonomy the average time taken to publish the results is 45 days which is published through website.
- Under MAKAUT the average time taken to publish the results is according to the university's discretion. However, the maximum time is 45 days through website.

**2.5.7 Does the college have an integrated examination platform for the following processes?**

\* Pre-examination processes – Time table generation, OMR, student list generation, invigilators, squads, attendance sheet, online payment gateway, etc.

\* Examination process – Examination material management, logistics.

\* Post examination process – attendance capture, OMR based exam result, auto processing, generic result processing and certification.

**Yes.**

Pre-examination procedures

- Time table generation
- Student list generation
- Online payment gateway for fees collection
- Attendance list preparation
- Admit card distribution to the students
- Room arrangement
- Duty assignments for invigilators
- Training of invigilators

Examination process

- Distribution of the question papers and answer scripts
- Recording the attendance
- Collection of answer scripts and sorting
- Despatching the answer scripts to MAKAUT, West Bengal and COE office (Autonomy)

Post examination process

- Distribution of the answer scripts to the concerned faculty members
- Evaluation of the answer scripts centrally
- Preparation of the tabulation sheet
- Execution of a meeting to analyse the result
- Publication of the result

**2.5.8 Has the College introduced any reforms in its Ph.D. evaluation process?**

College doesn't have any Ph.D. programme of its own.

**2.5.9 What efforts are made by the College to streamline the operations at the Office of the Controller of Examinations? Mention any significant efforts which have improved process and functioning of the examination division/section?**

Controller of Examination office is located in a room of area 240 sq. m. The office is chaired by Controller of Examination followed by the Deputy Controller of Examination along with three numbers

of office staffs. The additional staffs required for pre- and post examination procedures during the semester examination are arranged from the internal teaching and non-teaching staffs of the college as per the duty roster given by COE office.

- The controller office is located at a safe place in the building with a provision of entry restricted access.
- The students can only meet the at a out-office, which is non confidential zone
- The confidentiality and safety of the question papers/evaluation copies will be maintained through strong room facilities.
- All decisions of the examination work are kept confidential and under the purview of Controller of Examination.

#### **2.5.10 What is the mechanism for redressal of grievances with reference to evaluation?**

There is a review mechanism for the evaluated answer scripts that is notified to the students after the publication of the results.

### **2.6. Student Performance and Learning Outcomes**

#### **2.6.1 Does the College have clearly stated learning outcomes for its programmes? If yes, give details on how the students and staff are made aware of these?**

- We communicate our Programme Outcomes (POs) to the stakeholders especially parents and Alumni through meetings.
- Our POs are published in our institution's website and curricula books
- Our POs are printed and posted in department office, Staff room, department library and laboratories.

#### **2.6.2 How does the institution monitor and ensure the achievement of learning outcomes?**

Different course delivery methods/modes, e.g. lectures interspersed with discussion, asynchronous mode of interaction, group discussion, project etc., used to deliver the courses and justify the effectiveness of these methods for the attainment of the POs.

##### **➤ Course Delivery Methods:**

- Lecturing
- Quiz
- Experimental Demonstration
- Organizing seminar
- Group tasks
- Case Study
- Hands on training
- Audio visuals presentation(OHP,PPT)

#### **Effectiveness of course delivery methods for the attainment of the Pos**

**A typical example is given below:**

##### **Programme outcomes:**

- a) Apply the knowledge of mathematics, science, engineering practices, innovation techniques, entrepreneurship and human factors to provide value-adding solutions to complex engineering challenges.
- b) Identify, formulate, analyze and document complex engineering challenges to arrive at viable



solutions and substantiated conclusions.

- c) Conceive, Design, Implement and Operate solutions for complex engineering challenges that meet specified requirements with appropriate consideration for public health and safety, cultural, societal, environmental and economical considerations.
- d) Conduct research and investigation into complex challenges using methods which include experiment design, analysis of data and synthesis of information to provide valid conclusions.
- e) Create, select and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modelling, to complex engineering activities, with an awareness of the accompanying assumptions and limitations.
- f) Apply reasoning informed by contextual knowledge to assess societal, health, safety, legal, economical and cultural issues and the consequent responsibilities relevant to professional engineering practice.
- g) Explain the global impact of professional engineering solutions in societal, economical and environmental contexts and demonstrate knowledge of and need for sustainable development.
- h) Apply professional and ethical responsibilities of engineering practice.
- i) Effectively communicate complex engineering activities, both orally and in a written form, in both technical & non-technical contexts.
- j) Function effectively as an individual and in multidisciplinary settings with the capacity to be a leader.
- k) Recognize the importance of lifelong learning and engaging in continuous professional development activities in accordance with technological change.
- l) Effectively manage projects in multidisciplinary environments and apply project management tools and techniques to one's own work, as a member and leader in a team to satisfy stakeholders' requirements.
- m) Design and develop circuit for a product and rectify as necessary.

Course delivery Methods	Attainment of POs	Justification
Lecturing	a,b,c,g,k,l	<ul style="list-style-type: none"> <li>Information to teach students about a particular subject.</li> <li>Lectures are used to convey critical information, history, background, theories and equations.</li> <li>In academia as a quick, cheap and efficient way of introducing large numbers of students to a particular field of study.</li> </ul>
Quiz	a,b,f	<ul style="list-style-type: none"> <li>The technique was very useful and successful. It ensures the attention of learners into the topic at the beginning of the class.</li> <li>In addition, preparing the quiz questions and other similar resources for activity, needs lot of preparation time.</li> </ul>

Course delivery Methods	Attainment of POs	Justification
Experimental Demonstration	c,e,d,m	<ul style="list-style-type: none"> <li>This method of teaching serves as model laboratory instruction</li> <li>This makes the student familiar with use of apparatus</li> <li>Teacher's time is properly utilized in watching the students doing experiments</li> </ul>
Organizing Seminars	i,g,h	<ul style="list-style-type: none"> <li>Exposure to current topics and research trends</li> <li>Seminars are more effective than classical mode of interaction</li> </ul>
Group tasks	f,m,h,j,l	<ul style="list-style-type: none"> <li>Students generally enjoy such sessions. Some of the groups/learners came up with very innovative presentations/demonstrations/role plays.</li> <li>However, lot of time gets consumed in these kinds of activities so that once/twice in a month such a show</li> </ul>
Case Study	b,c,d,e,k,j	<ul style="list-style-type: none"> <li>As students read a case, prepare assignments and actively participate in class discussions they learn how best to approach a problem in a case</li> </ul>

### 2.6.3 How does the institution collect and analyse data on student learning outcomes and use it for overcoming barriers of learning?

Our ultimate goal is to utilize assessment instruments to make ongoing improvements to our program. The institute performs outcomes assessment at two levels: Course level and Program level.

#### ➤ Course Level Assessment

Our experience shows that assignments and examinations in individual courses provide immediate and valuable feedback to both student and faculty. Two unit tests are required in all classes. They allow the faculty to identify any potential problems in related course. Each course has detailed objectives, specific course outcomes. Each course has clearly defined objectives, a set of measurable outcomes and contributes to one or more of the Program's Student Learning Outcomes. The faculty member teaching the course is responsible for reporting any major issues that are revealed from outcomes assessment and initiating any appropriate changes to ensure that the course outcomes are met successfully.

#### ➤ Program Level Assessment.

Outcomes assessment from the program level is carried out by using a variety of assessment methods:

##### 1. Student and alumni surveys reflecting on program outcomes :

Graduating seniors are surveyed at the time of graduation for their perceptions about the program's educational objectives and student learning outcomes and suggestions for improvement.

Alumni from our programs are surveyed to rank the importance of each of our Program Educational Objectives and Student Learning Outcomes in the context of their current professional position and their level of preparation with respect to the objectives and outcomes.

## 2. Employer Surveys:

Faculties visit a company or industry that employs graduates from our program. A set of open ended questions are distributed prior to the visit to provide a foundation for the participants.

## 3. Visits to industry

Our placement cell periodically surveys employers and provides salary information and relevant information on upcoming trends and opportunities to the programs.

## 4. Exit interviews from Graduating Seniors

Stakeholders' data were systematically collected and analyzed. For the purpose of analysis of the result gathered, respondents were asked of their organization profiles. This is to enable a more detailed analysis to be done on certain specific categories, if necessary

### 2.6.4 Give Programme-wise details of the pass percentage and completion rate of students.

Given in tables (vide section 5.2.1)

## SWOC Analysis

### Strengths

- Circulation of the course plan among the students before the commencement of the semester.
- Arrangements of remedial classes help academically poor students.
- Students participate in conferences, lecture sessions and other academic involvements to enrich their knowledge.
- Collection of students' feedback to design course curriculum and enrichment teaching-learning methodology.
- Orientation program for the students and the faculty members facilitates the teaching-learning procedures.
- Recognition of the efforts of faculty members through awards of excellence.

### Weaknesses

- Large no of student have difficulty in english communication.
- Lack of mobility of the faculty members between different institutes and industries.

### Opportunities

- Enhancement of more R&D activities through interactions with the other institutes and industries.
- Increase in the faculty exchange programme.
- Enhancement of IT infrastructure to make teaching learning 24 X 7.

### Challenges

- Retaining of prominent faculty and staff going out with genuine reasons.
- Involvement of faculties from different states of India and abroad to provide a good exposure to the students.
- Obtaining accurate feedback on the attainment of PEOs based on the diversified employment and research activities of passed out students.

## **CRITERION III: RESEARCH, CONSULTANCY AND EXTENSION**

### **3.1 Promotion of Research**

#### **3.1.1 Does the College have a research committee to monitor and address the issues of research? If yes, what is its composition? Mention a few recommendations which have been implemented and their impact.**

Yes, The College has a research committee to monitor and address the issues of Research and Research Projects of the Institute.

The composition of the committee is as follows:

1. Dean (PG and Research) as Chairman
2. Dean (UG) and
3. All HODs as members.

Important recommendations which have been implemented are as follows:

**Among the various recommendations submitted by the committee, some may be cited as:**

- Allocation of a well equipped Laboratory in each department for M.Tech Project work and ongoing research work.
- Arrangement of seed funds for young faculty members to promote their research to a stage which could obtain external grants from national level
- To modernize the R& D labs of the departments by minimum budgetary inhouse support and hence to mould the budgets in that direction.

**The result of the recommendations have yielded fruits in the form mentioned:**

- Research and project grants have been received from the AICTE, DST, UGC, MOBROBs .
- 45 faculty members are currently pursuing Ph.D.
- College is at present enjoying TEQIP Phase II grant after successful completion of TEQIP Phase I.
- Numbers of Faculty members are now enjoying the TQUIP Phase II fund for paper presentations in National and International Conferences.
- The number of publications in journals and paper presentations in Conferences has increased significantly in recent years.
- Seminars and workshops are being organized regularly for the benefit of faculty members and students with resource persons from reputed organizations.

#### **3.1.2 What is the policy of the College to promote research culture in the College?**

**The policy of the college is to encourage faculty members and students in a multipronged manner towards pursue of research.**

- Conduct of seminars, workshops and short term courses to acquaint the faculty members and students with the latest topics in their field of studies.
- To provide financial support to the teachers to attend different national and International, workshops organized by different IITs and other reputed institutions and organizations.
- Grants faculty members Lean against post-Doctoral research work in different Universities within the country and abroad.
- Working hour has been made less for the faculty members who are persuing their research work in collaboration with other Institutions in order to meet their research supervisors. Register is maintained to enter the record of beneficiaries.
- They also utilize library and laboratory facilities of the college of their use.
- There is provision for extra two increments in their salary on receiving the Ph. D. degree in case done in collaboration with other institutions.
- Well equipped Laboratory for M.Tech Project work and undergoing research work has been allocated to each degree awarding department for the smooth running of the projects.

### 3.1.3 List details of prioritised research areas and the areas of expertise available with the College.

Details of prioritized research areas and areas of expertise available with the college:

Department	Prioritized research area	Faculty	Dept	Laboratory facility
<b>AEIE</b>	Micro Sensors, Instrumentation for BLDC Motor , Electrical Impedance Tomography and its different applications in Instrumentation	Dr. Madhurima Chattopadhyay	AEIE	Research lab
	Biomedical Signal/ Image Processing , Pattern Recognition, Embedded System	Dr. Santanu Ghorai	AEIE	DSP lab
	Biomedical Instrumentation	Prof. Surajit Bagchi	AEIE	Microprocessor lab
	Fuzzy logic , Process Control and Control Engineering	Prof. Arabinda Kumar Pal	AEIE	MTech LAB
	Artificial Intelligence , Gas Sensor	Dr. Anil Kumar Bag	AEIE	Industrial instrumentation lab
	Analog Signal Processing	Dr. Soumik Das	AEIE	Power electronics lab
<b>CE</b>	Treatment of municipal wastewater and recycling of it for use purpose	Sushovan Sarkar & Ankush Mazumder	Civil	Environmental Engg lab
	Improvement of the quality of concrete using different types of waste materials and admixtures	Prof. (Dr.) Tapas Sadhu and Prof. Puja Basu Chaudhuri	Civil Engineering	Concrete Laboratory
	Development of software as per technical demand	Prof. (Dr.) Sarmila Sahoo , Prof. Kaustav Bakshi and Prof. Prithwish Saha	Civil Engineering	CAD Laboratory
	Ground Improvement with Conventional Binders	Prof. Monideepa Paul & Prof. (Dr.) Subha Sankar Chowdhury	Civil Engineering	Soil Mechanics Lab – I & II
	Some deformation characteristics of Kolkata clay			
	Effect of organic constituents on strength and deformation characteristics on different types of soils.			
	Utilization of waste material in pavement construction	Prof. Arpita Suchismita & Prof. Rudra Roy Chowdhury	Civil Engineering	Highway & Transportation Engg Lab
<b>BT</b>	Medicinal activity of plants and drugs on biofilm formation	Dr. Soma Banerjee	Biotechnology	Plant Tissue Culture Lab, Bioinformatics lab
	Enzyme and Bioprocess Technology	Dr. Soham Chattopadhyay	Biotechnology	Fermentation lab
	Human Epidemiology	Dr. Riddhi Goswami	Biotechnology	Immunology lab
	Enzyme Technology	Dr. Subhabrata Sengupta	Biotechnology	R & D lab
	Bioremediation	Dr. Srabanti Basu	Biotechnology	R & D lab
	Molecular Modeling & Drug Design, Biophysics	Dr. Dipankar Chaudhuri	Biotechnology	Bioinformatics lab
	Industrial enzyme and genetic biomarkers	Dr. Nandan Kumar Jana	Biotechnology	Molecular Biology lab
	Biological treatment of industrial wastewater	Dr. Sudipta Dey	Biotechnology	Environmental Engineering lab
	Biochemical engineering & Environmental Biotechnology	Dr. Bhaswati Chakraborty	Biotechnology	Environmental Engineering lab
	Plant Molecular Biology & Soil Microbiology	Dr. Ruplekha Chatterjee	Biotechnology	Microbiology lab
	Plant Molecular Biology & Soil Microbiology	Dr. Kakali Mukherjee	Biotechnology	Microbiology lab
	Bio-reactor design	Dr. Tapan Kumar Ghosh	Biotechnology	Fermentation lab
	Bioremediation	Ms. Sonali Hazra Das	Biotechnology	Environmental Engineering lab
<b>EE</b>	Microprocessor & Microcontroller	Satadal Mal, Saibal Dutta & Bivash Mondal	EE	Microprocessor & Microcontroller lab

Department	Prioritized research area	Faculty	Dept	Laboratory facility
	Power System	Sudipta Mitra, Bidisha Roy & Sarmistha Sinha	EE	Power System
	Power Electronics& Drives	Bivash Mondal & Reetwik Bhadra	EE	Power Electronics& Drives
	Electrical Machines	Amitava Hatia & Sanjay Ch. Das	EE	Electrical Machines
IT	Sensor Network, Data Acquisition & Processing	Dr. Tapan Chakraborti	IT	Network lab
	Data management , sensor network	Dr. Ratul Kumar Majumdar	IT	DBMS and network lab
IT	Evolutionary Algorithms for GCP	Dr. Anindya Jyoti Pal	IT	Research lab
CSE	Algorithmic Design & Analysis, Parallel and Distributed Computing, Self-Stabilization, Grid Computing, Algorithm Graph Theory	Dr. Pranay Chaudhuri	CSE	Research lab
	Algorithms, VLSI, Social Networking, Data Analysis	Dr. Subhashis Majumder	CSE	Research lab
	Pattern Recognition, Data Mining, Image Processing, Machine Intelligence	Dr. Dinabandhu Bhandari	CSE	Research lab
	Agent Based System, Services Science, Business Process Modeling, Web-based applications	Dr. Aniruddha Dasgupta	CSE	Research lab
	Image Processing, Computer Network	Dr. Poulami Das	CSE	Research lab
	Data Mining, Social Network Analysis, Machine Learning	Partha Basuchowdhuri	CSE	Research lab
ECE	Electronics & Telecomm. Engg.	Dr. P. Banerjee	ECE	Microwave and Antenna Lab
	RadioPhysics & Electronics	Dr. S. Biswas	ECE	Microwave and Antenna Lab
	RadioPhysics & Electronics	Dr. P. K. Ray	ECE	Microwave and Antenna Lab
	Electronics & Telecomm. Engg.	Dr. A. Sen	ECE	VLSI Lab,
	Control System Engg	Dr. M. Kar	ECE	Control lab
	RadioPhysics & Electronics	Dr. S. Pandit	ECE	Control lab
	Electronics & Telecomm. Engg	Dr. S. Dhar	ECE	M.Tech VLSI Lab
	Electronics & Telecomm. Engg	K .Dutta	EC E	M.Tech VLSI Lab
	Electronics & Telecomm. Engg	Dr. A. H. Roy	ECE	
	RadioPhysics & Electronics	Dr. S. Dasgupta	ECE	Advance Communication Lab
ME	Production & Manufacturing Engineering	Dr. Siddhartha Ray	ME	Advance manufacturing lab
	Fluid Mechanics & Hydraulics Engg, & Turbomachinery	Dr. Sukanta Sarkar	ME	IC Engine Lab,
	Operations Research	Dr. Amal Kumar Ray	ME	Dynamics of Machine Lab
	Fluid Mechanics & Hydraulics Engg.	Dr. Rajarshi Sengupta	ME	Fluid Mechanics lab
	Heat Power	Dr. Sumanta Banerjee	ME	Heat transfer lab
CHE	Chemical Reaction Engineering, Biotechnology and Bioprocess Engineering	Prof. (Dr.) Pinaki Bhattacharya	CHE	process equipment design and drawing lab
	Separation Process including Advanced Separation, Waste water Treatment	Prof. (Dr.) Sangita Bhattacharya	CHE	Mass transfer Lab
	Heat Transfer, Project Engineering, Transport Phenomena	Prof. Bibhuti Ranjan Saha	CHE	Heat Transfer Lab
	Bio-process Engineering, Environmental Engineering	Prof. (Dr.) Swami Vedajnananda	CHE	Mechanical operation lab,
	Nano – Composite and Polymer based Sensor	Prof. (Dr.) Alok Kumar Sen	CHE	Chemical reaction lab,

Department	Prioritized research area	Faculty	Dept	Laboratory facility
	Computational Fluid Dynamics, Flow in microchannels	Prof. (Dr.) Sulagna Chatterjee	CHE	Fluid Mechanics Lab,
	Ultrafiltration, Membrane Separation	Prof. (Dr.) Diptendu Datta	CHE	Chemical reaction lab,
	Petroleum Refinery Engineering & Petrochemicals	Prof. Abhoday Mallick	CHE	energy lab
	Reaction Engineering, Membrane technology	Prof. (Dr.) Pramita Sen	CHE	Chemical reaction lab,
	Biomembrane reactor, nanofiltration, membrane separation	Prof. (Dr.) Dwaipayan Sen	CHE	Chemical reaction lab,
	Nonconventional Energy and Pyrolysis	Prof. (Dr.) Aparna Ray Sarkar	CHE	Energy lab
	Nonconventional Energy and Fuel Cell	Prof. (Dr.) Avijit Ghosh	CHE	Energy lab
<b>MCA</b>	Mobile Wireless Network, Sensor Network, IoT	Dr. Siuli Roy	MCA	ITRA,DISARM project lab

### 3.1.4 What are the proactive mechanisms adopted by the College to facilitate smooth implementation of research schemes/projects?

#### Advancing funds for sanctioned projects

- The college management advances funds whenever necessary to sanctioned projects to accelerate progress of the project.
- Institution provides the overspending of fund if there is any upto certain limit.
- Institute bears the non funded expenses like travelling allowances etc.
- Institute provide and transfer fund from its available TEQIP fund to meet any deficit.

#### Providing seed money

- Seed grant upto Rs. 50,000.00 to be made available from TEQIP( as thought) .
- Autonomy to the principal investigator/coordinator for utilizing overhead Charges
- The Principal investigator / coordinator possess full power to steer the research scheme/ project in the required direction. A separate R&D account is maintained for the project and operated as per requirement.

#### Timely release of grants

- Grants sanctioned for research project are released whenever expenses are to be met by the research team, as per the advice of the Principal coordinator.

#### Timely auditing

- Audit of accounts is done at regular intervals.

#### Submission of utilization certificate to the funding authorities

- Utilization certificate is submitted to the funding authorities within the schedule time.

### 3.1.5 How is interdisciplinary research promoted?

#### ➤ Collaboration with national/international institutes / industries

Collaboration is done between departments of the college with different universities and industries of repute, national and international .some of such projects are

- MOU with **Sun Oil Company Pvt. Ltd.** and **Vikram Solar Pvt. Ltd**
- with the **Centre of Excellence for Green Energy and Sensor System (CEGESS)**,
- **Indian Institute of Engineering Science and Technology, Shibpur (IEST)** to promote collaborative Research and Development activities on efficient solar cells development.

Members of the faculty of Computer Science and Engineering department of the institute has jointly published with faculty members of Electronics and Communication department of Jadavpur university, Kolkata on a current topic of interest namely Mobile computing in the conference EUCNC to be presented in Greece in June 2016.

➤ **Between/among different departments of the College**

Members of the faculty of Computer Science and Engineering and department of Mathematics have jointly co-authored multiple papers published in proceedings of International Conferences as well as peer reviewed journals on subject of interest like Computational Number Theory.

**3.1.6 Enumerate the efforts of the College in attracting researchers of eminence to visit the campus and interact with teachers and students?**

Researchers from industries, IITs, NITs, Universities (National/International) are invited to the campus frequently. They interact with faculty members and students giving suggestion with new direction to the areas in which research is in progress. Eminent scientists and researchers are invited to deliver lectures in current research scenario, enlightening and encouraging the faculty members to carry out research to do Ph. D.

Sl. No.	Name of the expert with designation/Institute	Lecture topic	Number of participants	Date
1.	Dr. Bimal Kumar Basak Ex Executive Director, Wesman Engineering Company Limited	Lecture on Foundry Equipment Usages/Applications		24.04.2013
2.	Dr. Bimal Kumar Basak Ex Executive Director, Wesman Engineering Company Limited	Lecture on Foundry Equipment Usages/Applications		24.04.2014
3.	Dr. Tapan Kumar Ghoshal Dr. Bijan Sarkar Prof. M.K.Tiwari Prof. S. P. Mukherjee Dr. Jaya Sil	Workshop on Research Methodology	32	29.07.2014 to 31.07.2014
4.	Dr. Amitava Mustafi Dr. Tapas Kumar Gupta Mr. Saroj Kumar Sarkar Mr. Sujoy Ghosh Mr. Amarnath Bhadra	Occupational Health & Safety with related Environmental Issues	62	27.03.2014
5.	Prof. Siddhartha Ray Prof. Samir Saha Prof. Bijan Sarkar Dr. Tapan Kumar Ghoshal Dr. Amal Kumar ray	"Research Methodology" course for PhD students of WBUT.	57	06.03.2014 to 08.05.2014
6.	Prof. Palash B.Paul., Saha Institute of Nuclear Physics, Kolkata	Small particles at high energy	150	Venue; Seminar Room, A-building Time: 3:15 p.m. Date; 21-03-2012
7.	Chasing the missing link at CERN: Higgs Boson'	: Prof. Bikash Sinha, Former Director, Saha Institute of Nuclear Physics, Kolkata	700	Venue: HITK, Auditorium Time : 3 p.m. Date : 08-08-2012
8.	Mr. Mriganka Majumdar Former Managing Director, DPL	Challenges in Power System		13 <sup>th</sup> March, 2014
9.	Prof. M.U. Deshpande Former Professor, IIT Bombay	Power System		13 <sup>th</sup> March, 2014
10.	Prof. Sujoy Basu Former Professor, JU	Non-conventional Energy		13 <sup>th</sup> March, 2014
11.	Prof. Biplab Paul Principal, Shri Ram Institute of Technology Sciences	Power System Reforms		13 <sup>th</sup> March, 2014
12.	Prof. Goutam Bandyopadhyay Professor, IEST	Power System Protection		14 <sup>th</sup> March, 2014
13.	Prof. Swapan Kumar Goswami Professor, JU	Current Issues in Power System		14 <sup>th</sup> March, 2014
14.	Prof. Sumana Choudhury Associate Professor, CU	Power Electronics and Non-conventional Energy		14 <sup>th</sup> March, 2014
15.	Prof. Prithwiraj Purkait Professor, Haldia Institute of Technology	Condition Monitoring of Electrical Apparatus		14 <sup>th</sup> March, 2014



Sl. No.	Name of the expert with designation/Institute	Lecture topic	Number of participants	Date
16.	Dr. Sivaji Chakravorti, JU	Importance of Calibration in Quality Assurance	57	17 <sup>th</sup> April, 2015
17.	Dr. Subir Kr. Sarkar, JU	Design Challenges for Low power VLSI Circuits	57	17 <sup>th</sup> April, 2015
18.	Kaushik Roy, Purdue University, USA	NANO-ELECTRONICS: A Bottom-up Approach	65	23 <sup>rd</sup> April, 2014
19.	Kaushik Roy, Purdue University, USA	Approximate Computing for Energy-efficient Error-resilient Multimedia Systems	65	9 <sup>th</sup> April, 2014
20.	Kaushik Roy, Purdue University, USA	Beyond Charge-Based Computing	50	8 <sup>th</sup> April, 2014
21.	Prof. Udayan Ganguly, IIT, Bombay.	Resistance Random Access Memory (RRAM)-Devices (Memory and Selection Device) to Cross Point Array Based Circuits.	60	18 <sup>th</sup> December, 2013
22.	Dr. Amretashis Sengupta, IISC, Bangalore	Next Generation 2D Channel Material based MOSFETs: Overview and Simulation Tools	65	4 <sup>th</sup> September, 2013
23.	Prof. Swapnadip De, MSIT, Kolkata	Short channel effects in MOSFETs	75	11 <sup>th</sup> . March, 2013
24.	Prof. Debaprasad Das, MSIT, Kolkata	Challenges of VLSI Interconnects	80	11 <sup>th</sup> . March, 2013
25.	Prof. A. B. Bhattacharya	MOSFET and Interconnect Inductor Modeling for CMOS VLSI Design"		16 <sup>th</sup> . October, 2012
26.	Prof. R. Jindal, University of Louisiana, USA Dr. M. K. Radhakrishnan, NanoRel Corporation	Two day workshop on Sixth Sense Botz"— Vision and Gesture Control Robotics Workshop.		18th-19th. April, 2012.
27.	Prof. K. S. Dasgupta, IIST, T'puram Dr. Rajeswari Chattopadhyay, Director, NTA Mr. Alak Chattopadhyay, Director, NTA, Bangalore	Faculty development program on Reliable Microwave Communication		August 21-22, 2012
28.	Dr. Madhab Desai, IIT Bombay, Dr. Susanta Sen, CU Dr. S. Kolay, ISI Kolkata Dr. C.K. Sarkar, JU	Faculty development program on VLSI Design and Technology		November 12-13, 2013
29.	Dr. C. K. Sarkar, JU	IEEE- EDS Student Paper Conference (IESPC-2011)		18 <sup>th</sup> April, 2011
30.	Dr. Alex Mason, UK Dr. Samar K. Saha, Director, Compact Modeling Inc, USA Dr. Sikharesh Majumder, University of Saskatchewan, Canada	International Conference on Electronics Communication and Instrumentation, (ICECI -2014)	128	16-17 <sup>th</sup> Jan, 2014
31.	Dr. Nabarun Bhattacharya, Associate Director, C-DAC, Kolkata. Mr. Arunava Chakraborty, Project Manager, Honeywell. Mr. Sarbajit das, Founder & CEO, Sundew Solutions.	Importance of Applied Electronics & Instrumentation in Industry.	60	Date: 04.08.2015
32.	Prof. Panchanan Pramanik, Ex Prof., Dept. of Chemistry, IIT Kharagpur. Prof. Biswajit Ghosh, Prof. Dept. of Energy Studies, JU.	Sensors for disease detection. Energy Technology for Tomorrow in Conjunction with Instrumentation Engineering.	129	Date: 06.11.2015
33.	Mr. Sarbajit Das, Founder & CEO, Sundew Solutions Pvt. Ltd. Mr. Sugata Bandyopadhyay, Senior General Manager, TATA Consulting Engineers Ltd., Saltlake.	Instrumentation in IT Analytical Instrumentation Embedded System	70	Date: 31.07.2014, 01.08.2014

Sl. No.	Name of the expert with designation/Institute	Lecture topic	Number of participants	Date
	Mr. Anupam Baid, Director, Baid Power Services Pvt. Ltd., Lake Town, Kol-89.			
34.	Mr. Anup sarkar, EFY TECH Center, Kolkata.	EMBEDDED & other Electronics System in association with EFY TECH Center, Kolkata. Date: 14.11.2014	60	Date: 14.11.2014
35.	Organized by the Finishing School of HITK under TEQIP-II.	Industry Orientation Program on Advanced C, C++ & Data Structure.		Date:01.04.2015, 08.04.2015, 10.04.2015, 17.04.2015, 22.04.2015, 24.04.2015, 29.04.2015
36.	Mr. Vineet Surana, Beryline Labs Pvt. Ltd.	Trends in DSP based Embedded Systems.	70	Date: 23.04.2015
37.	Organized by The Equity Assurance Committee, TEQIP-II in collaboration with Dept. of AEIE, HITK.	C-Programming Language.		Date: 26.09.2013, 28.09.2013, 03.10.2013, 05.10.2013
38.	Chemistry department ,HIT-K Academic Science Culture Promotion Society	Acharya Prafulla Chandra Ray and Chemistry today	119	28.09.2011
39.	Prof. K. K. Ray, Prof., IEE Dept., Jadavpur University Dr. D. K. Bhattacharyya, Principal architect, in international rectifier (USA)	Power electronics device and application	100	04/04/2012
40.	Dr. R. K. Bhandari- Director, VECC and President of Indian Vacuum Society. Prof. G. Pal- Member of VECC and member of Indian Vacuum Society. Pro. D. L. Bandyopadhyay- Ex. Member of VECC and member of Indian Vacuum Society. Prof. A. K. Ghoshal- Ex. Prof., Jadavpur University and member of Indian Vacuum Society.	Vacuum technology	100	24/04/2012
41.	Mr. S K. Chattopadhyay, IOCL Haldia, and Mr. Shankar Kannan, Chemtrols, Mumbai	Instrumentation –in industry –Practical-Aspects	78	23/02/2013
42.	Mr. Sugata Bandyopadhyay, Senior General Manager, Tata Consulting Engineers Limited, Salt Lake, Kolkata-700091	Analytical instrumentation	70	01/08/2014
43.	Mr. Anupam Baid, Director, BAID POWER SERVICES Pvt. Ltd., Lake Town, Kolkata-700089	Embedded system	70	01/08/2014
44.	Mr. Anup Sarkar, EFY TECH CENTER, Kolkata	Importance of embedded and other electronics system	60	14/11/2014
45.	Mr. Anup Sarkar, EFY TECH CENTER, Kolkata	Embedded system and PCB design funded by funded by TEQIP-II	23	06/07/2015- 10/07/2015
49	Mr. Gourav Dutta Chowdhury, Project Engineer, ICT & S, CDAC,Kolkata	Workshop on “Application Development on Android Platform”		23rd – 27th Sep 2013
50	Mr. Gourav Dutta Chowdhury, Project Engineer, ICT & S, CDAC,Kolkata	Workshop on “C and Embedded C Programming Language”		22nd Feb – 3rd Mar 2014
51	Prof. M Nordin Zakaria, Head,High performance computing centre,UTP Mr. Mohammad Fazli Ahmat Jalaluddin, Technical officer ,UTP Prof. Amitava Chatterjee,Department of	Faculty Development Program On “Image Processing and Data Mining using Open Source Tools” under Technical Education	40	06-Aug-15 – 12-Aug-15

Sl. No.	Name of the expert with designation/Institute	Lecture topic	Number of participants	Date
	Electrical Engg., JU	Quality Improvement Program (TEQIP – II)		
52	Prof. Chandan Ghosh, NDMA Sri Amit Chaudhuri, Spl. Secretary, Department of Planning, Govt. of W.B. Dr. Anish Banerjee, Lead Technical expert, NDMA	Disaster Risk Reduction	44	4 <sup>th</sup> April, 2014
53	Prof. Vincenza Calabro, University of Calabria, Italy, Prof. Stefano Curcio, University of Calabria, Italy Dr. Sudip Chakraborty, Senior Research Scientist, University of Calabria, Italy	Faculty Development programme on Biotechnology and membrane science	8	26 <sup>th</sup> Sept. 2014
54	Mr Dipak Pahari, NRG Tech Services Pvt. Ltd., Managing Director and Principal Consultant, Gujrat	Industrial Safety & HAZOP analysis	27	17 <sup>th</sup> March, 2015
55	Dr. R.N.Singh, INSA Senior Scientist, Emeritus Scientist (CSIR), National Geophysical Research Institute, Hyderabad Dr. Kalyan Rudra, Chairman, WBPCB Prof. Arunava Majumdar, Emeritus Professor, Jadavpur University, Kolkata Dr. Arun Kanti Biswas, MOEF Expert in WBPCB Dr. Somnath Narayan, SE, WBPCB Dr. Rita Saha, Central Pollution Control Board	Workshop on Solid waste management	59	19 <sup>th</sup> & 20 <sup>th</sup> March, 2015
56	Dr. Asit Kumar Das, Head R&D, Refining, Reliance Industries Ltd, Jamnagar, Gujrat Mr. Ramchandra Dutta, Director & Chief Inspector of Factories, Govt. of West Bengal	Distinguished Lectures on Chemical Engineering	59	29 <sup>th</sup> March, 2015
57	Sri Joy Chakraborty, Divl. Engineer, WBREDA Sri Amitava Chakraborty, Addtl. Director, PCRA Sri S.Mohanta, Addtl. Director, PCRA Sri Indrajit Bose, Executive Director, Marketing Division, Indian Oil Corporation Ltd Sri Abhijit Nayak, Asst. Director, National Productivity Council, New Delhi	Workshop on "Energy Conservation Techniques in Industries"	39	27 <sup>th</sup> – 28 <sup>th</sup> September 2013

**3.1.7. What percentage of faculty has utilized sabbatical leave for research activities? How has the provision contributed to the research quality and culture of the College?**

College has no provision for the grant of sabbatical leave for research activities yet.

**3.1.8 Provide details of national and international conferences organized by the College highlighting the names of eminent scientists/scholars who participated in these events.**

Detail of National/International conferences organized by the college:

Sr.no	Name of the conference	Name of eminent scientist/scholar/Industry person	Duration	Number of Participants
1.	National Conference on Mathematical Trends in Physical Sciences	Prof.S.P.Mukherjee,CU Prof.BaniK.Sinha,IIM,Calcutta Dr.Chitralekha Mehera,BU Prof.M.Maity,VU Prof.A.Bagchi,HIT-K DR.B.P.Chatterjee,CMC Prof.B.Sarkar,JU	August 13-14, 2014	100
2.	National Seminar on Role of Mathematics in Socio-Economic Research	Prof. Suman Chakraborty, IIT KGP Prof. G. P. Raja Sekhar, IIT KGP Prof. S. De, IIT KGP Prof. Shashi Kant Mishra, BHU Prof. Archan S. Majumdar, SNBNCBS,	March 28-29, 2015	60

		Kolkata Prof. Anjan Ananda Sen, Jamia Milia Islamia Prof. Narayan Banerjee, IISER, Kolkata Prof. Tanuka Chattopadhyay, CU		
3.	National conference on Instrumentation and Control(NATCONIC I) funded by DRDO,CSIO,C-DAC-K	Prof. S.Sengupta,VC,WBUT Prof.A.Roy,VC,JU Prof S.C.Dutta Roy,IIT,Delhi Prof.E.S.Rajagopal,ISI,Bngalore Dr.P.Kapur,Director,CSIO	6-7 january,2011	70
4.	National conference on Instrumentation and Control(NATCONIC) funded by TEQIP-II	Prof.N.C.Shivoprakas	2days,26-27-February,2013	80
5.	International conference on electronics communication and instrumentation (ICECI) funded by TEQIP-II	Dr. Alex Mason, UK Dr. Samar K. Saha, Director, Compact Modeling Inc, USA Dr. Sikharesh Majumder, University of Saskatchewan, Canada	16-17 january,2014	128
6.	1 <sup>st</sup> International Conference on Applied Algorithms (ICCA 2014) under TEQIP II	Prof.Susanne Albers, Humboldt-Universitat zu Berlin, Germany Prof.Bhargab B. Bhattacharya, Indian Statistical Institute, Kolkata, India Prof.Dimitrios Gunopulos, University of Athens, Greece Prof.Rina Panigrahy, Microsoft Research, Mountain View, USA Prof.Assaf Schuster, Technion, Prof.Israel Inst. Of Tech., Haifa, Israel Prof.Christos Zaroliagis, University of Patras, Greece	3 Days(13-Jan-14-15-Jan-14)	139
7.	International conference on advances in bioprocess engineerinf and technology	Professor Abraham Lenhoff,COBRE Professor Doraiswami Rmkrishna,Purdue University Professor Mohini M.Sain ,University of Toronto,Canada Professor M.M.Sharma,a fellow of royal societ ,UK Professor Uttam AC Banerjee,nit punjab	20-22 an 2016	130

### 3.1.9 Details on the College initiative in transferring/advocating the relative findings of research of the College and elsewhere to the students and the community (lab to land).

The awareness about the latest research available at institute and university level is shared among the students and faculty members from all walks of life. The practical work of software development is demonstrated before the students by the expert faculty members in the respective fields, and students are advised to check its practical applicability in market and in daily life.

- It is compulsory for the students to hold seminars based on their project works.
- Students participates in various technological programs and contests where they display their research and project works and institute provides fund to encourage.
- The Institute organizes Technological Fest in every year where the students of our institute as well as students from various Institutes/organizasions participated and demonstrated their models, research projects.
- External experts are regularly invited by the institute to give lectures to the students on advanced research topics.
- The students are also given exposure through conferences /seminars/workshops. (Details can be obtained from Departmental information.)

### 3.1.10 Give details on the faculty actively involved in research (Guiding student research, leading research projects, engaged in individual or collaborative research activity etc.)

The faculty members are extensively involved in several individual as well as collaborative research activities. Guiding students for their research activities are one of the top priorities of the faculty members. Details of which are available in the respective departmental entres in the website.

### 3.2 Resource Mobilization for Research

#### 3.2.1 What percentage of the total budget is earmarked for research? Give details of major heads of expenditure, financial allocation and actual utilization for last four years.

Rs. 10 lacs was allotted for research last year.

The college provides budget for research as a part of the total budget for the following activities

- To conduct and attend seminars /workshops
- To purchase new software/hardware unit as per requirement for the research activity
- Research paper publication allowances upto Rs. 26,686.00 (Total amount spend Rs. 50,660.00)
- Expenditure on participation by faculty in seminars /conferences/workshops.
- Expenditure in organizing in house subject area training programme/workshops/Seminars/continuing education programmes Rs. 50.72 Lakhs from TEQUIP II projects.

#### 3.2.2 What are the financial provisions made in the College budget for supporting student research projects?

There are different categories under which research is undertaken on campus. The B.Tech Programme, M.Tech Programme, MCA Programme where research is possible through the fee collected for the programme, with each activity having a different fee structure on an estimate of the expenditure likely to be incurred for the activity by the faculty in charge.

- Registration fees and travel allowance per student for their paper publication in journal /conference is reimbursed by the college after attending and submitting the proper document.
- Financial assistance for purchasing software /hardware.

	2011-12		2012-13		2013-14		2014-15		2015-2016	
	Proposed in lacs	Actual in lacs	Proposed in lacs	Actual in lacs	Proposed in lacs	Actual in lacs	Proposed in lacs	Actual in lacs	Proposed in lacs	Actual in lacs
AEIE	2.00	2.27	2.00	1.45	2.00	1.77	2.25	2.23	2.50	1.98
BT	1.00	0.59	1.00	1.43	1.00	0.84	1.50	1.70	1.50	1.03
CHE	0.50	0.25	0.50	0.64	0.50	0.76	0.50	0.65	0.50	0.39
CIVIL	--	--	--	--	--	--	0.50	0.48	0.50	0.26
CSE	3.00	3.00	3.00	2.16	3.00	2.52	3.50	2.73	4.00	3.60
ECE	3.00	2.42	3.00	2.10	4.00	3.30	5.00	5.03	7.00	6.42
EE	--	--	--	--	--	--	--	--	1.00	0.95
IT	2.00	1.83	2.00	1.41	2.00	1.47	2.00	1.66	2.00	1.65
ME	--	--	--	--	--	--	0.50	0.27	1.00	1.00
MCA	1.00	0.93	1.25	1.23	1.25	1.15	1.25	1.14	1.25	1.14

#### 3.2.3 Is there a provision in the institution to provide seed money to faculty for research? If so, what percentage of the faculty has received seed money in the last four years?

- Faculties are encouraged to apply to AICTE, DST, UGC, other Government Departments, and other organisations for research funding. The College itself have the resources to provide seed money. However, infrastructure, including space, equipment and other facilities are constantly being upgraded by the College, to enable good research. The College covers the expenditure that sometimes does not come from Funding Agencies or from Industry. We have a few such instances. A proposal for grant of seed money to faculty members through TEQUIP is under active consideration.
- Seed fund upto 2 lakhs to be made available through TEQUIP (as thought)

#### 3.2.4 Are there any special efforts made by the College to encourage faculty to file for patents? If so, provide details of patents filed and enumerate the sanctioned patents.

Yes, college makes effort to encourage the faculty to file for patents. the following faculty member has filed for patent.

1. Dr. Madhurima Chattopadhyay, "A CPAP respirator system using MEMS sensor", Patent No. 1333/KOL/2015 (Filed).
2. A process for the preparation of commercially and pharmaceutically important enzymes (pectinase and acid stable disaccharidases) from the plant *Calotropis gigantea*. Sengupta S, Mukherjee A. [Indian Patent application No.1104/KOL/2012. Publication date: 28.03.2014]
3. Sengupta S, Mukherjee A and Sengupta S. : A process for the development of an ultra sensitive test method for detection of mercury ion. Patent Application No. 585/KOL/2011.
4. Characterization of nimbidol as an alpha-glucosidase inhibitor present in neem (*Azadirachta indica*), useful for non-insulin dependent diabetes treatment. Sengupta S, Mukherjee A. [Application No. 768/KOL/2011].
5. A process for the preparation of a novel disaccharidase enzyme composition from the plant *Tinospora cordifolia* useful for disaccharide intolerance therapy. Sengupta S, Mukherjee A and Sengupta S. [Application No. 769/KOL/2011].
6. A process for the preparation of a complete enzyme composition from the plant *Tinospora cordifolia* useful for hydrolysis of starch into glucose as the major end product. Sengupta S, Mukherjee A and Sengupta S. [Application No.1989/KOL/2008; Publication date: 29.04.2011].
7. A process for inhibiting germination of monocotyledonae and dicotyledonae plant seeds. Sengupta S, Majumder K, Mukherjee A. Application No. 664/DEL/2006 A. Publication date: 26.08.2011]
8. Telnet/SSL/zModem based Secure File Transfer Process, Inventors – Arindam Chatterjee, Subhashis Majumder, Pankaj Goyal, Rounak Agarwal and Sourav Kundu, Reference No (Patent Booking No. furnished by the Patent Office): 883/KOL/2013, filed on 24th July, 2013 in Kolkata.
9. Improved Merge Sort Algorithm by Creating Better Partitions, Inventors – Subhashis Majumder and Md. Aman Khan, Reference No. - E-2/1278/2014-KOL (Application No. - 813/KOL/2014), filed on 31st July, 2014 in Kolkata.
10. An Optimum Microfluidic Sample Dilution Method using Weighted Mix-Split of Droplets, Subhashis Majumder, Nilina Bera and Bhargab B. Bhattacharya, Reference No. - E-2/1420/2014-KOL (Application No. - 882/KOL/2014), filed on 27<sup>th</sup> August, 2014 in Kolkata.
11. Optimization Technique using Evolutionary Algorithms, Dinabandhu Bhandari, CA Murthy, Sankar Kumar Pal, US Patent. Patent No. – 8700548 (Application No. – 13/265, 480).

### 3.2.5. Provide the following details of ongoing research projects funded by college.

Till now college has no such fund to support research projects of its own.

### 3.2.6. How many departments of the College have been recognized for their research activities by national / international agencies (UGC-SAP, CAS, DST-FIST; DBT, ICSSR, ICHR, ICPR, etc.) and what is the quantum of assistance received? Mention any two significant outcomes or breakthrough due to such recognition

All the Engineering and Service departments of the institute have undertaken research activities which are recognized by national agencies.

(Details are available in the respective Departmental profile.)

### 3.2.7 List details of completed research projects undertaken by the College faculty in the last four years and mention the details of grants received for such projects (funded by Industry/National/International agencies).

Consultancy, Training, Testing, R&D Projects	Name of Funding Agency	Amount (in Rs.) Lacs	Duration of the Project		Remarks (ongoing or completed)
			From	To	
Dr.Madhurima Chattopadhyay	DST-FIRST TRACK, National Agency ,	Rs-14.37lacs	March 2014	March 2016	ongoing
Prof .Arabinda Kumar Pal	AICTE 8023/RID/RPS-24/2010-11/dtd31.03.2011 &200-62/FIN/04/05/2368dtd 20.05.2011	8.75	June 2011	June 2013	completed

Prof. S.Sengupta	AICTE Funded Projects RPS	Rs-10.5	2010	2012	completed
Dr.S.Bhattacharjee	All India Council of Technical Education (AICTE-RPS)	Rs. 13.67	Feb. 2012	Feb. 2014	completed
Prof. S.Sen -	All India Council of Technical Education (AICTE-RPS)	Rs.19			
Prof. Anindita Bhattacharya	Department of Science & Technology (DST) on under FAST Track Young Scientist Scheme for three years	17	2011	2013	completed
Prof.Sandeep Chatterjee Funded	AICTE-	8 lacs	2010	2012	completed

### 3.3 Research Facilities

#### 3.3.1 What efforts are made by the College to keep pace with the infrastructure requirements to facilitate Research? How and what strategies are evolved to meet the needs of researchers?

Infrastructure required to facilitate research in the institute has been taken care of. With a view to promote research, the college has appointed Dean of Research to oversee the smooth working of the research facilities within the campus. Research labs are provided in all specialized fields of the departments. Labs are spacious enough to accommodate equipments necessary to carryout research that can be extended to graduate and under graduate students. Individual cubicles are provided to all the faculty members with computers and internet facility to pursue research without disturbance. Large labs with all accessories are provided for students research activity at the under graduate and post graduate level.

A team is formed to pursue research and the needs of the researchers are given highest priority. Almost all departments have separate research lab.

#### 3.3.2 Does the College have an information resource centre to cater to the needs of researchers? If yes, provide details on the facility.

Yes, the college has an information resource center to help the researchers.

Following are the facilities available:

- There is a 'Research and Development' section constantly giving upgraded information about the ongoing research works world wide.'
- The college library subscribes to several journals and books that could be used by researchers
- Digital library system
- Traditional library media
- All departments are provided with internet facility

#### 3.3.3 Does the College provide residential facilities (with computer and internet facilities) for research scholars and faculty?

No residential facilities are available for researchers at present. Internet access is available in departments and laboratories.

#### 3.3.4 Does the College have a specialized research centre/ workstation to address challenges of research programmes? If yes, give details.

Since research programs are undergoing at the individual faculty levels they utilize their own specialized laboratories/ centers as well as project laboratories for the purpose.

#### 3.3.5 Does the college have research facilities (centre, etc.) of regional, national and international recognition/repute? Give a brief description of how these facilities are made use of by researchers from other laboratories.

Yes. Details are available under entries of individual departments.

### 3.4 Research Publications and Awards

#### 3.4.1 Highlight the major research achievements of the College through the following:

- major papers presented in regional, national and international conferences

Details as per individual departmental profile.

- publication per faculty

#### AEIE

Year		Publication
2015	International	13
2014	International	8
2013	International	9
2012	International	7
2011	International	2

#### BT

Year		Publication
2015	International	8
2014	International	10
2013	International	8
2012	International	5
2011	International	4

#### CHE

Year		Publication
2015	International	06
2014	International	14
2013	International	16
2012	International	15
2011	International	06

#### CIVIL

Year		Publication
2015	International	06
2014	International	14
2013	International	10
2012	International	10
2011	International	04

#### CSE

Year		Publication
2015	International	18



2014	International	05
2013	International	05
2012	International	14
2011	International	10

## ECE

Year		Publicatio n
2015	International	27
2014	International	15
2013	International	17
2012	International	10
2011	International	10

## EE

Year		Publication
2015	International	07
2014	International	07
2013	International	05
2012	International	06
2011	International	03

## IT

Year		Publication
2015	International	05
2014	International	00
2013	International	3
2012	International	11
2011	International	00

## MCA

Year		Publicat ion
2015	International	06
2014	International	14
2013	International	10
2012	International	02
2011	International	04

## ME

Year		Publication
2015	National	4
	International	7
2014	National	3
	International	6
2013	National	3
	International	4
2012	National	3
	International	4
2011	National	3
	International	2

➤ faculty serving on the editorial boards of national and international journals

Following faculty members are attached to the editorial boards of national and international journals:

1. **Prof. Subhabrata Sengupta** is one of the members of the editorial board of journal '**Current Enzyme Inhibition.**'
2. **Atanu Kundu** is a member of JARS editorial Board.
3. **Dr. Nandan K Jana** is a member of following editorial board of journals  
(From 2012- till now)

- (i) Greener Journal of Biological Sciences (GJBS)
- (ii) Journal of AIDS and HIV Research (JAHR)
- (iii) Journal Brewing and Distilling (JBD)

4. **Dr. T.K.Ghosh** is a member of following editorial board of journals

- (i) Journal of Developmental Biology and Tissue Engineering (since 2010)
- (ii) Recent research in Science and Technology (since 2012)

➤ Faculty members on the organisation committees of international conferences, recognized by reputed organizations / societies include

- International Conference on Advances in Bioprocess Engineering and Technology (ICABET- 2016) funded by TEQIP-II. **The details are in the department.**
- 1<sup>st</sup> International Conference on Applied Algorithms (ICCA -2014) funded by TEQIP-II . **The details are in the department.**
- International Conference on Electronics Communication and Instrumentation (ICECI-2013) funded by TEQIP-II . **The details are in the department .**
- Dr. Subhashis Majumder was a programme committee member of VDAT-2014 International conference.
- Dr.Dinabandhu Bhandari was a member of different programme committee as below:  
2015-16  
Member, Program Committee, International Conference on Computer Vision and Image Processing (CVIP 2016), IIT Roorkee  
2015-16  
Member, Technical Program Committee, 2nd International Conference on Computational Intelligence & Networks, 2016, KIIT University, Bhubaneswar, Odisha, India  
2014, 2015

Member, Program Committee, 2<sup>nd</sup> and 3<sup>rd</sup> International Conference on Advanced Computing, Networking, and Informatics [ICACNI-2014], Kolkata and Bhubaneswar 2013

Member, Program Committee, International Conference on Pattern Recognition and Machine Intelligence (PReMI 13), Kolkata, India

**3.4.2 Does the college publish research journals? If yes, indicate the composition of the editorial board, publication policies and whether it is listed in international database?**

NO

**3.4.3 Give details of publications by Faculty:**

**Number papers published in peer reviewed journals (national / international)**

The total number of publications by the faculty is 427 in national and international journal in last five years.

**B Monographs:** Each department has printed Monograph (lab manual) for each laboratory and supplied to the students. Details as per individual departmental profile.

**Chapters in Books: 33 (Details are available in departmental report)**

**Editing Books:**

**Books with ISBN numbers with details of publishers: 34**

**(Details are available in departmental report)**

**Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.):**

Citation Index-range/average:	1-200
SNIP:	0-1.03
SJR:	0-1.2
Impact factor-range/average:	0.5-8
H-index:	0-7

**3.4.4 Indicate the average number of successful M. Tech, M. Phil. and Ph. D scholars guided per faculty.**

M. Phil. course is not offered by the Institute. Regarding M.Tech and Ph.D. scholars guided per faculty, detail is available in the respective departmental profile.

**3.4.5 What is the stated policy of the College to check malpractices and misconduct in research?**

The Institution has a well known and publicized zero tolerance policy towards plagiarism and malpractices in research. It may be noted that there have been no such cases of plagiarism in last five years.

**3.4.6 Does the College promote interdisciplinary research? If yes, how many inter departmental / inter disciplinary research projects have been undertaken and mention the number of departments involved in such an endeavour.**

The college supports interdisciplinary academic ventures, both intra and inter institutional. Many faculty members are involved in various interdisciplinary research projects.

The institute, however, has taken a decision to apply for the permission to introduce an M. Tech. Course in 'Energy Science' that will allow graduates of different discipline under the course.

**3.4.7 Mention the research awards instituted by the College.**

The College has instituted one annual Research award. It is given to a member of the faculty for the contribution they have made to research in their field. The award has been instituted since 2006. The following faculty members received the award since its inception.

Year	Name of the faculty member	Department
2012	Dr. Shreedhara Gupta,	Assistant Professor, Chemistry
2013	Prof. Arabinda Kumar Pal,	Associate Professor, AEIE
2014	Prof. (Dr.) Srabanti Basu,	Associate Professor & HOD, Dept. of Biotechnology
2015	Prof. Atanu Kundu	Assistant Professor, Dept. of ECE

**3.4.8 Provide details of:****Research awards received by the faculty:**

Quite a few numbers of faculties have bagged awards regarding their research activities from reputed professional bodies and National Institutes.

**3.4.9. State the incentives given to faculty for receiving state, national and international recognitions for research contributions.**

The individuals who receive awards are usually honoured with a congratulatory reception in the departmental level. Their achievements are also given recognition by the college with special mention in the college magazine and on the website.

**3.5 Consultancy****3.5.1 What is the stated policy of the College for structured consultancy? List a few important consultancy services undertaken by the College.**

Faculty and staff members are encouraged by the college to offer consultancy to promote research grant from industry and build up Industry-Institute partnership.

1. East India Pharmaceuticals Works Pvt. Ltd.  
Address: 6, Nandalal Bose Sarani, Kolkata -700071, West Bengal, India  
Status of the project: Phase I completed  
Principal Investigator: Prof. (Dr.) Pinaki Bhattacharya  
Co- Principal Investigator: Prof. (Dr.) Diptendu Datta
2. Consultancy with East India Pharmaceuticals Works Pvt. Ltd. in order to produce specialized chemicals and Revenue generated: 5000 INR

**3.5.2 Does the College have College-industry cell? If yes, what is its scope and range of activities?**

Yes.

College has MOUs with Industries (Sun Oil Company Pvt. Ltd.; Vikram Solar Pvt. Ltd.; Baid Power Electronics; Sankalp Electronics; CEGESS, IEST)  
In regard to

- Collaborative research and development work
- Faculty and student training in the industries
- Plant visit by the faculties and students.

**3.5.3 What is the mode of publicizing the expertise of the College for consultancy services? Mention the departments from whom consultancy was sought.**

The expertise of teachers specially that are related to engineering is well known in the state. The faculty members are often called by different institutions to provide expert advice on matters related to wide range of issues from engineering to environment.

**Chemical Engineering, Bio-Tech. and Computer Science Engineering** are three departments from whom consultancy services were sought. (Details are again available in the departmental report)

**3.5.4 How does the College encourage the faculty to utilise the expertise for consultancy services?**

Name of Project	Principal Investigator/ Co Principal Investigator	Funding Agency	Amount (in Rs.)	Nature of Consultancy
Supply and Order Management System(SOMS)	Dr. Aniruddha Dasgupta Kamal Poddar Mandakini Majumdar Poulami Das Satabdi Barman Sandip Samaddar Anindita Ghosh	Vikram Solar Pvt. Ltd	2,75,000/-	Software development work
Project titled "Preparation of Nitro-p - dichlorobenzene via nitration of p-dichlorobenzene"	Prof. (Dr.) Pinaki Bhattacharya; Co-PI: Prof. (Dr.) Diptendu Datta	East India Pharmaceuticals Works Pvt. Ltd. (Address: 6, Nandalal Bose Sarani, Kolkata - 700071, West Bengal, India). Status of the project: Phase I completed	Rs. 60,000/-	Research and development work

**3.5.5 List the broad areas of consultancy services provided by the College and the revenue generated during the last four years.**

- (a) Consultancy with East India Pharmaceuticals Works Pvt. Ltd. To Chemical Engineering Department on production of specialized chemicals Revenue generated: 5000 INR (CE)

**3.6 Extension Activities and Institutional Social Responsibility (ISR)**

**3.6.1 How does college sensitize the faculty and students on Institutional Social Responsibilities? List the social outreach programmes which have created an impact on students' campus experience.**

Yes, For the purpose of Institutional Social Responsibilities our students' are actively participate in "Rotract Club", which has been officially presented the Charter of Rotary International, being next only to IIM Calcutta, IIT Kharagpur and Jadavpur University, in the state of west Bengal with following activities:

Social outreach programmes	Date, Venue
1. Rainbow 2015	23 <sup>rd</sup> August 2015 The Heritage School Auditorium, Heritage Institute of Technology

2. Slam Poetry Session	9 <sup>th</sup> August, 2015 Heritage Institute of Technology
3. Suryakiran Independence Day	20 <sup>th</sup> August, 2015 The Heritage School Auditorium, Heritage Institute of Technology
4. Threads That Unite	1st September, 2015 Heritage Institute of Technology, Anandapur
5. Lending a Hand	5 <sup>th</sup> October to 6 <sup>th</sup> October CB lobby, AV Hall, Heritage Institute of Technology
6. Thalassaemia Awareness Workshop	4th November, 2015 Department of Biotechnology, at A-building Seminar Hall, Heritage Institute of Technology

**3.6.2 How does the college promote College-neighborhood network and student engagement, contributing to holistic development of students and sustained community development?**

Our college students' are actively participate in following activities in every year:

- Visiting Malwani Homes, an old age home for women on a regular basis for contributing towards easing their lives.
- Weekly visit to a school for underprivileged children in the slum under the Ballygunge Bridge run by SLARTC, an NGO, to impart teaching.
- Organizing Annual Sports Day and Diwali celebrations for the kids of Suryakiran.
- "Clean up Drive"-Along the lines of the recent national movement of "Swachh Bharat Abhiyan", RC-HITK in collaboration with the Heritage Group of Schools and Colleges organized a clean-up drive on 14th of November, 2014.



- On 23rd of March, 2014 a team of enthusiastic Rotaractors from Rotract Club of Heritage Institute of Technology visited a slum school in Beliaghata, run by the NGO, "Kholo Ankhi" to conduct a Health and Hygiene Workshop. There were a total of 50 children belonging to the age group of 5-10 years.



- On 23rd of February 2014, a health camp was organized by KALYAN BHARTI TRUST in the college campus from 10:00a.m-1:00p.m. The event saw a massive turnout of around 200 people from the neighboring villages of Anandapur.

### 3.6.3 How does the college promote the participation of students and faculty in extension activities including participation in NSS, NCC, YRC and other National/International agencies?

1. Our college encourages the participation of students and faculty in extension activities as in our WBUT curriculum a course of NSS (XC181) is mandatory in 1<sup>st</sup> semester.
2. A very active Rotract club and their participation in many activities which promotes in various internet sites.

- Uncharted Delta Project got published in the RI Newsletter.: <http://rotarynewsonline.org/2015/11/06/light-after-storm/>
- Our Pujo Projects got a mention in Telegraph
- Waste Management at Kulti got published in Earth Smiles and Campus Buzz: [http://www.earthsmiles.net/0715/articles003\\_stories.html](http://www.earthsmiles.net/0715/articles003_stories.html), <http://www.wbutadda.com/campus-buzz/h/heritage-institute-of-technology/garbage-free-india-initiative-by-rotaract-club/>
- First Ever publication in the Rotary International News: <http://rotarynewsonline.org/2015/11/06/light-after-storm>
- Publication in EarthSmiles.net [http://www.earthsmiles.net/0715/articles003\\_stories.html](http://www.earthsmiles.net/0715/articles003_stories.html)

### 3.6.4. Give details on social surveys, research or extension work (if any) undertaken by the College to ensure social justice and empower the under-privileged and most vulnerable sections of society?

An exhaustive survey was carried out by our institution to look after the under-privileged and vulnerable sections of society. Our students and member of Rotract club are weekly visited some of the places on "Literacy Project" who are under-privileged

1. **Chingrighata Classes-** For more than a year now, our Rotract club provide tutorial classes twice a week for those students who are from the families that are under poverty line.

2. **Magrahat Classes:** Every Sunday morning, a couple of our extremely dedicated volunteers reach to Magrahat to teach subjects ranging from English grammar and vocabulary to pronunciation.
3. **Spoken English classes at Rajabazar:** To empower girls from orthodox Muslim families, Rotract club of HITK started teaching spoken English to a school at Rajabazar. A group of & enthusiastic girls from slums in Rajabazar come every Wednesday to Friday to learn spoken English.
4. **Adult Literacy Project:** Rotract club of HIT-K has taken up the task of empowering the women of working class. The mothers of Suryakiran school ( a school of under-privileged under the Kalyan Bharati Trust) mostly belong to working class. A group of 10 extremely enthusiastic women are being taught the fundamentals of English, Bengali, Hindi and Maths. They also plan to teach them handicrafts to enhance their monthly income. The classes are being held twice a week.
5. **Suryakiran computer class:** There is never a dull day spent with the Suryakiran ex-students who come for the computer classes. The classes are conducted every Thursday from 3-6pm in the heritage school computer lab.

### 3.6.5. Give details of awards / recognition received by the College for extension activities community development work.

Rotaract Club of Heritage Institute of Technology was awarded for being the best club out of 30 Rotaract Clubs in Rotaract District 3291 at the Annual District Awards Event of Rotaract District 3291, for the term 2014-15, which was held on 28th June, 2015. A total of 16 awards were received by RC HITK (maximum that was ever received since 2009), details of which are as follows:

1. Best Club of Rotaract District 3291
2. Best President in Rotaract District 3291- Ramyani Mukherjee
3. Best Secretary in Rotaract District 3291- Swarnadeep Biswas
4. Best Club in Community Service
5. Best Project- Joga Bonito (Knock out Football Tournament for raising funds for Durbar Football team - members comprising children of sex workers of Sonagachi : a red light area)
6. Best R-Idea of the year- Liter of Light (A 2-day project to demonstrate use of ordinary water bottles and bleach to illuminate the houses of the poor : it is an eco friendly and cost effective method of providing light to those places which are quite congested)
7. Best International Service Project- The Great Raffle for Nepal Earthquake victims
8. Best Professional Development Project- Outliers (Women's Day Celebration)
9. Best Special Area Project- Project Teach
10. Best Club in Basic Education and Literacy
11. Best club that has complied with DRR's thrust areas (a total of 26 thrust area projects)
12. Club with best bulletin
13. Club with best social media presence
14. Most Popular Club
15. Most Popular Rotaractor- Sayantani Roy
16. Outstanding Rotaractor of Rotaract District 3291- Sayantani Roy



**3.6.6 Reflecting on objectives and expected outcomes of the extension activities organized by the College, comment on how they complement students' academic learning experience and specify the values and skills inculcated?**

All these extension activities are conducted with the intention of ensuring that the development of our students is not one dimensional but holistic. Such a vision cannot be realized without ensuring that their sense of social responsibility forms a strong driving force in their lives. It has been observed that participating in the following activities like "Swatch Bharat Abhiyan", Blood donation camp, taking classes to the children who come from backward class etc students become more conscious about the fragilities of our ecology and they begin to spread the message through the campus and through the street.

These activities have resulted in a positive growth of our students and learn many lessons like:

- Understanding one another.
- Co-operation
- Learning work together
- Careful use of resources
- Enhanced communication skills

**3.6.7. How does the College ensure the involvement of the community in its outreach activities and contribute to the community development? Detail the initiatives of the College which have encouraged community participation in its activities.**

The college promotes the involvement of the community in its outreach activities and contributes to the community development by encouraging the inclusion of extension activities as part of the curriculum in various departments. In addition, every student has to complete at least 1 hour under the social involvement programme of the college. They conduct rural camps every year to help students connect with and identify with the challenges faced by the rural population in their day to day living. The sessions conducted by Rotract club in our campus brings in people from all walks of life and sensitizes them to varied issues.

**3.6.8. Does the College have a mechanism to track the students' involvement in various social movements / activities which promote citizenship roles?**

Yes. The college has various committees to co-ordinate the extension programmes. These committees take care of all logistics like orientation for students. The rigorous requirements for attendance and evaluation help in tracking the student's involvement in various activities of the college. The committees are actively involved in extension activities which promote citizenship

- Health centre (Medical camps, Blood donation camps, Thalassemia awareness)
- Placement, career guidance cell
- Quiz, Debate competition
- Literacy association
- Science association. Waste management, Recycling of materials

**3.6.9. Give details on the constructive relationships (if any) with other institutions in the nearby locality in working on various outreach and extension activities.**

Rotract club of Heritage Institute of Technology in collaboration with Blood Connect and Haldia Ramakrishna Seba Sadan conduct blood donation camp and medical health check up.

**3.6.10. Give details of awards received by the institution for extension activities and/contributions to the social/community development during the last four years.**

Rotaract Club of Heritage Institute of Technology was awarded for being the best club out of 30 Rotaract Clubs in Rotaract District 3291 at the Annual District Awards Event of Rotaract District 3291, for the term 2014-15, which was held on 28th June, 2015. A total of 16 awards were received by RC HITK (maximum that was ever received since 2009), details of which are as follows:

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14. Most Popular Club
15. Most Popular Rotaractor- Sayantani Roy
16. Outstanding Rotaractor of Rotaract District 3291- Sayantani Roy

### **3.7. Collaboration:**

#### **3.7.1 How has the College's collaboration with other agencies impacted the visibility, identity and diversity of activities on the campus? To what extent has the College benefitted academically and financially because of collaborations?**

College's collaboration with other institutions and agencies are having lots of importance. The basic objectives are to promote contact and collaboration between members of faculty, staff and students to carry out joint research programmes, cooperation in academic programmes, organize seminars, workshops on mutually agreed activities.

Yes, our college has benefitted academically and financially because of the collaboration between our institute with other institute and agencies and TEQIP-II fund is provided by the World Bank assists with Ministry of Human Resource Development to our institute for enhancing the quality improvement plan in higher education.

There has been Memorandum of Understanding (MOU) signed between Heritage Institute of Technology, Kolkata (HITK) with many of other institute and agencies with the objective of

- Collaborative R & D activities on efficient solar cells development utilizing the state-of-the-art laboratory facilities of CEGESS, IEST,
- Shibpur and other relevant academic programmes such as conducting an M.Tech. Course on Renewable Energy & Energy Audit' at HITK. Organizing Workshops, Conferences and Symposia with joint participation of VS, EFRAC and HITK and also
- Encouraging engineers from VS / EFRAC to visit HITK to deliver lectures to our students.

**3.7.2. Mention specific examples of, how these linkages promote**

- Curriculum development
- Internship, On-the-job training
- Faculty exchange and development
- Research, Publication
- Consultancy, Extension
- Student placement
- Any other, please specify

Name of the Department	Curriculum development	Internship, On-the-job training	Faculty exchange and development	Research, Publication	Consultancy, Extension	Student placement	Any other, please specify
Civil Engineering	<p>Conducting workshop for framing 2<sup>nd</sup> Year and 3<sup>rd</sup> Year, B. Tech. Syllabi on 19.12.2014 and 21.01.2016.</p> <p><u>List of External Experts:</u></p> <ul style="list-style-type: none"> <li>• Prof. (Dr.) Aparna Dey Ghosh, Professor of Civil engineering, IEST, Shibpur.</li> <li>• Prof. (Dr.) Sujata Biswas, Assistant Professor of Civil engineering, IEST, Shibpur.</li> <li>• Prof. (Dr.) Tapash Roy, Assistant Professor (Senior Scale), Dept. of Civil Engineering, IEST, Shibpur.</li> <li>• Prof. (Dr.) Debabrata Mazumder, Professor, Dept. of Civil Engineering, IEST, Shibpur.</li> <li>• Er. Achintya Biswas, Sr. GM, DCPL</li> </ul> <p><u>Question paper moderator:</u> Prof. Sneha Murmu, Asst. Prof, Dept. of CE, IEST, Shibpur</p>	<p>Summer research programme at New Jersey Institute of Technology (NJIT), USA on 24<sup>th</sup> June to 1<sup>st</sup> aug, 2013</p> <ul style="list-style-type: none"> <li>• Six of our students are participated from our department in the year of 2013.</li> </ul>	NIL	<p><b>Kousik Deb</b>, Associate Professor, Dept. of Civil Engineering, IIT Kharagpur, India</p> <p><b>Aniruddha Sengupta</b>, Professor, Dept. of Civil Engineering, IIT Kharagpur, India.</p> <p><b>Prof. (Dr.) Debabrata Mazumder</b>, Professor, Dept. of Civil Engineering, IEST, Shibpur.</p>	NIL	TCS-Infosys-Wipro-	
Mechanical Engineering	Not directly applicable	With New Jersey Institute of Technology. From our department 3 students have taken Internship training.	NA	NA	NA	NA	

Name of the Department	Curriculum development	Internship, On-the-job training	Faculty exchange and development	Research, Publication	Consultancy, Extension	Student placement	Any other, please specify
Chemical Engineering	1. An M.Tech. course on "Renewable Energy" has been designed with the help of experts from IEST, Jadavpur University and Industry 2. A MOU exists between the institute and CEGESS, IEST, Shibpur, Howrah MOU exists between the institute and National Environmental Engineering Research Institute (NEERI), Nagpur since 6th April, 2010 for three years for carrying research facility	1. Students participate in the Summer Internship at NJIT, USA 2. Students participate in the Summer and Winter Internship at Sun Oil Company Pvt. Ltd., West Bengal	NIL	Although faculty members have quite a large number of publications with the faculty members from other reputed institutes, but these are not under MOU	Project titled "Preparation of Nitro-p - dichlorobenzene via nitration of p-dichlorobenzene" with a grant amount of Rs. 60,000/- from East India Pharmaceuticals Works Pvt. Ltd. (Address: 6, Nandalal Bose Sarani, Kolkata - 700071, West Bengal, India). Status of the project: Phase I completed Principal Investigator: Prof. (Dr.) Pinaki Bhattacharya Co- Principal Investigator: Prof. (Dr.) Diptendu Datta	Placements of the students are done through Training and Placement Cell and through individual effort after qualifying competitive examinations	Faculty members have PhD scholars with Co-supervisor (s) from reputed educational institutes.

**3.7.3 Does the College have MoUs nationally / internationally and with institutions of national importance/other universities/ industries/corporate houses etc.? If yes, explain how the MoUs have contributed in enhancing the quality and output of teaching learning research and development activities of the College?**

Yes. The college has Memorandum of Understanding, nationally and internationally, with other institutions and agencies. The MoUs have contributed in enhancing teaching-learning research and development activities of the college as follows:

1. Our college collaborates with many reputed institutions like Deakin University, IIT-Kgp, NEERI (National Environmental Engineering Research Institute, Nagpur), NJIT (New Jersey Institute of Technology), Sungkyunkwan University, Alabama University, University of Massachusetts Lowell (UML), IEST (Shibpur) where our college students and staff can participate in their conference, seminars, workshops and Research programs funded by TEQIP-II. This will develop their knowledge and explore their research works worldwide.

- **Summer Research Programme at New Jersey Institute of Engineering (NJIT), New Jersey, USA :**

Since its inception in 2008, the Programme has benefitted a total of 95 2nd & 3rd Year B Tech students of our Institution.

The outcome of this Summer Research Programme has shown a tremendous success. One of the students who participated in this programme has already received PhD in a high ranking university in the USA.

Students who have participated in this Programme have continued their education at excellent graduate schools (both in India and abroad), obtained lucrative jobs (often in unfavorable job markets), received scholarships and awards from local, national, and international organizations, published papers in international conferences and journals, and improved their academic grades and self-confidence.

### 3.7.4 Has the College-Industry interactions resulted in the establishment / creation of highly specialized laboratories / facilities on campus?

All the department with their interaction industrial expert and academic expert have developed the specialized

Sr.No.	Department	Specialized labs
1	AEIE	Research Lab, DSP Lab, Process Control Lab, M. Tech Lab, Microprocessor Lab
2	BT	Recombinant DNA tech Lab, plant tissue culture Lab, fermentation tech Lab, R & D Lab, Molecular Biology Lab
3	CHE	Mass transfer Lab, Fluid Mechanics Lab, Heat Transfer Lab, mechanical operation lab, energy lab, chemical reaction lab, process equipment design and drawing lab
4	CIVIL,	Environmental Engineering Lab, Concrete lab, Soil Mechanics lab, Highway and transportation Engg Lab, CAD lab, Strength of Materials lab and Geology Lab.
5	CSE	Basic computing lab, DBMS lab, Project lab, Advanced Computing lab (M. Tech)
6	ECE	Microwave and Antenna Lab, VLSI Lab, Advance Communication Lab, control system engg lab, M.Tech VLSI Lab, analog communication lab
7	EE	Microprocessor and microcontroller Lab
8	IT	HP Proliant ML350G6 Server at ICT B06 LAB. Generally used for research work.
9	ME	Advance manufacturing lab, Machine Shop, IC Engine Lab, Heat Transfer Lab, Dynamics of Machine Lab
10	MCA	MCA lab I & II, ITRA DISARM project lab

### SWOC analysis of the Institute

#### Strengths:

- Good Industry- Institute Interaction.
- Highly qualified faculties (Ph.D./Post Doctorate) with international exposure in emerging areas.
- Dynamic national relations through active MOU with renowned R&D labs of reputed industries in India.
- Renowned projects in association with reputed R&D organizations and Industries like DST, UGC, MODROB, AICTE, TEQIP.
- Students involvement in research work in collaboration with New Jersey Institute of Technology etc.
- Infrastructure for non-conventional energy (solar energy) production in collaboration with industry.

#### Weakness

- Limited collaborative research work between departments within the institute.
- Consultancy activity need to be enhanced.
- Lack of adequate funding for research activities
- Involvement in the faculty exchange programs with IITs and other Technological Institutes within India and abroad is inadequate.

**Opportunities**

- Offer under graduate honors and post graduate course in different science subjects as the institute has highly qualified faculty members in all branches of basic sciences.
- To have more faculty as well as students exchange programs with Universities and other Technological Institutes of repute both within India and abroad.
- To undertake M.Tech. Programs in all the streams of the Institute.
- R & D projects (formulation and execution) in domains of relevance to state/national missions, such as renewable energy/ innovate manufacturing/advanced materials.
- Generate wider cluster of Institute-Industry collaboration.
- Fostering a large number of start-ups through Vel Tech-TBI

**Challenges:**

- Competition from a large number of new universities/government institutions.
- Inadequate support from national funding agencies to autonomous institutes.
- Increasing lead time in securing grants from government agencies.
- High budgetary requirements related to establish new and equipped research centers.

## CRITERION IV: Infrastructure and Learning Resources



### 4.1 Physical Facilities

The Institute is located on 22,742.00 sqm land and has adequate physical infrastructure to accommodate all departments, class rooms supportive facilities. Whenever new courses are introduced the institute plans and constructs new buildings. The college put forward to make sure that constant up gradation takes place in this ahead.

#### 4.1.1 How does the College plan and ensure adequate availability of physical infrastructure and ensure its optimal utilization?

The institute ensures the optimal utilization of available infrastructure by effective participatory planning.

Heritage Institute of Technology evolved a system for the optimal utilization of existing infrastructure resources. The institute has an excellent infrastructural physical facility which includes existing class rooms, laboratories, staff rooms, toilets, tutorial rooms, administrative area etc.

The institute is always ready to provide a systematic effort to grow its infrastructure needs and to keep up the progress with new supplementary facility.

The time table committee plans well in advance for all requirements like class rooms, laboratories, furniture and other equipments and amenities. The management has enough time to rearrange some of the ruined or unused facilities at the beginning of every academic year. The institute uses optimal utilization of the seminar hall and auditorium.

**Existing Buildings****CME building: This building includes**

<b>Name of the room</b>	<b>Number of rooms</b>	<b>Area (square meters)</b>
Laboratory	44	4600.62
Class rooms	20	1802.7
Toilets	13	679.2
Staff rooms	8	538
Administrative area	7	499.68
Tutorial rooms	8	443.46

**ICT building: This building includes**

<b>Name of the room</b>	<b>Number of rooms</b>	<b>Area (square meters)</b>
Laboratory	44	3156
Class rooms	18	1728
Toilets	19	332
Staff rooms	9	448
Administrative area	4	132
Tutorial rooms	9	360

**Central Block: This building includes**

<b>Name of the room</b>	<b>Number of rooms</b>	<b>Area (square meters)</b>
Laboratory	34	2755
Class rooms	21	2016
Toilets	14	880
Staff rooms	11	607
Administrative area	-	2912
Tutorial rooms	8	366
Library	1	11500
Auditorium	1	1502

**SAC building: This building includes**

<b>Name of the room</b>	<b>Number of rooms</b>	<b>Area (square meters)</b>
Laboratory	4	254
Class rooms	3	231
Toilets	5	65
Staff rooms	1	62
Administrative area	6	260
Tutorial rooms	1	33
Library	1	100

**Other buildings:**

<b>Building</b>	<b>Area (square meters)</b>
Sub-station	169
Workshop	344
Canteen	507
Boy's Hostel	731.37
Girl's Hostel	1668



#### **4.1.2 Does the College have a policy for creation and enhancement of infrastructure in order to promote a good teaching-learning environment? If yes, mention a few recent initiatives.**

There is a continuous process of upgrading the enhancement of infrastructures, all OHP are being replaced by LCD Projectors, acoustics of class room have been improved and better sitting arrangements of the students are being replaced with the old ones

#### **4.1.3 Does the College provide all departments with facilities like office room, common room, separate rest rooms for women students and staff?**

Yes. Every department has adequate number of class rooms, tutorial rooms, faculty room. All Departments have separate office and separate restrooms for Ladies staff and students However the common room is common to all the departments.

#### **4.1.4 How does the College ensure that the infrastructure facilities meet the requirements of students/staff with disabilities?**

All the building have a ramp and lift for student with disabilities, the toilets are being provided with support system for staff and student with disability. Department staff at library and canteen assist them.

#### **4.1.5 How does the College cater to the residential requirements of students? Mention**

The college have hostel facilities for 220 girls and 120 boys and hostel facilities is being provided to outstation students.

- The hostels are provided with broadband connectivity /Wi fi, the campus is wi fi enabled.
- There is provision of Gym in the hostel.
- There is a Yoga and meditation centre in the campus and interested student may take part in the same.

\* Capacity of the hostels and occupancy (to be given separately for men and women)

Capacity of Boys hostel: 220 and capacity of Girls hostel: 120 occupancy rate (girls: 95%, boys: 80%)

\* Recreational facilities in hostel/s like gymnasium, yoga center, etc.

\* Broadband connectivity / wi-fi facility in hostel/s.

#### **4.1.6 How does the College cope with the health related support services for its students, faculty and non-teaching staff on the campus and beyond?**

There is infirmary in the campus with trained nurses coming on daily basis and visiting doctors twice a week. Proximities of nos. of renowned hospitals within 2 to three KMs is added advantages.

#### **4.1.7 What special facilities are made available on the campus to promote interest in sports and cultural events?**

The campus have large playfields for Football and net practice for cricket apart from Basketball and volley ball and Archery. Trainers are available for interested students after study hours.

### **4.2 Library as a Learning Resource**

#### **4.2.1 Does the library have an Advisory Committee? Specify the composition of such a committee. What significant initiatives have been implemented by the committee to render the library, student/user friendly?**

The Library Advisory Committee consists of

- Prof. (Dr.) Subhabrata Sengupta (BT), Dean (PG & Research)
- Dr. Binod Bihari Das, Library Advisor
- Prof. (Dr.) Tapas Sadhu (CE)
- Prof. (Dr.) Aniruddha Dasgupta (CSE)
- Prof. (Dr.) Ajanta Das (Physics)
- Prof. Atanu Kundu (ECE)
- Dr. Debarati Dey (Chemistry)

The significant initiatives implemented by the committee to render the library user friendly:

- Monitor the students' use of the library facilities and suggest measures to make library services more user –friendly and easy accessible.
- Users are reminded with information regarding renewal and over dues.
- Library working hours have been extended up to 6 pm during the working days.
- Any suggestions/grievances are invited from users through Suggestion Box and action is taken accordingly after discussion with Committee.
- The students can access question papers of previous years
- Digital Library has been set up with 20 systems connected with high –speed network connectivity to access all e-resources and video streaming e- learning program.
- The Head of the Departments recommend for the annual purchase of subject and reference books. The Library receives requisitions from Departments and faculty members for new books and all these are discussed in meeting of the Library Advisory Committee
- Ensure proper maintenance of all library facilities
- Discuss and place its views on any library related matter as required by the college management.

#### 4.2.2.

Provide details of the following:

- Total area of the library (in Sq. Mts.) : 1858 sq. mts
- Total seating capacity: 250
- Working hours (on working days, on holidays, before examination days, during examination days, during vacation)
  - On working days: **09:00 A.M. to 06:00 P.M.**
  - On holidays: 9:00 A.M. to 01:30 P.M.
  - On or before examination days: 09:00 A.M. to 07:00 P.M.
  - During examination days: 09:00 A.M. to 07:00 P.M.
  - During vacation: 09:00 A.M. to 05:00P.M.
- Layout of the library (individual reading carrels, lounge area for browsing and relaxed reading, IT zone for accessing e-resources)



- Individual reading carrels : YES
  - lounge area for browsing and relaxed reading : YES (under plan in the extended area)
  - IT zone for accessing e-resources : YES
- Access to the premises through prominent display of clearly laid out floor plan adequate signage; fire alarm; access to differently abled users and mode of access to collection)

- Access to the premises through prominent display of clearly laid out floor plan :YES
- Adequate signage :YES
- Fire alarm :YES
- access to differently abled users and mode of access to collection : YES, lifts are available in library

Library staff personally assist the differently abled people in accessing and using library resources.

**Photograph shows the entrance of the Central Library;**



#### **4.2.3. Give details on the library holdings**

##### **a) Print**

(Books, back volumes and thesis)

- Books: Title- 5229; Volume:45804 ( up to 31st March, 2016)
- Print National /International Journals ; 172
- Back volumes: 1000(Journals)

##### **b) Non Print (Microfiche, AV)**

**CD/DVDS: 3500**

##### **c) Electronic (e-books, e-Journals) : 642**

##### **d) Special collection**

(eg. Text book, Reference books, standards, patents).

▪ Text books :	YES	21593
▪ Reference books	YES	1200
▪ TEQIP collection	YES	69
▪ Semester Books	YES	22053
▪ Career Guidance Books	YES	225
▪ Donated Books	YES	642
▪ Standards	YES	22

#### **4.2.4. What tools does the library deploy to provide access to the collection?**

- Open Access System
- From Information Desk the human personalised Service is provided to users on regular basis
- Wi-Fi enabled reading hall
- OPAC: software interface between the user and collections of the library
- Computers for internet browsing and Digital library i.e. 24 computers with multimedia.
- Digital library with more than 3500 CD/DVDs
- High end reprographic machine
- E-journal, e-books, reports under DELNET
- Library Website
- Library automation
- Total number of computers for users : 20+4

- Total number of printer for users: 01
- Electronic Resource Management package for e-journals: Yes
- Participation in Resource sharing network / consortia :DELNET ,British Council ,American Library and IEL is available
- In-house/remote access to e-publications: YES, In-house access to e-publications is available through Intranet
- Scanning Service is available

#### **4.2.5 To what extent is the ICT deployed in the library?**

- Library automation: The library services are fully automated through using the standard package Libsys. All the transactions are fully computerized and all the documents are bar coded. The barcode ID and scanner are used for charging and discharging the books.
- Wi-Fi enabled reading hall
- Computers for internet browsing and Digital library i.e. 24 computers with multimedia
- Digital library with more than 3500CD/DVDs
- High end reprographic machine
- E-journal, e-books, reports under DELNET
- Library Website
- Antitheft Solution for security measure
- OPAC: software interface between the user and collections of a library (for searching resources)
- Total number of computers for users : 20+4
- Total number of printer for users: 01
- Electronic Resource Management package for e-journals: Yes
- Participation in Resource sharing network/ consortia :DELNET, British Council ,American Library and IEL is available
- In-house/remote access to e-publications: In-house access to e-publications is available through Intranet
- Internet band width speed: 60 Mbps
- Content Management system for e-learning : NPTEL video streaming courses available
- Institutional Repository: Question paper, Publications etc. ( building IR through D-space )
- The library is equipped with CCTV cameras to secure the resources .
- Information of books/journals procurement and attendance of staff be done through newly introduced ERP System

#### **4.2.6 Provide details**

- Average number of walk-ins:350 per day
- Average number of books issued/returned: Issued-76543, Returned-74758 for the session: 2014-15 till 31.03.2015
- Ratio of library books to students enrolled:1:15
- Average number of books added during last three years: 2000
- Average number of login to OPAC: 150 (approx.)
- Average number of login to e-resources: 50 /day
- Average number of e-resources downloaded/printed: 40
- Number of information literacy trainings organized: at the time of admission and also in searching digital resources.

#### **4.2.7 Give details of the specialized services provided by the library.**

- Reference: The library has a separate reference section which has leading printed /online reference collections. Resources include special collection of subject references, competitive exam books
- (GATE,TOEFL etc.), CDs /DVDs, IS standards, and TEQIP books.
- Reprography: 500 pages per day( approx.)
- ILL (Inter Library Loan Service): Yes
- The library has a journal section where the current issues of the journals are displayed.

#### **Information Deployment and Notification:**

- Alerting services to the departments regarding new arrival of books
- Current awareness services with the scanned copy of the content pages of new issues of the journals to the departments through e-mail.

- OPAC: for searching the resources of the library
- Display of new arrival of books and journals
- Through library publication: Know Your Library
- Display of Publishers' catalogue and Bibliography
- Information through e-mail
- Information displayed on Notice Board
- Posters of events on the campus are displayed on the Board within the library
- Anti- ragging posters are displayed
- Any event related to the library is uploaded on the college website/ e-mail notice
  - Internet Access: Yes
  - Downloads: Yes
  - Printouts: Yes
  - Reading list/ Bibliography compilation: On demand/ on request
  - In-house access to e-resources: Yes, through IP authentication.

#### User Orientation:

- Through Library Publication ( Know your library, Library: A Brief Profile)
- Presentation through lecture to the new members
- Hands on training to search e-journals, e-books in digital library
- May I help you service is rendered to user for any query, as and when required

#### Assistance in searching Databases:

- Assistance to the users is available in digital library in searching and downloading the resources as per their requirements
- List of URL of e-journals is available in digital library
- Library Publication: "Know Your Library" in order to help the users to search the resources
- \* INFLIBNET/IUC facilities: NA

#### 4.2.8. Provide details on the annual library budget and the amount spent for purchasing new Books and journals.

Central Library expenditure on Books:-

Year	No. of books (vols.) & Accession No.	Amount spent (Rs. in lacs)
2015-2016	2130 (31141 to 33271)	7.97
2014-2015	1766 (29374 to 31140)	9.69
2013-2014	2653 ( 26720 to 29373)	11.13
2012-2013	1241 (25478 to 26719)	6.90
2011-2012	933 ( 24544 to 25477) +1892 (B27707 to B29599) 2825	9.79

Central Library expenditure on print and online Journals:- (National & International):-

Year	No. of Journals (print+online)	Amount spent (Rs. in lacs)
2015-2016	179+4136	9.51
2014-2015	179+4136	8.79
2013-2014	164+4136	9.94
2012-2013	160+4136	7.10
2011-2012	64+4136	5.98

Central Library expenditure on furniture, equipments, maintenance on software and contingencies:-

Year	Amount spent (Rs. in lacs)
2015-2016	3.69
2014-2015	29.61
2013-2014	1.03
2012-2013	4.15
2011-2012	2.74

## DONATED BOOKS

Year	Donated by	No. of books donated	Acc. No.	Closing balance
2012-2013	Dr. D. K. Bhattacharya	35	D1 – D35	
	Dr. Debjani Sengupta	09	D36 – D44	
	Mr. Patit Paban Paira	16	D45 – D59	
	Dr. D. N. Banerjee	08	D60 – D67	
	Mr. Dipak Majumder	03	D68 – D70	
	Prof. B. B. Paira	03	D71 – D73	
	Mr. Prabeen Chand	05	D74 – D78	
	Mr. Paritosh Kumar Sarkar	10	D79 – D86; D91 – D92	
	Dr. S. K. Mukhopadhyay	04	D87 – D90	
2013 - 2014	Dr. S. K. Biswas	127	D95 – D221	
	Dr. Sobhen Roy	51	D222 – D272	
	Ms. Priya Bhartia	09	D273 – D281	
2014 -2015	NIL			
2015 - 2016	Prof B. B. Paira	170	D282 – D419; D514 – D515; D548 – D576; D635	
	Mr. Dipak Majumder	13	D420 – D432	
	Prof. B. R. Maity	66	D433 – D497	
	Ms. Bipasa Basu	28	D498 – D513; D516 – D527	
	Mr. Rohit Sharma	05	D528 – D532	
	Ms. Rumela Bhadra	13	D535 – D547	
	Ms. Subhra Banerjee	01	D533	
	Ms. Moumita Sen	01	D534	
	Prof. Alok Kumar Ghosh	58	D577 – D634	
	Mr. Probir Roy	03	D636 – D639	

## TEQIP

Year	No of books present	No. of books purchased	Acc. No.	Amount spend for academic year Rs.	Total amount spend Rs.
2014-2015	69	69	T1 – T69	346213/-	

#### 4.2.9. Does the library get the feedback from its users? If yes, how is it analyzed and used for improving the library services.

Library gets its feedback through student's satisfaction survey. Attempts are being made to implement the corrective measures by the library. Further indirect feedback is also received through the Complaint and Suggestion Box. Library analyzes such suggestions/complaints which are placed in the Library Committee meeting for betterment of library services. The visitors record their remarks in the Visitors' Book.

#### 4.2.10. List the infrastructural development of the library over the last four years.

- Shifting of the library from old campus to new campus
- Seating capacity increased.
- Modern lighting system introduced
- Antitheft solution installed

- Digital library and development of Institutional Repository
- New Issue / return system
- Loose Journals issues display rack
- Current list of publication of the different publishers' and bibliographies displayed.
- New arrival of books are on display for ten days before circulation.
- CCTV cameras installed in different corners of the library as security measure
- 20 work stations are available for searching e- books ,e-databases and e-journals.
- 10 Head phones are in use to access NPTEL and other video programmes
- All Departments have Departmental Libraries which are connected through OPAC. Central library transfers respective books to the departments periodically to ensure access to the concerned faculty.
- Fire preventive system is installed.
- IP phones are available in the library.
- New bag counter is provided
- Wi-Fi enabled reading hall
- ERP System introduced.

#### 4.2.11. Did the library organize workshop/s for students, teachers, non-teaching staff of the College to facilitate better Library usage?

- Library conduct orientation programmes for the students every year
- Information literacy programmes are taken to provide easy access to the digital resources
- In-house Power point presentations are given to the students regarding the facilities of the library
- Library has organized a seminar on D-space and koha –open source software for Digital library and library management on 3rd February, 2016. 135 participants took part in the Seminar
- Library also organizes Book exhibitions for their users

Workshop /seminar attended by the library staff (2011-2016)

NAME	COURSE/WORKSHOP/SEMINAR	YEAR
Dr. B.B.Das	Acted as resource person in the refresher courses of Library and Information Science conducted by JU and CU	2011-2015
Dr. B.B.Das	Acted as chairperson in the International seminar on Koha	2016
Dr. B.B.Das	Guiding Research Scholars of the University	2011-2015
Dr. B.B.Das	Guest faculty in the department of LIS at the University level	2011-2015
Dr. B.B.Das	Acted as coordinator in the seminar on D-space and Koha organized by Heritage Institute of Technology, Kolkata	2016
Ms. S. Banerjee Mr. R. Adhya	Participated in the International seminar on Koha	2016
Ms. S. Banerjee Mr. M. K. Maiti Ms. M. Sen	Participated in the staff development programme organized by Heritage Institute of Technology, Kolkata	2012
Ms. S. Banerjee Mr. M. K. Maiti	Participated in the seminar /workshop organized by Informatics	2013
Ms. S. Banerjee Mr. M. K. Maiti Ms. M. Sen Ms. S. Mukherjee Mr. R. Adhya Mr. T. Chakraborty	Participated in the seminar /workshop organized by Informatics	2014
Ms. S. Banerjee	Acted as Joint Coordinator in the seminar on D-space and Koha organized by Heritage Institute of Technology, Kolkata.	2016



Ms. S. Banerjee Mr. N. Bhattacharya Mr. S. Karikar Mr. M. K. Maiti Ms. M. Sen Ms. S. Mukherjee Mr. R. Adhya Mr. T. Chakraborty	Participated in the seminar on D-space and Koha organized by Heritage Institute of Technology, Kolkata.	2016
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- Acted as resource person in the refresher courses of Library and Information Science conducted by JU and CU
- Acted as chairperson in the International seminar on Koha
- Guiding Research Scholars of the University
- Guest faculty in the department of LIS at the University level
- Participated in the International seminar on Koha
- Participated in the staff development programme
- Participated in the seminar of BCL
- Participated in the seminar /workshop organized by Informatics
- Participated in the workshop organized by Libsys etc.

### 4.3 IT Infrastructure

#### 4.3.1 Does the College have a comprehensive IT policy addressing standards on IT Service Management, Information Security, Network Security, Risk Management and Software Asset Management?

Yes. The following are the comprehensive IT policies.

#### IT Service Management

IT Service management is done by the System Department regularly. If any problem arises, they will attend and rectify the same.

#### Information Security

Information security is maintained by System Department by using firewall policies.

#### Network Security

Network security is controlled by network firewall. Users are assigned an ID and password that allows them access information and programs within their authority.

#### Risk Management

The system department identifies and prioritizes the risks followed by coordinated and economical application of resources to minimize, monitor, and control the probability and/or impact of unfortunate events or to maximize the realization of opportunities.

#### Software Asset Management (SAM)

The system department identifies, analyses the software needs, prepares the budget and submit to the Management. The Management, the Principal along with the Finance committee takes the decision and allocates budget to purchase the legal software. These are maintained by the System Administrator.

#### 4.3.2 Give details of the College's computing facilities (hardware and software).

All the system at Heritage Institute of Technology is having minimum configuration of Intel Core 2Duo and above and yearly basis we replace the old system with new upgraded one. The details of systems procured since 2011 are given below.

**Details of Computers Added since 2011:**

Device Name	Model	DoP	System Configuration	Quantity	Price(Including Tax) in Rs.
Desktop Computer	Wipro	25.3.11	C2D Processor, 2GB RAM, 160GB HDD, Wipro 15.6" Monitor	200	4076800
	HCL	18.10.11	Core i3 processor, 2GB RAM, 500 GB HDD	100	2100000
	HCL	31.10.11	Core i3 processor, 2GB RAM, 500 GB HDD	150	3276000
	Assembled	29.2.12	Core i3 processor, 2GB RAM, 500GB HDD, 18.5" LED Monitor	5	131414
	AMD Assembled	12.2.12	Athlon X2 processor, 2GB DDR3 RAM, 500GB HDD	5	18616
	Dell Vostro 460MT	22.3.12	Core i7 2 <sup>nd</sup> gen processor, 500 GB HDD, 2GB DDR3 RAM	1	41600
	Dell Vostro	26.5.12	Core i7 2 <sup>nd</sup> gen processor, 500 GB HDD, 2GB DDR3 RAM	1	41600
	Assembled	8.6.12	Core i3 processor,	1	25349
	Assembled	14.6.12	Core i3 processor,	1	25349
	HP pro 3330	23.7.12	Core i3 processor, 2GB RAM, 500 GB HDD	200	4095000
	Dell 660S	15.3.13	Core i3 processor, 2GB RAM, 500 GB HDD. 19" LED Monitor	3	89884
Desktop Computer	HP Compaq Pro 4300	31.1.13	Core i3 processor, 4GB RAM, 500 GB HDD. 19" LED Monitor	170	2927925
	Assembled	25.3.13	Core i3 processor, 4GB RAM, 500 GB HDD. 19" LED Monitor	30	741468
	Assembled	29.3.13	Core i7 processor, 8GB RAM, 2TB HDD. 19" LED Monitor	2	85124
	Dell 3010	25.6.13	core i3 3rd generation processor, Intel h61 MB, 4GB DDR3 RAM, 500GB HDD, 18.5" LED Monitor	40	528000
	Assembled	22.11.13	core i5 3rd generation processor, Intel D75ML K MB, 8GB DDR3 RAM, 500GB HDD	2	64900
	Assembled	22.11.13	core i5 3rd generation processor, Gigabyte H61 WW MB, 4GB DDR3 RAM, 500GB HDD	14	330960
	HP 202 G1	24.3.14	core i3 3rd generation processor, Intel h61 MB, 2GB DDR3 RAM, 500GB HDD, 18.5" LED Monitor	200	6289500
	Lenovo	28.4.14	core i5 3rd generation processor, Lenovo MB, 4GB DDR3 RAM, 1TB HDD, 18.5" LED Monitor	2	104475

Device Name	Model	DoP	System Configuration	Quantity	Price(Including Tax) in Rs.
	Assembled	14.8.14	core i3 4th generation processor,Gigabyte H81M-S1 MB, 4GB DDR3 RAM, 500GB HDD	80	1504400
	HP 280G1M	23.7.15	core i3 4rd generation processor,HP MB, 4GB DDR3 RAM, 500 GB HDD, 18.5" LED Monitor	160	4368000
Desktop Computer	Dell 3010	25.6.13	Intel Core i3 3rd generation processor, Intel h61 MB, 4GB DDR3 RAM, 500GB HDD, 18.5" LED Monitor	40	528000
	Assembled	22.11.13	Intel Core i5 3rd generation processor,Intel D75ML K MB, 8GB DDR3 RAM, 500GB HDD	2	64900
	Assembled	22.11.13	Intel Core i5 3rd generation processor,Gigabyte H61 WW MB, 4GB DDR3 RAM, 500GB HDD	14	330960
	HP 202 G1	24.3.14	Intel Core i3 3rd generation processor, Intel h61 MB, 2GB DDR3 RAM, 500GB HDD, 18.5" LED Monitor	200	6289500
	Lenovo	28.4.14	Intel Core i5 3rd generation processor,Lenovo MB, 4GB DDR3 RAM, 1TB HDD, 18.5" LED Monitor	2	104475
	Assembled	14.8.14	Intel Core i3 4th generation processor,Gigabyte H81M-S1 MB, 4GB DDR3 RAM, 500GB HDD	80	1504400
	HP 280G1M	23.7.15	Intel Core i3 4th generation Processor, HP MB, 4GB DDR3 RAM, 500 GB HDD, 18.5" LED Monitor	160	4348000
Server Computer	HP ML10	12.3.14	Intel Xeon 4core Processor, 24GB RAM, 2TB HDD, 18.5" TFT	1	76150
	IBM	21.5.14	Intel Xeon quadcore Processor, 16GB RAM, 2TB HDD	1	84000
	IBM X3300	6.1.15	Intel Xeon quadcore Processor, 16GB RAM, 2TB HDD, 18.5" TFT	1	760000
	X3400	22.3.12	Intel Xeon Quad core Processor, 8GB RAM, 300GB HDD18.5: TFT	1	151200
	HP ML10	12.3.14	Intel Xeon 4core Processor, 24GB RAM, 2TB HDD, 18.5" TFT	1	76150
	IBM X3100 M4	21.5.14	Intel Xeon quadcore Processor, 16GB RAM, 2TB HDD	1	84000

Device Name	Model	DoP	System Configuration	Quantity	Price(Including Tax) in Rs.
	IBM X3300	6.1.15	Intel Xeon quadcore Processor, 16GB RAM, 2TB HDD, 18.5" TFT	1	760000

**Details of Printers added since 2011**

Model	DoP	Quantity	Price (Rs.) (Including Tax)
HP 2050 DJ PRINTER	19.04.11	1	3744
Canon LBP 2900B	19.04.11	1	5616
Canon LBP 2900B	13.08.11	1	5616
HP 5235 Printer	13.08.11	1	17940
Canon LBP 2900B	8.9.11	1	5616
HP Desk jet Printer	8.9.11	1	3744
Canon LBP 2900B	26.9.11	1	5616
Canon LBP 2900B	18.10.11	1	5616
Canon LBP 2900B	25.10.11	1	5616
Canon LBP 2900B	29.11.11	1	5616
Canon LBP 2900B	17.1.12	2	11440
Canon LBP 2900B	31.1.12	3	17316
Canon LBP 2900B	15.3.12	2	11440
Canon LBP 2900B	20.3.12	1	5772
Canon LBP 2900B	20.4.12	1	5772
HP DJF2050 AIO PRINTER	27.4.12	1	3692
Canon LBP 2900B	5.5.12	1	5772
HP DJ 4500 AIO PRINTER	14.6.12	2	11336
Canon LBP 2900B	26.9.12	1	5772
HP LJ 1606DN	11.10.12	1	15704
Canon LBP 2900B	3.12.12	1	5772
Canon LBP 2900B	5.3.13	1	6448
HP 3525 DJ PRINTER	14.3.13	1	7455
HP 2515 PRINTER	19.3.13	1	4888
Canon LBP 2900B	30.5.13	1	7000
HP Deskjet 3515	15.6.13	1	6195
HP Deskjet 3525	15.6.13	1	7450
Canon LBP 2900B	1.7.13	1	7000
HP Deskjet 3515	1.7.13	1	6195
Canon LBP 2900B	10.7.13	1	7000
Canon LBP 2900B	21.8.13	1	7000
HP DJ7500 ALL IN ONE	26.11.13	1	19845
WEP LQ DSI 5235	31.12.13	2	39480
WEP LQ DSI 5235	31.12.13	2	39480
Canon LBP 2900B	25.2.14	1	7000
Canon LBP 2900B	12.3.14	1	Printer
Canon LBP 2900B	8.4.14	2	13230
Canon LBP 2900B	11.4.14	1	7000
HP 3545 DJ Printer	24.4.14	1	6563
Canon LBP 2900B	24.4.14	2	13440
HP 3545 PRINTER	19.7.14	1	6300
HP LJ 400 Duplex	28.6.14	1	22533
Canon LBP 2900B	8.9.14	1	7000
Canon LBP 2900B	8.9.14	1	7000
HP 3545 PRINTER	7.11.14	1	6248

Model	DoP	Quantity	Price (Rs.) (Including Tax)
HP 3545 PRINTER	13.11.14	1	6248
Canon LBP 2900B	4.3.15	2	13440
Canon LBP 2900B	1.6.15	1	7000
Canon LBP 2900B	6.7.15	1	7000
Canon LBP 2900B	3.8.15	1	7000
Canon LBP 2900B	26.9.15	1	7000
Canon LBP 2900B	2.12.15	1	7000
Canon LBP 2900B	2.12.15	2	13440

- **Computer-student ratio:** 1:1 (as every student allotted a dedicated computer in their respective lab for their lab classes & project assignment)
- **Dedicated computing facility:** every faculty provided with dedicated computer as their respective desk.
- **LAN facility:** All the computers at our campus are connected with Gigabit LAN.
- **Wifi facility:** Every building at our campus and all the campus hostels are having WiFi facility.
- **Propriety software / Open source softwares:** The List of Softwares are given below.

<ul style="list-style-type: none"> <li>✓ AutoCAD Suite</li> <li>✓ ArcGIS 10.2 for desktop</li> <li>✓ Syamntec Endpoint Antivirus 12.1 Campus Agreement</li> <li>✓ Windows 7 32 and 64 bit</li> <li>✓ Windows Server 2008</li> <li>✓ Windows 8.1 32 and 64 bit</li> <li>✓ Microsoft Campus Licensing Agreement (ALL major Microsoft software/tools)</li> <li>✓ PTC Creo</li> <li>✓ Adobe CS4 &amp; CS5</li> <li>✓ TCAD Synopsys</li> <li>✓ Glide Prime</li> <li>✓ STAAD Pro V8i &amp; STAAD Foundation</li> <li>✓ ETAP</li> <li>✓ MD FEA Bundle plus MD ADAMS Bundle</li> </ul>	<ul style="list-style-type: none"> <li>✓ Xilinx</li> <li>✓ Various open-source software such as Ubuntu OS, Mysql etc.</li> <li>✓ Matlab</li> <li>✓ PSpice</li> <li>✓ NI LAB VIEW Premium suit</li> <li>✓ Cadence University Bundle</li> <li>✓ QUALNET 6.1</li> <li>✓ ANSYS Academic Advance</li> <li>✓ Premium Local Guru(LocalG by B.Tech GURU)</li> <li>✓ Campus Placement Preparation Material (Multi user online material for Communication skill, Interview skill, resume Building, soft skill)</li> </ul>
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- **Number of nodes/ computers with internet facility:** Total no. of computers with internet facility=1627.
- **Any other:** All our college buildings and campus entry exit gates are protected with CCTV surveillance system. In case of power failure we provide power backup for all the computers at our campus through central ups system. We are having 2nos 80Kva, 1No 100Kva, 3nos 10Kva online UPS system installed by a very reputed international manufacturer.

#### 4.3.3 What are the institutional plans and strategies for deploying and upgrading the IT infrastructure and associated facilities?

Our College as a policy maintains a regular infrastructure data base of computers and accessories. Periodically, the old systems are replaced with systems with an enhanced configuration. The old systems withdrawn are donated to NGO or to under privilege school. All Head of the Departments, Professors, and Assistant Professors have independent system each at their respective desks. Periodic review is done to see that latest systems are in use in the college by replacing the nonfunctioning or old systems.

(Configuration of PCs and servers procured since 2013 are given above 4.3.2)

#### 4.3.4 Give details on access to online teaching and learning resources and other knowledge, and information provided to the staff and students for quality teaching, learning and research.

- INTRANET enable the latest information through NPTEL video & audio by eminent lecturer from IIT.
- Accessibility of the library is from 9 a.m. to 5-30 p.m.
- CDs and DVDs are available on various subjects in the library.
- LCD projectors are available for power point presentation and online presentation.
- Video conferencing facility.
- Language Lab e-resources.

#### 4.3.5 Give details on the ICT enabled classrooms/learning spaces available within the College and how they are utilized for enhancing the quality of teaching and learning.

- E-learning room is equipped with a double screen board for enhancing the quality of teaching and learning.
- Language lab classes are conducted for staff and students to enhance communication skills.
- QEEE program is resource for knowledge dissemination.

#### 4.3.6 How are the faculty facilitated to prepare computer aided teaching-learning materials?

- Computers systems are available in all departments.
- Training is given to the faculty members in the use of computer operation.
- Computer Department helps other faculty members in preparing Power point
- Presentation for presenting in the seminars, conferences and workshops.
- Library preserves important articles published journals and newspaper for the use of faculty and students.

#### 4.3.7 How are the computers and their accessories maintained? (AMC, etc.)

Computers and their accessories are maintained by regular technical staff. A system Administrator and three System Support Executive look after the maintenance work. Consumables, spares and accessories are purchased as and when required. Apart of it AMC is given to a reputed concern for all the Desktops & Servers maintenance. Networking such as structured cabling & CCTV surveillances are carried out by reputed vendors. In addition, for power and other miscellaneous work we have technicians at our maintenance department.

#### 4.3.8 Does the College avail of the National Knowledge Network connectivity directly or through the affiliating University? If so, what are the services availed of?

No, National knowledge Network connectivity is not availed directly or through the affiliating University.

#### 4.3.9 Provide details on the provision made in the annual budget for update, deployment and maintenance of the computers in the College?

S. No.	Particulars	Amount (Rs.)			
		2011-12	2012-13	2013-14	2014-15
1	Update, deployment & maintenance of Computers	6,00,000	9,00,000	10,00,000	11,00,000

#### 4.4 Maintenance of Campus facilities

##### 4.4.1 Does the college have an estate office/designated officer for overseeing maintenance of buildings, class rooms and laboratories? If Yes, mention a few campus specific initiatives undertaken to improve the physical ambience.

Yes. A designated Manager, Mr. Debashis Chatterjee has been appointed to look after the maintenance of the buildings, classrooms, workshops, laboratories etc. All works related to electrical, plumbing and sanitary & other utility services are under his jurisdiction & is undertaken with the help of efficient personnel & agencies employed to undertake periodic supervision.

The list of works for regular upkeep are as follows:

- Conversion of existing lighting system to energy saving L.E.D
- Conversion & up keep of all existing plumbing system to prevent water loss in the form of leakages.
- Upkeep of all electrical equipment to prevent excess energy loss & short circuits
- Installation, monitoring & upkeep of energy management system.
- Installation, monitoring & upkeep of automated water level controllers with solenoid valves to prevent excessive water loss due to overflow in water tanks.

All the maintenance activities are controlled by Computerised Maintenance Management System (CMMS).

##### Landscape & Greenery

- Plenty of green & soft surface all-round the campus.
- Minimisation of hard surfaces with introduction of paver block system for driveways & walkways.
- Lawns, playgrounds used for multifarious activities
- Regular plantation of new types of trees & plants to enhance beautifications
- Water from recycled waste water from S.T.P. used for gardening

##### Fire Protection system:

- Includes centralised fire pump room with water reservoir of adequate capacity & ring main system for Fire Hydrant
- Sprinklers in all fire sensitive zones
- Efficient Heat & smoke detectors & manual call points at all fire sensitive zones
- Fire detection panels in designated zones
- Fire extinguishers with suitable ratings placed at strategic points.
- Efficient exit points in all buildings

##### 4.4.2: Does the college appoint staff for maintenance and repair? If not, how are the infrastructure facilities, services and equipment maintained? Give details.

**Yes maintenance staff is recruited for regular services.**

- Regular electrical maintenance is looked after by in-house technicians
- Carpentry, fabrication, plumbing & other minor maintenance works is also done through in-house technicians
- Lift, Air-conditioning, Cooling towers, solar panels, R.O. Plant etc are under AMC with the respective agencies.

##### Strengths

- Sufficient rooms and facilities are available for students and staffs to satisfy academic, research and extracurricular requirements.
- State-of-the-art library with huge number of books, online video lectures and reputed international journals.
- Sufficient number of highly equipped laboratories to provide academic and research support to students and faculty.

### **Weaknesses**

- Lack of adequate number of seats in boys' hostel's.
- Lack of advanced research laboratories in departments.

### **Opportunities**

- Expansion of research and development laboratories to meet the global demands.
- Expansion of renewable energy resources to provide electricity in the whole campus.
- Construction of new building to accommodate growing number of students.

### **Challenges**

- Rising cost of research equipment, construction of new buildings and required infrastructure to generate energy from renewable energy resources.



## **D.5 CRITERION V: Student Support and Progression**

### **5.1 Student Mentoring and Support**

#### **5.1.1 Does the College have an independent system for student support and mentoring? If yes, what are its structural and functional characteristics?**

Yes, H.I.T.K. College has an independent monitoring system for student support system as class teacher or teacher ward since inception of the college.

#### **Functional Characteristics:**

- Class teacher system has been established from of the college.
- Each faculty member is allotted to monitor in academic curricular and co-curricular activities.
- Two meetings are conducted in a year with students. On various students issues like course curricular, teaching\*\*
- The class-teacher conducts the parent meetings to review students' academic progress with parents and suggest them to improve student academic performance/ learning aspects.
- Meetings with the parents of students staying in hostel on the day of hostel admission.
- Encouraging students to organizing and participate in cultural programmes both within the college and outside the campus.
- Instilling values of discipline, punctuality.
- Most of the students, who aspire to take higher education in our institution comes from social and economically weaker section of the society. Keeping all these factors in view the institution established extending its services in higher education.
- The class teacher ensures, that his class students are aware of all the facility provide in the college such as library, net facility, computer centre, placement cell activity,etc.
- Instilling values of discipline, punctuality, regularity, confidence through one to one counseling, seminars by students, field trips etc.
- Arranging medical inspection for all students and providing medical facilities.

#### **5.1.2 What provisions exist for academic mentoring apart from class room work?**

The senior faculty provides necessary academic mentoring to students with queries.

- The faculty members act as mentors and facilitator for the hostel students.
- The college appoints the faculty members as mentors and facilitators for the boys and girls hostels. They monitor the academic and personal dimensions of the students and provide necessary counsel and offer academic assistance to those who need.
- Queries regarding certificate courses, add-on courses are answered and information provided.
- Mentors are also provides necessary information to students on academic and non-academic programmes.
- The members of the departments interact with parents on all working days.
- The class teacher system in an efficient system that monitors student progress. Each teacher in the department is allotted a class of student as advisors. The class teacher meets ones a week formally and the students share their academic struggles and areas of concerns with their teacher (mentor/ facilitator). High achievers/ advanced learners encouraged to participate in various competitions both in house and outside.
- The mentor recommends the deserving students for different scholarships.
- Departments organize parent-teacher meet ones a year to develop rapport with the parents and keep them informed of the academic progress to their children. Parents have free access to approach any faculty member during working hours of the college.

#### **5.1.3 Does the College provide personal enhancement and development schemes for students? If yes, describe techniques employed e.g., career counseling, soft skill development, etc.**

- Yes, the support system at H.I.T.K College offers various avenues for wholesome development of the learner's professional, emotional and physical wellbeing and success.

- The career guidance and placement cell (CGPC) provides awareness to students about skills required in job market. Various skill development programmes are conducted on career opportunities such as soft skills, employment opportunities, etc.
- The college arranges yoga sessions with a trained yoga master which enables students to relax and develop mental stability.
- The guest lectures and awareness programmes on communication and personality development were organized.
- The college has links with external agencies to which the final year students go for projects. This gives the students awareness about the job market and their expectations.
- The college brings out the talents of the students and enable them to develop their creative and organizing skills through intra, inter departmental and inter collegiate programmes.
- The college library provides a rich variety of books on personality development and leadership.

**5.1.4 Does the College publish its updated prospectus and handbook annually? If yes, what are the activities / information included / provided to students through these documents? Is there a provision for online access?**

Yes. The prospectus cum handbook of the college is updated annually and given along with the application. It is also available in the college website. It consists of various details regarding functions of the college and course requirements. It will be revised every year and given to all students, it contains the history of the college, achievements, administration, list of faculty department wise, programme co-curriculum, rules and regulations.

The handbook also includes the college calendar that gives information about holidays, college functions, tests and examinations date. This is ready reference for students. This hand book enables students to approach the respective offices according to their need.

**5.1.5 Specify the type and number of scholarships / freeships given to students (UG/PG/M.Phil/Ph.D./Diploma/others in tabular form) by the College Management during the last four years. Indicate whether the financial aid was available on time.**

The institute offers tuition fees waiver/ free ships for financially backward meritorious students. Table below shows the number of students received free ships from institute during last four academic year:

SL.No	Academic Year	Semester	Percentage Free ships	No. of Students received Free ships
1	2015-16	Odd	100%	115
			75%	26
			50%	34
			25%	11
2	2014-15	Even	100%	98
			75%	12
			50%	52
			25%	13
3	2014-15	Odd	100%	92
			75%	30
			50%	27
			25%	23
4	2013-14	Even	100%	47
			75%	28
			50%	66
			25%	31
5	2013-14	Odd	100%	79
			75%	49
			50%	46
			25%	07
6	2012-13	Even	100%	74
			75%	33
			50%	36
			25%	11

SL.No	Academic Year	Semester	Percentage Free ships	No. of Students received Free ships
7	2012-13	Odd	100%	81
			75%	21
			50%	21
			25%	12

**5.1.6 What percentage of students receives financial assistance from state government, central government and other national agencies? (e.g., Kishore Vaigyanik Protsahan Yojana (KVPY), SN Bose Fellow, etc.)**

Tables below show the number of Under and Post graduate students who received financial assistance from the state government.

Number of Under Graduate Students Who Availed Financial Assistance From State Government For Last Six Years								
Sl. No	Course	Year	2014-15	2013-14	2012-13	2011-12	2010-11	2009-10
1.	B.Tech (CSE)	I	6	3	2	8	11	4
		II	1	8	5	4	3	6
		III	6	0	3	3	8	6
		IV	4	5	1	3	8	3
2.	B.Tech (ECE)	I	4	2	7	18	8	8
		II	2	5	9	9	8	11
		III	1	6	11	10	11	7
		IV	6	5	9	7	12	8
3.	B.Tech (AEIE)	I	0	0	1	6	7	2
		II	0	1	8	8	4	2
		III	2	11	8	3	5	2
		IV	7	7	3	1	4	5
4.	B.Tech (IT)	I	1	0	8	5	0	0
		II	0	8	3	3	2	4
		III	2	3	2	2	7	4
		IV	6	0	4	3	5	9
5.	B.Tech (CHE)	I	0	0	0	5	2	2
		II	0	0	2	3	3	5
		III	0	4	5	2	3	2
		IV	3	0	5	0	2	0
5.	B.Tech (BT)	I	0	0	1	5	4	4
		II	1	0	2	3	3	0
		III	3	0	2	2	5	2
		IV	0	2	2	0	5	3
6.	B.Tech (ME)	I	1	1	5	4	-	-
		II	5	1	6	-	-	-
		III	3	3	-	-	-	-
		IV	7	-	-	-	-	-
7.	B.Tech (CE)	I	2	2	4	8	-	-
		II	3	5	6	-	-	-
		III	7	2	-	-	-	-
		IV	4	-	-	-	-	-
9.	B.Tech (EE)	I	4	2	8	-	-	-
		II	1	0	-	-	-	-
		III	5	-	-	-	-	-
		IV	-	-	-	-	-	-
Totals=			97	86	132	125	130	99

Number of Post Graduate Students Who Availed Financial Assistance From State Govt. For Last Six Years								
Sl. No	Course	Year	2014-15	2013-14	2012-13	2011-12	2010-11	2009-10
1.	M.Tech (CSE)	I	2	1	2	3	-	-
		II	0	2	3	0	-	-
2.	M.Tech (ECE)	I	1	0	1	1	-	-
		II	0	1	2	0	-	-
3.	M.Tech (AEIE)	I	3	0	0	0	2	4
		II	0	1	0	0	4	3
4.	M.Tech (IT)	I	0	0	1	-	-	-
		II	0	0	2	-	-	-
Totals=			6	5	11	4	6	7

**5.1.7 Does the College have an International Student Cell to cater to the needs of foreign students? If so, what measures have been taken to attract foreign students?**

No, Institute does not have an International Student cell.

**5.1.8 What types of support services are available for**

**Overseas students:-**

➤ Institute does not have overseas student right now.

**Physically challenged / differently abled students**

➤ Institutes and State Governments provide necessary financial support to these students. Lifts are provided in each building of the College, especially for physically challenged students. Toilets are modified to cater to their needs.

**SC/ST, OBC and economically weaker sections**

- Financial Assistance is provided to the students who participate in various competitions/conferences in India and abroad. (a) Reimbursement of Registration Fee, transportation fee for conferences /competitions (b) Encouragement is provided to the students who participate in National inter-college and National sports competitions.
- Institutes offers tuition fees waiver/ free ships for financially backward meritorious students.
- Book bank facility is available for all the students.
- Remedial classes are provided for sluggish learners.
- Summer training and industry visits are arranged by the institute. The institute bears the cost these.

**Students to participate in various competitions/ conferences in India and abroad**

- Travel allowance and special incentives are paid to students if they present technical papers at conferences.
- Encouragement is provided to the students who participate in inter-college and National sports competitions.

**Health Centre, Health Insurance etc.**

- Health Centre is available in College during college hours on all working days. One doctor and one nurse are available in the health centre during all the working days.
- Transportation Facility is available in case of emergency
- Institute has a MoU with Ruby General Hospital for emergency medical assistance both for students and staffs.
- Each student is covered by a medical insurance upto Rs. 10000/-.
- Special care is provided for Hostel Students.

**Skill Development (spoken English, computer literacy, etc.,)**

- English Communication Labs are provided to improve students, communication skills, presentation skills, verbal skills etc, as compulsory courses.
- Infosys “CAMPUS-CONNECT” training is provided to every student by subject experts from Infosys to improve their computer literacy.
- Training and placement cell organizes number of pre-placement talks, expert talk by HR Personnel etc.
- Soft skills courses are introduced in the curriculums which are compulsory for all students. Each course has 2 periods/ week and one credit for evaluation.

**Performance enhancement for slow learners / students who are at risk of failure and dropouts**

- Remedial Classes are conducted for slow learners and lateral entry students. Teachers are allotted to help such students.
- Remedial Classes are arranged for lateral entry students separately on Saturdays as there is no regular class on Saturdays as well as during Puja vacations.

**Exposure of students to other institutions of higher learning/ corporates/business houses, etc.**

- Institutes provides all kind of support to the student to do their internships, summer training in corporate/business houses
- Students are encouraged to present technical papers at other institutions. Records are available in
- The institute signed an MoU with New Jersey Institute of Technology (NJIT) for a student exchange programme under which the first batch of 20 students had a 6-week training programme at NJIT during 2008. The seventh batch of students underwent the training programme in 2015. It has also signed an MoU with the College of Natural science, Sungkyunkwan University. Negotiations are on with the University of Sussex for academic collaborations

**Publication of student magazines**

- Students publish a souvenir after every technical function each year. College extends financial support.
- News letter is published quarterly in a year. It covers achievements, participation in conferences, awards and prizes and list of prize winners of students.

**5.1.9 Does the College provide guidance / coaching classes for Civil Services, Defense Services, NET/SLET and any other competitive examinations? If yes, what is the outcome?**

Yes.

The institute provides comprehensive coaching classes for different aspects which serve the future needs of various competitive examinations. The aspects which are covered are as follows:

- Quantitative Aptitudes
- Reasoning
- Verbal Skills
- Personality Development
- Group discussions
- Interview Skills (Mock Interviews).

Extra classes are conducted both for technical subjects and to develop communication skills for the slow learners.

Many students appear in GATE examination. One student of Chemical Engineering Department got 3<sup>rd</sup> rank in the year 2014. Several students from Bio-technology, Computer Science & Engineering, Electronics & communication and Applied Electronics and Instrumentation Departments of our institute got All India Ranks between 10 to 100 in the year 2014 and 2013.

Several students appear in CAT examination, and get percentile above 90. One student from Bio-technology Department got 99.26 percentile in 2014. Detailed information about the success of our students in different all India examination is listed in the Information Brochure, Quarterly Newsletter and Website of the institute.

### **5.1.10 Mention the policies of the College for enhancing student participation in sports and extracurricular activities through strategies such as**

- Additional academic support, flexibility in examinations
  - H.I.T.K college promotes participation in sports through flexibility in admission i.e. fees payment, Mess, attendance requirements.
  - The students who have good track record in sports are given flexibility in admissions of their choice.
  - Special classes are conducted to sports students.
- Special dietary requirements, sports uniform and materials
  - Special diet is provided to sports students at the time of coaching and training period.
  - College provides sports kits.
  - Provision is also given to write retests and assignments.
- Any other:
  - Every year sports and games competitions are organized for college. There are many prizes and shields for boys and girls including teachers.
  - There is an elected Students' Council constituted with sub-committees like Cultural, Academic, Magazine, Games and Sports & various Clubs to encourage and organize various co-curricular activities.
  - The Annual Cultural Festival - ECLECIA and Annual Technical Fest - DAKSHH are organised with much fanfare and enthusiasm. The Centre for Student Affairs (CSA) has been established for coordination and supervision of all students' activities.
  - Photography, Film and Drama Club: Prabhasvana, under the aegis of the Students' Council.
  - Social Awareness & Community Service Club (SPARSH).
  - Rotaract Club of the Institute (Udaan) under the parent body Rotary Club of Mahanagar has been established, which is very active.
  - A robotics society - iRobotiX: To encourage activities pertaining to robotics and participation by HITK students in robotics competition, both within and outside the campus.
  - The Institute's Foundation Day, which falls on Teachers' Day (5th September), is celebrated with enthusiasm and reverence to the teaching fraternity.
  - Fresher's Welcome to induct the new-comers to the Heritage family and Farewell ceremony for the outgoing students.

### **5.1.11 Does the College have an institutionalized mechanism for placement of its students? What services are provided to help students identify job opportunities, prepare themselves for interview, and develop entrepreneurship skills?**

We have a Career Counseling and Placement cell to help students aspire for their careers. The Cell gives students Placement Orientation in the beginning of 7<sup>th</sup> Semester to help them understand the industry and market requirements. It gives them all the information required and the parameters considered by the industry before hand to prepare accordingly.

The Placement Cell provides

- Guest Lecture's
- Leadership talks
- Soft skills Training
- Quant Aptitude Training
- Technical Training
- ON-LINE aptitude tests practice
- TCS and other software companies on-line mock tests
- B.TECH guru test practice with feedback and correctional classes
- Infosys campus connect programme

The Placement Cell orient's them about Core, IT Industry, GATE & CAT Exams, GRE, TOFEL and IELTS, AMCAT Exams and various other competitive Exams. It ensures communication to every student every week of various events happening in other colleges regularly. It also share links of previous year placement papers to help student prepare before Campus hiring of each company.

College placement cell also conducts CII SPONSORED tests and shares feedback with students for correctional measures.

Campus Recruitment Training- It has built ample modern infrastructure and personnel to cater to the training and placement requirements of students.

Training on Soft Skills – 'LEARNING CURVE' is our training partner and they train the students for the Campus recruitments along with our in "house training faculty". The College has Entrepreneurship Development cell Sponsored by AICTE .Awareness camps are conducted every year for students on Entrepreneurship.

'INFOSYS CAMPUS CONNECT FOUNDATION PROGRAM' & SOFT SKILLS PROGRAM: Our students have the facility to be certified by INFOSYS CAMPUS CONNECT, an industry-academia initiative. This training is to bridge the gap between the corporate and academia and help students understand the real time issues of the industry. Infosys Foundation Program was rolled out to the students by the CSE/IT Department of the college (in house faculty – trained at Infosys under the Faculty Development Program) to improve their technical skills while the soft skills program was rolled out by Infosys to enhance the student's soft skills.

Aspiring Minds - AMCAT: An aptitude test by AMCAT is conducted which helps the students to get entry level jobs in various sectors.

JKC: JKC is an innovative and pioneering initiative by State Govt that attracts the best students from all over the state, providing them with a world class infrastructure and opportunities to apply their knowledge to the challenging problems. In 2009, College received award from the Chief Minister of State as "College of Maximum Placements by JKC"

Two photos printed below show the placement floor having 20 interviewing cubicles and group discussion halls. One photo shows student waiting for Interview another photo is students in Conference Room of Placement Cell:



**5.1.12 Give the number of students selected during campus interviews by different employers (list the employers and the number of companies who visited the campus annually for the last four years).**

Placements for the year 2010-11, 2011-12, 2012-13, 2013-14 and 2014-15 are shown below:

**COMPANY WISE RECRUITMENT DETAILS 2010-11**

SI No.	Company	Rs. P.a CTC	Total
1	BOCI India Limited	3.00	2
2	Paharpur Cooling Towers	2.16	3
3	Infosys Technologies Limited	3.50	231
4	Wipro Technologies Limited	3.50	67
5	ITC Infotech Limited	3.30	18
6	Philips Carbon Black	3.50	3
7	Haldia Petrochemicals Ltd	4.86	2
8	Capgemini	3.15	50
9	Tech Mahindra & Mahindra Satyam	3.08	10
10	SYNTEL	2.50	3
11	Wipro Infotech Ltd	3.00	2
12	LnT Infotech	2.90	2
13	Himadri Chemicals & Industries Ltd.	2.80	2
14	The Jute Corporation of India Ltd	2.00	1
15	NIIT Technologies Limited	2.80	1
16	Dena Bank	1.65	1
17	IERCEM	1.40	2
18	JIS Engineering College	1.20	4
19	Aryaabhatta Engineering College	1.30	1
20	Supreme Knowledge Foundation	1.80	1
21	Techno India Durgapur	1.20	1
22	Heritage Institute of Technology	1.30	2
23	Dream Institute of Technology	1.20	1
24	Voda Fone	1.30	2
25	St. Thomas Engineering College	1.20	1
26	Assam Don Bosco University	1.25	1
Total			414

**COMPANY WISE RECRUITMENT DETAILS 2011-12**

SI No.	Company	Rs. P.a CTC	Total
1	Infosys Technologies Limited	3.50	302
2	Wipro Technologies Limited	3.50	103
3	ITC Infotech India Limited	3.30	4
4	BOC India Limited	2.76	3
5	Syntel Limited	2.95	3
6	Swastic Refinery Pvt. Ltd.	2.04	1
7	Voith Paper Technology (India) Limited	3.60	2
8	Cheers Interactive	2.50	1
9	Global Adsorbent	1.20	1
10	Aluminus Software Pvt Ltd	1.50	1
11	Blooming Diagnostic & Impex Pvt Ltd	1.30	1



SI No.	Company	Rs. P.a CTC	Total
12	Chromous Biotech - bde	1.25	1
13	ION Exchange India Pvt Ltd	1.60	1
14	Capgemini	1.20	1
15	Ideo Technological Resources Ltd	1.40	1
16	Nomura Research Institute Fin. Tech. I Pvt Ltd.	1.75	1
17	Quest Tech Pvt Ltd	1.33	1
18	Camelia Group	1.65	2
19	BITM Shantineketan	1.75	1
20	Jharkhand Steel Plant	1.80	1
21	Dream Inst. Of Technology	1.20	2
22	Sikkim Manipal Univ.	1.30	1
23	MIST	1.25	1
24	UBI	1.20	1
25	IITP	1.30	1
26	IIT Kharagpur	1.20	1
27	Kalayani Univ	2.00	1
28	MIT Singhur	1.80	1
29	Budge Budge Inst. Tech.	1.50	2
30	Chandrakona Inst. College	1.30	4
31	Techno India	1.65	1
32	Bengal College of Engg Durgapur	1.70	3
33	Supreme Lodha	1.30	1
34	Heritage Institute of Technology	1.50	1
35	ICICI Bank	1.35	1
36	Raja Bazar Science College	1.20	1
Total			455

**COMPANY WISE RECRUITMENT DETAILS 2012-13**

SI No.	Company	Rs. P.a CTC	Total
1	Tata Consultancy Services Limited	3.16	89
2	BOC India Limited	2.46	4
3	ITC Infotech India Limited	3.30	8
4	Nomura Research Inst.Fin.Tech. (I) Pvt. Ltd.	3.80	8
5	CAPGEMINI INDIA	3.05	58
6	Dynamic Digital Technology	4.23	5
7	Microsoft	16.00	1
8	Sanmar Engineering Technologies Ltd	3.06	2
9	Industrial Pumps & Motors Agencies	1.80	1
10	Philips Carbon Black Limited	3.06	4
11	Berger Paints India Limited	4.25	2
12	Edudigm Education Services Pvt. Ltd.	2.25	3
13	WIPRO BPO	2.00	2
14	Gujarat Fluorochemicals Ltd	2.40	8
15	Mallcom India Pvt. Ltd.	1.50	8
16	Vikram Solar	1.80	2
17	Star Cement Meghalaya Ltd.	2.64	5
18	YKZ Zip & Fasteners Pvt. Ltd.	2.25	6
19	Patton India	1.5	3
20	Celia Infotech Solutions Software Pvt. Ltd.	2.4	8
21	Secure Enersoft Ltd	2.20	2
22	Magnaj Innovations (Magna Group)	2.40	1
23	Alchem International Pvt. Ltd.	3.00	2
24	Shyam Sel	1.80	2
25	IBM	2.50	1

SI No.	Company	Rs. P.a CTC	Total
26	WT IT Solutions	2.00	10
27	GEN PACT	2.20	2
28	Birla Jute	3.00	2
29	Global Adsorbents	1.20	2
30	Institute of Applied Quality Management	1.80	8
31	Reinguss GMBH	1.50	1
32	IOCL	3.10	1
33	Linde	3.00	1
34	Inodada Isogen Ltd	1.80	1
35	Germittion Technology	2.05	2
36	Gargi Memorial	2.00	1
37	IXIA Technologies	1.80	1
38	Tech Mahindra	3.08	6
39	Keventer Agro Limited	2.50	1
40	HCL	1.80	2
41	Manikaran Power	2.25	1
42	CTS	3.00	3
43	Infosys	3.50	5
44	IMT Gaziabad	2.05	1
45	Placed	-	2
46	ICICI Bank	1.35	1
47	BSEB	2.00	1
48	CGI	1.80	1
Total			285

**COMPANY WISE RECRUITMENT DETAILS 2013-14**

SI No.	Company	Rs. P.a CTC	Total
1	Wipro Technologies Limited (Exclusive)	3.50	53
2	Infosys Limited (Exclusive)	3.50	171
3	Polaris Networks (Dynamic Digital Technology)	5.50	1
4	Microsoft	16.00	1
5	Odessa Technologies	3.05	3
6	Capgemini	3.05	35
7	ITC Infotech	3.38	5
8	Odessa Technologies	3.05	1
9	Linde (India) Private Limited	2.76	2
10	Johnson Controls	3.00	1
11	Edudigm Education Services Pvt. Ltd.	3.25	2
12	UST Global	3.00	10
13	Va Tech Wabag Limited	3.55	2
14	Meditab Software Inc.	3.60	1
15	IBM	3.40	6
16	Berger Paints India Limited	4.50	2
17	IBM (Females)	2.20	1
18	Mendine Pharmaceuticals Pvt Ltd	2.74	1
19	Scholar@SAP Program with BITS PILANI	3.00	1
20	Cryobanks International India Private Ltd	1.65	5
21	Wacker Metroark Chemicals	4.00	2
22	TCS	3.00	5
23	TECH Mahindra	3.07	19
24	Thyrocare Technologies Limited	2.00	2
25	Haldia Petrochemicals Limited	5.00	2

SI No.	Company	Rs. P.a CTC	Total
26	Embee Software Private Limited	1.49	1
27	Voith paper Technology (India) Private Limited	3.00	4
28	L&T Infotech	3.00	1
29	Inox Air Products Ltd	3.50	1
30	Steel Authority of India	1.28	2
31	IBM	3.40	8
32	Mendine Pharmaceuticals Pvt Ltd	1.44	1
33	Prime Focus	4.50	1
34	CGI	2.90	1
35	Mindtree	4.50	1
36	Codez	2.90	1
37	Accenture	4.50	6
Total			362

**COMPANY WISE RECRUITMENT DETAILS 2014-15**

SI No.	Company	Rs. P.a CTC	Total
1	Infosys Limited - Only (All B.Tech. & M.Tech)	3.25	193
2	Wipro Technologies Limited - Only (AEIE,CHE,CSE,ECE,MECH,IT&MCA)	3.25	101
3	Va Tech Wabag (AEIE,CHE,CIVIL,MECH)	3.50	5
4	ITC Infotech (CSE,ECE,IT)	3.30	13
5	Capgemini (B.T & M.T-CSE,ECE,IT,AEIE,MECH,CIVIL,MCA)	3.05	31
6	Tech Mahindra (ALL Streams & MCA)	3.07	40
7	Linde India Limited (CHEM)	5.00	2
8	Yodlee Infotech Private Limited (CSE,IT)	5.70	1
10	SAP Labs India (CSE,ECE,IT)	3.00	1
11	Persistent Systems Ltd, Nagpur (CSE,IT,MCA)	3.58	1
15	Dynamic Digital - Only (CSE,ECE,IT B.TECH. & M.TECH)	4.50	2
16	Bosch - Only (AEIE , ECE)	3.64	4
17	James Warren Tea Limited (MECH)	5.00	2
18	IBM (All B.Tech &M.Tech - Female)	3.15	2
19	Rene Impex Private Limited (AEIE, CHE, MECH)	2.40	2
20	Torrecid India Pvt Ltd (CHEM)	2.88	1
21	Paharpur Cooling Towers Limited(CHE,CIVIL,MECH)	3.60	2
22	GKB Rx Lens Pvt. Ltd. (AEIE & MECH)	3.00	4
23	Aakash Institute (All B.Tech & M.Tech)	6.00	1
24	Green Valley Industries Ltd (AEIE, CHE & MECH)	2.40	2
25	Berger Paints	4.20	1
26	Phillips Carbon Black Limited (CHEM)	5.00	6
27	Idea Cellular Limited (ECE)	3.50	1
28	Xplorsoft Pvt. Ltd. (CSE, ECE, IT & MCA)	1.80	10
29	Tractors India (MECH)	3.24	1
30	STUP Consultants Pvt. Ltd. (CIVIL)	3.00	1
31	Birla Jute Mills Limited (MECH)	3.00	2
32	Voith Paper Technology (India) Private Limited (AEIE & MECH)	4.5	2
33	Ideal Group (CIVIL)	2.75	3
34	TCS	3.18	5
35	Ericsson India Global Services (ECE)	2.70	5
36	Thyrocare Technologies Ltd (AEIE BIO)	2.50	3
37	Alom Poly Extrusions Limited & Techno Electric	2.00	3
38	SRMB Group (Mech, CIVIL)	2.00	5
39	Premium Transmission Limited (MECH)	2.40	3
40	Techno Electric & Engineering Co. Ltd. (Only)	2.50	1
41	NRGtech Services Pvt Ltd (CHEM)	2.58	2

SI No.	Company	Rs. P.a CTC	Total
42	KEC International Limited - Domestic	3.50	1
43	KEC International Limited - International	7.00	1
44	Nividyne Systems Pvt. Ltd (B.Tech - All Streams)	1.10	1
45	Kutchina (Kitchen Solutions) (AEIE, ECE, MECH - MALE)	1.80	1
46	Star Cement (Civil)	2.20	4
47	Tata Steel	4.92	1
48	Mendine Lifecare Products Pvt. Ltd. (CHEM)	2.50	1
49	Vikram Solar Pvt Ltd (MECH & AEIE)	2.50	2
50	Rajwada Group	2.16	2
51	Vikram India Limited	2.40	1
52	Amazon (All B.Tech.)	3.50	1
53	Sky Scrappers Pvt. Ltd. (CIVIL)	1.80	5
54.	HiTech Systems & Services Limited (MECH, ECE, AEIE)	2.50	3
55.	Proconmag (Civil)	2.50	1
56.	Focus Academy for Career Enhancement (All B.Tech.)	2.64	2
57.	Patton India Limited	2.00	2
58.	SHV Energy Pvt Ltd.	3.40	1
59.	Overtop Marketing Pvt.Ltd	1.80	1
60.	M/S Trans Residency Pvt Ltd	1.80	1
61.	ITD Cementation	3.00	1
62.	Mani Group	2.50	1
63.	Techno Scientific Co.	2.50	2
64.	Himadri Chemicals (Chem)	2.80	4
65.	Tata Consultancy Services	3.18	3
Total			507

**5.1.13. Does the College have a registered Alumni association? If yes, what are its activities and contributions to the development of the College?**

Alumni Association is not a registered body

- The college has alumni association. All the outgoing students automatically become members of the association. The alumni association offers various facilities.
- The alumni are members of the BOS, and contribute their expertise in designing of course curriculum.
- They provide feedback to the college overall development.

**Body of the Alumni association**

Mr. Anupam Baid (AEIE'05)	Chairman
Mr. Nilashis Chatterjee (CSE'05)	Vice-Chairman
Mr. Partha Sarathi Banerjee(AEIE'05)	Vice-Chairman
Mr. Sujoy Mukherjee (ECE'05)	General Secretary
Mr. Shaon Majumder (AEIE'06)	Asst. General Secretary
Ms. Sonal Mazumder (CH'06)	Asst. General Secretary
Mr. Rohit Kathotia (IT'05)	Treasurer
Mr. Amit Mohanka (CSE'05)	Member
Ms. Joshita Nandy (MCA'06)	Member
Mr. Asif Iqbal Khan (MBA'05)	Member
Mr. Arvinder Singh (MCA'06)	Member
Mr. Prantik Mahajan (ECE'06)	Member
Mr. Shubhdeep Mukherjee (IT'06)	Member
Mr. Debraj Sengupta (ECE'06)	Member
Mr. Arunava Das (BT'06)	Member

**5.1.14 Does the College have a student grievance redressal cell? Give details of the nature of grievances reported and how they were redressed.**

Yes.

- H.I.T.K college has a grievance redressal cell (GRC) exclusively for students both boys and girls separately. It is not forum for entertaining indiscipline and any other violation of college and does not encourage rebellion among students.
- GRC comprising of the principal as the chairman, other senior faculty and student members.
- The GRC reviews the grievances of the students once in a month and actions taken immediately.
- Grievance boxes is placed in front of the principal's office for students, parents and others

Based on complaints dropped in the GRC box, the following facilities are provided.

- General facilities are provided to the auditorium and the library.
- RO water is provided in the campus.
- To cope with the heavy demand for internet browsing additional systems have been provided in the library.
- Printing mistakes in the question paper, questions from out of syllabus are brought to the notice of the grievance redressal cell and they are forwarded to the COE.
- Reprographic facility was established in the internet room for photocopying material for library.

**5.1.15 Does the College have a cell and mechanism to resolve issues of sexual harassment?**

Yes, the college has the anti-ragging committee and woman's cell as per Govt. norms. As per the vision, the college encourages senior students to extend support, encouragement and help to their juniors. There is a cell and mechanism to resolve issues of sexual harassment. But no incident has been recorded since inception of college.

**5.1.16 Is there an anti-ragging committee? How many instances (if any) have been reported during the last four years and what action has been taken on these?**

- Yes, the college has an anti-ragging committee under the convener of
- The committee has been conducting meeting on ragging and its evil impact on youth by lawyers and police department.
- Not only last four years, but from the inception of the college (AY: 2001-02), no incidence of ragging has been recorded.

**5.1.17 How does the College elicit the cooperation from all stakeholders to ensure overall development of the students considering the curricular and co-curricular activities, research, community orientation, etc?**

- H.I.T.K. college takes effort in maintaining healthy relationship with stakeholders such as parents alumnae, industrialist by involving them, in B.O.S, A/C and BG thereby eliciting their expertise in framing curricular and community oriented activities such as
- All departments conduct parent teacher meetings every year to review the overall development of their children. Alumni association is actively involved in activities of the college.
- At the time of student admissions, undertakings from parents and students are received pertaining to ragging, mobile etc.
- Disciplinary action on violation of college / hostel rules is taken after discussion with the parents.
- Disciplinary action for malpractice in examination is taken as per college examination COE rules and informed to the parents.
- Feedbacks from the various stakeholders are collected in written questionnaire.

**5.1.18 What special schemes/ mechanisms are in place to motivate students for participation in extracurricular activities such as sports, cultural events etc.?**

- The college made certain unique and well intended efforts to motivate each of the students to involve in sports and cultural activities.

- Students have been provided special diet during the training period.
- The college offer scholarships for talented sports students, Sports students are provided with sports kit and uniforms.
- Special classes are taken to cover the syllabus.
- Students are deputed for participation in debate, seminars, and competitions in all over the state.
- Fine arts — Fine art association organizes various cultural programmes.
- Training facilities are provided to the students who are participating in cultural activities.
- Cost me, make-up and orchestra expenses are provided by the college.

### To participate outside the College

- Students are encouraged to participate in the youth festivals organized by MAKAUT every year.
- Displaying names of prize winners on the college notice board and notice will be sent to every class during working day.
- Honoring the winner in a college function
- Flexibility in attendance requirements to enhance participation in cultural activities outside the college.

### 5.1.19 How does the College ensure participation of women in 'intra' and 'inter' institutional sports competitions and cultural activities? Provides details of sports and cultural activities in which such efforts were made?

- The college ensures the participation of girl students in 'inter' and 'intra' institutional sports competitions and other cultural activities on par with boys.
- The fine arts association organizes various cultural activities inside and outside the college like, folk dance classical dance during the college day competition and festival at MAKAUT

## 5.2 Student Progression

### 5.2.1 Provide details of programme-wise success rate of the College for the last four years. How does the College compare itself with the performance of other autonomous Colleges / universities (if available)

Yes, we have an autonomous exam department which works independently and is responsible for performing result analysis as well. HIT, K has the highest pass percentage among other colleges in under MAKAUT, Kolkata and has been displaying excellent pass percentage consistently across the years.

Academic Performance of the students admitted in AY's 2011-12 (1st Yr) 2012-13 (2nd yr), 2013-14 (3rd yr) and 2014-15 (4th yr) (wherever applicable)

Academic Performance of the Students for the Academic Year 2014-15

Department	HIT			University			Other College		
	Students appeared	Students Passed	% of success	Students appeared	Students Passed	% of success	Students appeared	Students Passed	% of success
EEE	-	-	-						
ECE	211	204	97						
AEIE	70	67	96						
CSE	117	110	97						
IT	68	66	97						
CE	66	62	94						
ME	76	68	89						
CHE	70	68	97						
BT	68	64	94						
MBA	NAV	NAV	NAV						
MCA	58	58	100						
MBA (Part Time)	NAV	NAV	NAV						
AEIE- ME Degree	13	13	100						

Department	HIT			University			Other College		
	Students appeared	Students Passed	% of success	Students appeared	Students Passed	% of success	Students appeared	Students Passed	% of success
CS- ME Degree	33	32	97						
BT- ME Degree	12	12	100						
CHE- ME Degree	NAV	NAV	NAV						
ECE- ME Degree	11	11	100						
IT- ME Degree	9	6	67						
ECE (VLSI)- ME Degree	16	16	100						

## Academic Performance of the Students for the Academic Year 2013-14

Department	HIT			University			Other College		
	Students appeared	Students Passed	% age	Students appeared	Students Passed	% age	Students appeared	Students Passed	% age
EEE	-	-	-						
ECE	147	145	99						
AEIE	64	61	95						
CSE	104	100	96						
IT	65	63	97						
CE	-	-	-						
ME	-	-	-						
CHE	69	67	97						
BT	58	53	91						
MBA	107	97	91						
MCA	47	47	100						
MBA (Part Time)	08	06	75						
AEIE- ME Degree	18	18	100						
CS- ME Degree	34	33	97						
BT- ME Degree	15	15	100						
CHE- ME Degree	NAV	NAV	NAV						
ECE- ME Degree	17	17	100						
IT- ME Degree	15	14	93						
ECE (VLSI)- ME Degree	17	17	100						

## Academic Performance of the Students for the Academic Year 2012-13

Department	HIT			University			Other College		
	Students appeared	Students Passed	% age	Students appeared	Students Passed	% age	Students appeared	Students Passed	% age
EEE	-	-	-						
ECE	103	103	100						
AEIE	64	64	100						
CSE	94	94	100						
IT	66	65	98						
CE	-	-	-						
ME	-	-	-						
CHE	58	58	100						
BT	57	57	100						
MBA	153	140	92						
MCA	56	55	98						
MBA (Part Time)	22	21	95						
AEIE- ME Degree	15	15	100						
CS- ME Degree	31	31	100						

Department	HIT			University			Other College		
	Students appeared	Students Passed	% age	Students appeared	Students Passed	% age	Students appeared	Students Passed	% age
BT- ME Degree	18	18	100						
CHE- ME Degree	01	01	100						
ECE- ME Degree	17	17	100						
IT- ME Degree	9	9	100						
ECE (VLSI)- ME Degree	16	16	100						

## Academic Performance of the Students for the Academic Year 2011-12

Department	HIT			University			Other College		
	Students appeared	Students Passed	% age	Students appeared	Students Passed	% age	Students appeared	Students Passed	% age
EEE	-	-	-						
ECE	115	115	100						
AEIE	70	70	100						
CSE	108	108	100						
IT	64	64	100						
CE	-	-	-						
ME	-	-	-						
CHE	58	58	100						
BT	67	66	99						
MBA	119	99	83						
MCA	55	54	98						
MBA (Part Time)	32	29	91						
AEIE- ME Degree	16	13	81						
CS- ME Degree	17	17	100						
BT- ME Degree	16	16	100						
CHE- ME Degree	03	03	100						
ECE- ME Degree	16	15	94						
IT- ME Degree	-	-	-						
ECE (VLSI)- ME Degree	-	-	-						

## Academic Performance of the Students for the Academic Year 2010-11

Department	HIT			University			Other College		
	Students appeared	Students Passed	% age	Students appeared	Students Passed	% age	Students appeared	Students Passed	% age
EEE	-	-	-	-	-	-	-	-	-
ECE	101	101	100						
AEIE	63	63	100						
CSE	108	107	99						
IT	59	59	100						
CE	-	-	-						
ME	-	-	-						
CHE	59	59	100						
BT	64	64	100						
MBA	112	108	96						
MCA	54	53	98						
MBA (Part Time)	39	36	92						
AEIE- ME Degree	17	17	100						
CS- ME Degree	16	16	100						
BT- ME Degree	18	18	100						
CHE- ME Degree	02	02	100						
ECE- ME Degree	14	14	100						
IT- ME Degree	-	-	-						
ECE (VLSI)- ME Degree	-	-	-						



**5.2.2 Providing the percentage of students progressing to higher education or employment (for the last four batches) highlight the observed trends.**

**Department Name: Biotechnology**

Name of the course		Year of Passout	Percentage against the enrollment
UG to PG (B.Tech. Biotechnology)		2015	23%
		2014	23%
		2013	30%
		2012	24%
PG to PhD (M.Tech. Biotechnology)		2015	25%
		2014	33%
		2013	29%
		2012	50%
PhD to Post Doctoral		2015	NIL
		2014	NIL
		2013	NIL
		2012	NIL
Employed	Campus Selection	2015	55%
		2014	58%
		2013	26%
		2012	68%
	Other than campus recruitment	2015	NIL
		2014	NIL
		2013	NIL
		2012	NIL
Entrepreneurs		2015	NIL
		2014	NIL
		2013	NIL
		2012	NIL

**Department Name: Chemical Engineering**

Name of the course		Year of Passout	Percentage against the enrollment
UG to PG		2015	10.0
		2014	13.0
		2013	18.9
		2012	27.2
PG to PhD		2015	57.1
		2014	22.3
		2013	20.0
		2012	16.7
PhD to Post Doctoral		2015	25.0
		2014	50.0
		2013	67.0
		2012	67.0
Employed	Campus Selection	2015	47%
		2014	51%
		2013	69%
		2012	89%
	Other than campus recruitment	2015	1.0%
		2014	4.3%
		2013	3.4%
		2012	1.7%

Name of the course	Year of Passout	Percentage against the enrollment
Entrepreneurs	2015	NIL
	2014	NIL
	2013	NIL
	2012	NIL

**Department Name: Applied Electronics and Instrumentation Engineering**

Name of the course		Year of Passout	Percentage against the enrollment
UG to PG		2015	10
		2014	10
		2013	5
		2012	2
PG to PhD		2015	2
		2014	2
		2013	5
		2012	2
PhD to Post Doctoral		2015	0
		2014	0
		2013	0
		2012	0
Employed	Campus Selection	2015	76
		2014	65
		2013	85
		2012	85
	Other than campus recruitment	2015	18
		2014	25
		2013	10
		2012	10
Entrepreneurs		2015	2
		2014	2
		2013	2
		2012	2

**Department Name: Civil Engineering (1<sup>st</sup> Batch have passed out in 2015)**

Name of the Course	Year of Passout	Percentage against enrolled
UG to PG	2015	NIL
PG to M.Phil.		NIL
PG to Ph.D.		NIL
Ph.D. to Post-Doctoral		NIL
Employed		81
• Campus selection		19
• Other than campus recruitment		
Entrepreneurs		NIL

**Department Name: Computer Science and Engineering**

Name of the course		Year of Passout	Percentage against the enrollment
UG to PG		2015	11
		2014	11
		2013	12
		2012	10
PG to PhD		2015	NIL
		2014	NIL
		2013	NIL
		2012	NIL
PhD to Post Doctoral		2015	NIL
		2014	NIL
		2013	NIL
		2012	NIL
Employed	Campus Selection	2015	86
		2014	85
		2013	67
		2012	89
	Other than campus recruitment	2015	NIL
		2014	NIL
		2013	NIL
		2012	NIL
Entrepreneurs		2015	NIL
		2014	NIL
		2013	NIL
		2012	NIL

**Department Name: Electrical Engineering (1<sup>st</sup> Batch will pass out in 2016)**

Student progression	Percentage against enrolled
UG to PG	NA(New Department)
PG to M.Phil	NA
PG to Ph.D.	NA
Ph.D. to Post-Doctoral	NA
Employed <ul style="list-style-type: none"> <li>Campus selection</li> <li>Other than campus recruitment</li> </ul>	75 02
Entrepreneurs	NIL

**Department Name: Electronics and Communication Engineering**

Name of the course		Percentage against the enrollment	
UG to PG	2015	8	
	2014	9	
	2013	8	
	2012	6	
PG to PhD	2015	NIL	
	2014	NIL	
	2013	NIL	
	2012	NIL	
PhD to Post Doctoral	2015	NIL	
	2014	NIL	
	2013	NIL	
	2012	NIL	
Employed	Campus Selection	2015	84
		2014	71
		2013	58
		2012	92
	Other than campus recruitment	2015	NIL
		2014	NIL
		2013	NIL
		2012	NIL
Entrepreneurs	2015	NIL	
	2014	NIL	
	2013	NIL	
	2012	NIL	

**Department Name: Information Technology**

Name of the course	Year of Passout	Percentage against the enrollment
UG to PG	2015	NIL
	2014	NIL
	2013	NIL
	2012	NIL
PG to PhD	2015	NIL
	2014	NIL
	2013	NIL
	2012	NIL

Name of the course		Year of Passout	Percentage against the enrollment
PhD to Post Doctoral		2015	NIL
		2014	NIL
		2013	NIL
		2012	NIL
Employed	Campus Selection	2015	90.76
		2014	68.18
		2013	69.23
		2012	61.78
	Other than campus recruitment	2015	NIL
		2014	7.46
		2013	3.17
		2012	NIL
Entrepreneurs		2015	NIL
		2014	NIL
		2013	NIL
		2012	NIL

**Department Name: Mechanical Engineering (1<sup>st</sup> Batch have passed out in 2015)**

Student progression	Year of Passout	Percentage against enrolled
UG to PG	2015	0.26
PG to M.Phil		NA
PG to Ph.D.		NA
Ph.D. to Post-Doctoral		NA
Employed		67.1
• Campus selection		Data not available
• Other than campus recruitment		
Entrepreneurs		NIL

**5.2.3 What is the Programme-wise completion rate/dropout rate within the time span as stipulated by the College/University?**

**Department Name: Biotechnology**

Name of the Course	Applications received	Selected			Pass percentage (Completion Rate)	
		Year	Male	Female	Male	Female
B.Tech in Biotechnology	66	2014-15	25	41	100%	100%
	55	2013-14	24	31	100%	100%
	57	2012-13	26	31	100%	100%
	67	2011-12	29	38	100%	100%

Name of the Course	Applications received	Selected			Pass percentage (Completion Rate)	
		Year	Male	Female	Male	Female
M.Tech in Biotechnology	12	2014-15	4	8	100%	100%
	15	2013-14	3	12	100%	100%
	17	2012-13	5	12	100%	100%
	16	2011-12	6	10	100%	100%

**Department Name: Chemical Engineering**

Name of the Course	Applications received	Selected			Pass percentage (Completion Rate)	
		Year of Passout	Male	Female	Male	Female
B.Tech in Chemical Engineering	71	2014-15	45	26	100%	100%
	73	2013-14	57	16	100%	100%
	73	2012-13	55	18	100%	100%
	72	2011-12	60	10	96.4%	100%

**Department Name: Applied Electronics and Instrumentation Engineering**

Name of the Course	Applications received	Selected			Pass percentage (Completion Rate)	
		Year of Passout	Male	Female	Male	Female
B.Tech in Applied Electronics and Instrumentation Engineering	63	2014-15	42	21	100%	100%
	61	2013-14	46	15	100%	100%
	63	2012-13	45	17	100%	100%
	62	2011-12	48	14	100%	100%
M.Tech in Applied Electronics and Instrumentation Engineering	17	2014-15	7	10	100%	100%
	14	2013-14	9	5	100%	100%
	18	2012-13	7	11	100%	100%
	17	2011-12	10	7	100%	100%

**Department Name: Civil Engineering**

Name of the Course	Applications received	Selected			Pass percentage	
		Year of Passout	Male	Female	Male	Female
B.Tech	60	2014-2015	58	07	93	100

**Department Name: Computer Science and Engineering**

Name of the Course	Applications received	Selected			Pass percentage (Completion Rate)	
		Year of Passout	Male	Female	Male	Female
B.Tech	117	2014-15	79	31	92.94%	96.87%
	104	2013-14	62	37	93.93%	97.36%
	94	2012-13	76	18	100%	100%
	108	2011-12	77	31	100%	100%

M.Tech	33	2014-15	18	13	100%	86.66%
	34	2013-14	21	12	95.45%	100%
	31	2012-13	16	15	100%	100%
	17	2011-12	11	6	100%	100%

**Department Name: Electrical Engineering**  
**New Department (1<sup>st</sup> Batch will pass out in 2016)**

**Department Name: Electronics and Communication Engineering**

Name of the Course	Applications received	Selected			Pass Percentage	
		Year of passout	Male	Female	Male	Female
<b>B. Tech</b>	231	2015	166	45	90.96	93.33
	149	2014	115	32	98.26	100
	104	2013	91	12	98.90	100
	117	2012	85	30	97.65	100
<b>M. Tech (Communication)</b>	16	2015	9	7	100	100
	17	2014	7	10	100	100
	17	2013	9	8	100	100
	17	2012	12	4	91.67	100
<b>M. Tech (Microelectronics and VLSI Design)</b>	13	2015	7	6	100	100
	17	2014	12	5	100	100
	16	2013	9	7	100	100
		2012	-	-	-	-

**Department Name: Information Technology**

Name of the Course	Application received	Selected			Pass percentage	
		Year of Passout	Male	Female	Male	Female
<b>B. Tech</b>	71	2014-15	48	20	93.75	100
	67	2013-14	44	21	95.45	100
	67	2012-13	43	23	100	95.65
	66	2011-12	44	21	100	95.23
<b>M. Tech</b>	20	2014-15	6	5	50	60
	23	2013-14	7	11	71.4	81.8
	11	2012-13	5	5	80	100
		2011-12	--	--	--	--

**Department Name: Mechanical Engineering**

Name of the Course	Applications received	Selected			Pass percentage	
		Year	Male	Female	Male	Female
<b>B.Tech</b>	76	2014-2015	74	02	100%	100%

**5.2.4 What is the number and percentage of students who appeared/qualified in Examinations like UGC-CSIR-NET, UGC-NET, SLET, ATE / CAT / GRE / TOFEL / GMAT / Central / State services, Defense, Civil Services, etc.**

**Department Name: Biotechnology**

Academic Year	GATE	TOEFL	IELTS	GRE	CAT	MAT	Total	%Appeared	%Qualified	Batch Size
2014-2015	16	-	-	-	2	-	18	19	94.7	65
2013-2014	6	5	1	5	-	-	17	20	85	55
2012-2013	8	3	-	3	3	-	17	20	85	57
2011-2012	13	5	-	5	3	-	26	30	86.6	67

**Department Name: Chemical Engineering**

Academic Year	GATE	TOEFL	IELTS	GRE	CAT	MAT	Total	%Appeared	%Qualified	Batch Size
2014-2015	12	-	-	-	-	-	12	26.4	65	70
2013-2014	15	5	-	5	-	-	25	48.3	75	69
2012-2013	20	2	-	2	1	-	25	50.7	85	58
2011-2012	10	2	-	2	-	-	14	30.2	80	58

**Department Name: Applied Electronics and Instrumentation Engineering**

Academic Year	GATE	TOEFL	IELTS	GRE	CAT	MAT	Total	%Appeared	%Qualified	Batch Size
2011-2012	7	0	0	0	1		8	20%	13%	60
2012-2013	11	1	0	1	3		16	30%	26%	60
2013-2014	4	2	0	2	0		8	20%	13%	60
2014-2015	6	1	0	2	4		13	30%	22%	60



**Department Name: Civil Engineering**

Academic Year	Govt. & other Competitive Examinations	GATE	TOEFL	IELTS	GRE	CAT	MAT	Total	%Appeared	%Qualified	Batch Size
2014-2015	5	8	0	0	0	0	0	13	38.46	20	65

**Department Name: Computer Science and Engineering**

Academic Year	GATE	TOEFL	IELTS	GRE	CAT	MAT	Total	%Appeared	%Qualified	Batch Size
2014-2015	10	1	-	1	8	-	20	30	66.67%	90
2013-2014	9	3	-	3	8	-	23	32	71.87%	90
2012-2013	9	3	-	3	4	-	19	28	67.85%	90
2011-2012	6	3	-	3	2	-	14	21	66.67%	90

**Department Name: Electrical Engineering****New Department****Department Name: Electronics and Communication Engineering**

Academic Year	GATE	TOEFL	IELTS	GRE	CAT	MAT	Total	%Appeared	%Qualified	Batch Size
2014-2015	5	4		4	5		18	30	28	218
2013-2014	7	4		4	4		19	38	35	141
2012-2013	8	5		5	6		24	47	43	116
2011-2012	6	4		4	5		19	42	38	114

**Department Name: Information Technology**

Academic Year	GATE	TOEFL	IELTS	GRE	CAT	MAT	Total	%Appeared	%Qualified	Batch Size
2011-2012	3	-	-	1	15	-	19	44.61	29.23	65
2012-2013	4	-	-	2	10	-	16	42.42	24.24	66
2013-2014	2	1	-	3	5	-	11	41.53	16.92	65
2014-2015	2	1	-	3	1	-	7	35.29	10.29	68

**Department Name: Mechanical Engineering**

Academic Year	GATE	TOEFL	IELTS	GRE	CAT	MAT	Total	%Appeared	%Qualified	Batch Size
2014-2015	06 (qualified)	-	-	-	-	-	06	19.79	7.9	76

**5.2.5 Provide details regarding the number of Ph.D/D.Sc./D.Litt. theses submitted, accepted, resubmitted and rejected in the last four years.****Department Name: Biotechnology**

Name of the Degree	Number of faculty	
	Submitted	Awarded
Ph.D.	01	04

**Department Name: Chemical Engineering**

Name of the Degree	Number of faculty	
	Submitted	Awarded
Ph.D.	NIL	03 01 (2014-2015); 01 (2013-2014); 02 (2012-2013)

**Department Name: Applied Electronics and Instrumentation Engineering**

Name of the Degree	Number of faculty	
	Submitted	Awarded
Ph.D.	3	2

**Department Name: Civil Engineering**

Name of the Degree	Number of faculty	
	Submitted	Awarded
Ph.D.	01	01

**Department Name: Computer Science and Engineering**

Name of the Degree	Number of faculty	
	Submitted	Awarded
Ph.D.	0	3 1(2013) 2(2012)

**Department Name: Electrical Engineering**

Name of the Degree	Number of faculty	
	Submitted	Awarded
Ph.D.	0	1(2012)

**Department Name: Electronics and Communication Engineering**

Name of the Degree	Number of faculty	
	Submitted	Awarded
Ph.D.	11	7

**Department Name: Information Technology  
NA****Department Name: Mechanical Engineering**

Name of the Degree	Number of faculty	
	Submitted	Awarded
Ph.D.	0	5

**5.3 Student Participation and Activities****5.3.1 List the range of sports and games, cultural and extracurricular activities available to students. Provide details of participation and program calendar.**

HITK has spacious play ground for boys and girls.

**Outdoor Games:**

- Archery
- Basketball
- Cricket
- Football
- Swimming
- Volleyball

HITK has well built infrastructure for indoor games.

**Indoor Games:**

- Carom
- Gymnasium
- Table Tennis

### 5.3.2 Provide details of the previous four years regarding the achievements of students in co-curricular, extracurricular activities and cultural activities at different levels:

University / State / Zonal / National / International, etc.

#### Details of winners in various Sports and Games for 4 years:

##### ACADEMIC YEAR 2015-16

Sl. No.	Name of the Sport	Name of the Event	Result
1	Football	Joga Bonito	Champion
2	Cricket & Football	Kalyani Govt. Engineering College Tournament	Semi final
3	Football	Elastico	Runner up
4	Football	RG Kar Tournament	Runner up
5	Table Tennis	Top Spin	Runner up
6	Archery	District Archery Meet	Second & Third
7	Archery	State Archery Meet	1 <sup>st</sup> & 2 <sup>nd</sup>
8	Rowing	Junior National Rowing Championship	Won Silver Medal

##### ACADEMIC YEAR 2014-15

Sl. No.	Name of the Sport	Name of the Event	Results
1	Basketball	BPL-IMG Reliance College Basketball League (Boys)	Quarter final
2	Basketball	Indian College Basketball League – Kolkata Zone	Quarter final
3	Table Tennis & Tennis	BIT Patna	Semi final Successfully participated
4	Football	Pailan Frontier	Runner up
5	Football	Kick Off	Champion
6	Football	BESU	Runner up
7	Football	Elastico	Champion

##### ACADEMIC YEAR 2013-14

Sl. No.	Name of the Sport	Name of the Event	Results
1	Cricket	Muqabla – ‘Parakram’	Successfully participated
2	Football	Calcio – ‘Parakram’	Successfully participated
3	Basketball	Re-bound – ‘Parakram’	Successfully participated
4	Table Tennis, Tennis	‘Parakram’	Successfully participated

Sl. No.	Name of the Sport	Name of the Event	Results
5	Badminton	'Parakram'	Successfully participated
6	Football	BIT-Patna Inter College Football Tournament	Champion
7	Football	Poto Cup	Champion
8	Tennis	ISM Dhanbad	Semi Final
9	Football	'Elastico' – Inter College Football Tournament	Champion
10	Football	RCC-LIT Inter College Football Tournament	Champion
11	Football	Inter College Football Tournament organized by Meri	Champion
12	Table Tennis, Tennis	'Parakram' – ISM Dhanbad	Quarter-finals / Semi final
13	Football	'Spectrum' – NIFT	Champion
14	Football	BBIT tournament	Semi finalist
15	Table Tennis	JIS tournament	Runner up

**ACADEMIC YEAR 2012-13**

Sl. No.	Name of the Sports	Name of the Event	Result
1	Football	Parakram	League matches
2	Football	Heritage Champion Trophy	Semi-final
3	Football	BBIT	Runner up
4	Football	EILM	League matches
5	Football	Inter College Football Tournament	Champion

**ACADEMIC YEAR 2011-12**

Sl. No.	Name of the Sports	Name of the Event	Results
1	Cricket	Inter College Cricket Meet	Team became Champion
2	Football	Inter College Football Meet	Team became Champion
3	Table Tennis	Inter College Table Tennis Tournament	Became Champion Became Runner Up
4	Football	Joga Bonito	Became HIT-K Champion
5	Football	Parakram	Qualified to Semi-final
6	Football	BESU	Became Champion
7	Football	WBUT Cup	Qualified to Quarter Final
8	Football	EILM Cup	Qualified to Semi-final

**The cultural, extracurricular and co-curricular activities of the college have been detailed below:**

**Year 2015:**

- HIT-K were the Runners-up in IT Quiz organized at COMPASS Tech Fair from 13th Feb 2015 till 15th Feb 2015.
  - HIT-K bagged the First Runners-up position in Economic Times Campus Quiz organized by Economic Times on 2nd Feb 2015.
  - National Conference on Mathematical Trends in Physical Sciences 2014 (NCMTPS 2014) jointly organized by the Department of Mathematics and the Department of Physics, was held on 13th & 14th August at Heritage Institute of Technology, Kolkata under the aegis of TEQIP-II. Around 100 participants comprising of faculty members from different colleges and universities, research scholars and students attended the sessions. The Conference was inaugurated by Swami Atmapriyanandaji Maharaj, Vice Chancellor, Ramakrishna Mission Vivekananda University, Belur. There were six sessions in the conference, three each day, dedicated to the discussion of six thrust areas of the conference which are of contemporary interest in Mathematical and Physical Sciences.
  - ECLECIA 2015- the Annual Cultural Fest witnessed participation of more than 20 colleges from the city. The fest included various activities like creative writing, debate, tattoo painting, paintball, script writing, antakshari, music, fashion show and many more. The Fest was held from 4th till 6th April 2015 and on the last day a grand performance of popular singer Mohit Chauhan thrilled the audience.
  - DAKSSH 2015- the Tech fest of HIT-K was organized on 18th & 19th March 2015. A fabulous Air Show organized by the Students Council in association with India's Hobby Centre on 19th March 2015.
  - 8th batch of B.Tech students, HITK, with Dr. Durgamadhab Misra participated at the 6-week Summer Research Programme at NJIT, USA.
  - "Prologue", the Parliamentary Debate, was organized by HITK in association with Presidency University on 11th and 12th April 2015 respectively.
  - COMPASS 2015 – Freshers' Induction and Orientation Programme of the B.Tech and MCA Students was organized on 3rd August 2015.
  - The 15th Foundation Day and the Teachers' Day Celebration Programme were organized on 4th September 2015.
  - On 4th November 2015, Department of Biotechnology, HITK, Kolkata, organized a Seminar on "Science for Nation Building" sponsored by West Bengal State Council of Science and Technology and catalyzed by National Council for Science, Technology and Communication, DST, New Delhi.
  - Rotaract Club of HITK was awarded the Best Club out of 30 Rotaract Clubs in Rotaract District 3291 at the Annual District Awards Event of Rotaract District 3291, for the term 2014-15, held on 28th June, 2015. A total of 16 awards were received by RC HITK ( maximum that was ever received since 2009), details of which are as follows:
1. Best Club of Rotaract District 3291
  2. Best President in Rotaract District 3291- Ramyani Mukherjee
  3. Best Secretary in Rotaract District 3291-Swarnadeep Biswas
  4. Best Club in Community Service
  5. Best Project- Joga Bonito (Knock out Football Tournament for raising funds for Durbar Football Team – members comprising children of sex workers of Sonagachi: a red light area)
  6. Best R-Idea of the year- Liter of Light ( A 2-day project to demonstrate use of ordinary water bottles and bleach to illuminate the houses of the poor: it is an eco friendly and cost effective method of providing light to those places which are quite congested).
  7. Best International Service Project- The great raffle for Nepal Earthquake victim.
  8. Best Professional Development Project –Outliers (Women's Day Celebration)
  9. Best Special Area Project- Project Teach.
  10. Best Club in Basic Education and Literacy
  11. Best Club that has complied to DRR's thrust areas ( a total of 26 thrust area projects)
  12. Club with best bulletin
  13. Club with best social media presence
  14. Most popular club

15. Most popular rotaractor- Sayantani Roy
16. Outstanding Rotaractor of Rotaract District 3291- Sayantani Roy

#### Year 2014:

- The Rotaract Club of HIT-K received the following Rotaract District Awards 2014 at RID 3291 "TRIONFO":
  1. Best Club Membership Growth
  2. Best work for Women Empowerment
  3. Best Club in Community Service
  4. Best Club in Professional Development and Leadership
  5. Got a Presidential Citation from Rotary International DRR's Trophy
  6. The project at Jharkhand made it to the top ten projects of the district
  7. 'Outliers' was among the top three PD Projects of the district.

And the biggest achievement of the year, HIT-K Rotaract Club was adjudged the '*3rd Best Club in the Rotary International District 3291*'.
- Krishna Nath Dutta, a 3rd year student of B.Tech-Mechanical Engineering, received a Certificate of Excellence for having stood 1st in the Paper Presentation competition "PAPYRUS", held on 28th February, 2014 at the Annual Techno - Management Fest of Jadavpur University "SRIJAN 2014".
- Megha Nangia B.Tech Final year student of Department of CSE was selected as a participant in International Development Youth Forum (IDYF 2014) which was held in Tokyo, Japan for a week in March, 2014. She was selected as one of the five delegates from South Asia and she is the only one from India.
- The departments of ECE and AEIE, at HIT-K organized an International Conference on Electronics, Communication and Instrumentation 2014 sponsored by TEQIP-II and IEEE Kolkata Section. Prof. Alex Mason, Liverpool University, U.K., Prof. Samar Saha, Compact Modeling SuVolta, Inc, (USA) and Prof. Shikharesh Majumdar, Carleton University, (Canada) deliberated in the conference.
- Department of CSE and IT, HIT-K organized the 1st International Conference on Applied Algorithms 2014 sponsored by TEQIP-II. It was a great opportunity to listen to the lectures of eminent scientists such as Prof. Christos Zaroliagis, University of Patras, (Greece); Prof. Assaf Schuster, Technion, Israel Institute of Technology, Haifa, (Israel); Prof. Rina Panigrahy, Microsoft Research, Mountain View, (USA); Prof. Dimitrios Gunopulos, University of Athens, (Greece); Prof. Gautam Das, University of Texas, Arlington, (USA) and Prof. Bhargab B. Bhattacharya, Indian Statistical Institute, Kolkata, (India). Research scholars and faculty members from eminent institutes made over 21 Presentations at this Conference.
- Professor Siben Dasgupta, Wentworth Institute of Technology, USA conducted a Seminar on 'Linear and Nonlinear Discrete and Classical Control System Experiments' on 6th Jan 2014.
- Prof. Richard J. Cobley from Prifysgol Abertawe Swansea University, Prof. (Dr) Kevin S Paulson from University of Hull and Dr. Mihaela Anca Ciupala, from University of East London visited HIT-K and addressed the students on 'Career prospects in Research and Development in Nano-Technology, Electronics and Telecommunications and Computer Science and Engineering' on 18th Feb 2014.
- Mr. Ben Sakker Kelly First Secretary (Education & Science) Australian High Commission visited HIT-K and addressed the students and faculty members on Australian Government Fellowship Programmes on 20th May.
- The 7th Batch (13 B.Tech students), HIT-K successfully completed their Summer Research Programme at New Jersey Institute of Technology in June-July 2014. This year Mr. Clayton Moses, Academic Advisor also visited NJIT on invitation and conducted seminars for International students and faculty members of NJIT.
- A one day workshop on 'Disaster Management' was organized by Chemical Engineering Department with technical support from Disaster Management Department, Govt. of India on 4th April 2014. The speakers at the workshop were Shri Amit Chaudhuri, former Joint Secretary, Disaster Management Department, Govt. of West Bengal; Dr. Muzaffar Ahmad, Hon'ble Member, National Disaster Management Authority; Dr. Chandan Ghosh, Professor & Head, GeoHazards, National Institute of Disaster Management (NIDM) and Dr. Anish Banerjee, Lead Technical Expert, Hospital Disaster Management, NDMA.

- COMPASS 2014, Orientation Programme of new batch 2014-15 of B.Tech students was organized on 31st July 2014. It was inaugurated and addressed by Swami Atmapriyanandaji, Vice-Chancellor, R.K. Mission Vivekananda University, Belur, as the Chief Guest.
- Pravasana Club of HIT-K organized the 4th Film Festival and a Photography and Painting exhibition on 7th and 8th February 2014.
- SINOFIA 2014, the 42nd Rotaract District Conference was organized on 1st March 2014 in the Campus.
- Dr. Debnath Chaudhuri, Professor & Head, Department of Biochemistry & Nutrition, All Indian Institute of Hygiene and Public Health, Kolkata, addressed the faculty members and students of Biotechnology on the topic 'Foods: Myths and Reality', on 7th March
- 2014. The distinguished lecture was organized by the Department of Biotechnology.
- Department of Electrical Engineering organized a National Conference on 'Recent Trends in Power Engineering' on 13th and 14th March 2014 in the campus under TEQIP-II. The Conference was inaugurated by Mr. A. Bose, Executive Director, Power Transmission, CESC Ltd as the Chief Guest. Mr. M. Majumdar, Former MD, Durgapur Projects Ltd was present as the Guest-of-Honour.
- Department of Humanities had arranged a panel discussion on 'Professional Ethics:Honesty is Still the Best Policy' on 20th of March, 2014. The speakers were Prof. Gopa Dutta (Professor of Lady Brabourne College), Prof. Timir Baran Chatterjee (Senior Executive Vice President, DIC India Ltd), Prof. Suman K. Mukherjee (Principal Dean, Bharatiya Vidya Bhavan Institute of Management Sciences, Kolkata) and Mr. Nilabhra Dasgupta (Dy. Commissioner, Income Tax Dept., Kolkata).
- A 7 Day workshop was organized by the Department of Electronics and Communication Engineering on "Android Application" from 23rd March till 1st April 2014 as a part of Finishing School Programme under TEQIP-II.
- On 5th April 2014, the CSE Department organized its 1st Annual Departmental Meet, 'CSE Rendezvous', which presented students a unique opportunity to interact with their seniors, professors as well as the alumni of the Department in an informal setting, unbound by the constraints often imposed by the four walls of the class rooms.
- Advantage Intercollege Lawn Tennis competition was organized by HIT-K on 9th April 2014.
- Professor Kaushik Roy, from School of Electrical and Computer Engineering, Purdue University visited HIT-K on 23rd April 2014 and delivered a talk on 'NANOELECTRONICS: A Bottom-up Approach'.
- Mr. Mrinal Das, Vice President of Sankalp Semiconductor Pvt. Ltd. addressed the students of ECE Department on 'Global trends in Electronics: Impact on India' on 15th May, 2014.
- CONFLUENCE-2014, the New Parents Orientation Programme for the New batch of B.Tech Students 2014-2018 had been organized on 2nd August 2014.
- DAKSHH 2014, the Tech Fest of HIT-K, organized from 2nd to 4th April 2014 witnessed participation of 16 colleges across the city.
- Eclectia 2014, the Annual Fest of HIT-K was organized from 10th to 12th April. 20 colleges from across the city took part in it. Eminent singer KK's fabulous performance mesmerized the youth at the end of the programme.
- A health camp was organized by Kalyan Bharti Trust (KBT) in association with Lion's Club Kolkata Adarsh in the campus on 23rd February 2014. Rotaract Club members of HIT-K actively participated in the health camp.
- Rotaract Club members of HIT-K also organized an educational trip to Science City Kolkata on 15th February 2014 for the kids of Socio Legal Aid Research and Training Centre (SLARTC).
- Rotaract Club members of HIT-K organized a programme "Rang Barse" for the unfortunate children of the Cancer Ward of S.S.C.C.R.I., Cancer Hospital at Thakurpukur on 15th March 2014 as a prelude to the colorful event of Holi.
- In collaboration with KHOLO ANKHI, an NGO, that runs KHOLO ANKHI Slum School in Beliaghata, Rotaract Club of HIT-K organized a workshop 'Project Koshis – Health & Hygiene' for the said slum school on 23rd March, 2014.
- Annual sports for the students of Suryakiran was organized by Rotaract Club of HIT-K on 28th March 2014 at The Heritage School Grounds.
- Paper presentation of B.Tech Final Year students of Department of Computer Science & Engineering under the guidance of Prof. Subhashis Majumder, won the 2014 Best Poster of Bigdata Science Award at Beijing.



- Prof. Stefano Curcio, Senior Researcher of Chemical Engg. from University of Calabria, Italy, Dr. Sudip Chakraborty, Senior Research Scientist, University of Calabria and Prof. Vincenza Calabro, University of Calabria, Italy visited HIT-K for a Lecture Session on Membrane Technology organized on 26th Sept. 2014 jointly by Department of Chemical Engineering and Department of Chemistry under TEQIP-II.
- 14th Foundation Day was celebrated along with as Award Ceremony on 5th September 2014.
- Freshers' Welcome programme – NASCENT 2014, was organized from 17th October 2014 till 19th October 2014.
- Workshop on UNIX under TEQIP-II held on 28th October 2014.
- Dr. Narayan Banerjee, Professor, IISER Kolkata addressed the students on the Concept of "Black Hole" under Science Club on 7th November 2014.
- Rotaract Club Activities- Litter of Light Project, Swachh Bharat Abhiyaan, Rashtriya Ekta Diwas, Self-Defence Workshop, Donation of Clothes, Celebration of Children's Day with children of Thakurpukur Cancer Hospital, Bhai Phonta, Community Service at Ghatshila etc.

### Year 2013:

- MDP by CSE Department, HIT organized on 24th and 25th January 2013 on Complex and Social Networks under TEQIP-II
- Rotaract Club of HIT-K, was officially presented the Charter of Rotary International, being next only to IIM Calcutta, IIT Kharagpur and Jadavpur University in the State of West Bengal.
- 'EKAKI' a short film made by Kaustav Debnath, B. Tech (Fourth Year), IT was screened in the Kolkata International Film Festival 2013.
- A debate was organized by The Bengal National Chamber of Commerce and Industries (BNCCI) on the motion "Renewable Energy meets Energy Security" where the Proposition team won the motion with Anuvab Bandyopadhyay (B. Tech student-Department of Computer Science Engineering, would be graduating in 2016 ) being adjudged the Best Speaker. Prize and Certificate was awarded by the President of India in the 160th AGM of BNCCI held on 14th September 2013
- Mr. Priya Ranjan, B. Tech- CSE 4th year won Nokia's Asha Innovation App Challenge Contest 2013 under the category "Speaking News" on July 3rd, 2013. He won a cash reward of 1000 Euros and a Nokia Asha 311 mobile phone.
- National Science Day was celebrated by the Department of Biotechnology on 1st October 2013. The programme was funded by the West Bengal State Council of Science and Technology and the Department of Science and Technology, Govt. of India, New Delhi. Dr. Maitreye Banerjee, Senior Scientist, West Bengal State Council of Science and Technology, Kolkata addressed the students and faculty members during the programme.
- We are the World, a discussion presented by the Heritage Group of Institutions and Calcutta Debating Circle in association with The Telegraph, saw Harvard, Yale, Cambridge and Oxford universities share the stage on Thursday 19th December 2013 with students from St. Stephen's, Delhi, The Heritage School and the Heritage Institute of Technology. Judges present were Helen LaFave, the US Consul-General, Malabika Sarkar, the vice-chancellor of Presidency University, and Scott Furssedonn-Wood, the British Deputy High Commissioner.
- COMPASS 2013, Campus Orientation Programme, for new batch of B.Tech students 2013-14 was organized on 1st and 2nd August 2013. The programme was addressed by Rev. Fr. (Dr.) J. Felix Raj, SJ, Principal, St. Xaviers College (Autonomous) Kolkata, along with our Trustees, Shri H. P. Budhia, Chairman, HBS and Shri P. R. Agarwala, Vice Chairman, HIT-K
- CONFLUENCE 2013, Orientation Programme for parents of B.Tech students, was organized at HIT-K on 3rd August 2013.
- Foundation Day and Award ceremony was celebrated on 5th September in the campus. Prof. Ajoy Kr. Ray, Vice Chancellor, BESU, addressed the students and faculty members during the programme as the Chief Guest.
- HIT-K has established Microsoft Innovation lab in association with Microsoft Research centre for R & D for faculty members and students.
- Heritage Institute of Technology, Kolkata, organized a panel discussion on "Higher Education in India- Challenges ahead" on 9th November 2013 as a prelude to the National Education Day. Panelists present were renowned educationists Dr. Asis Banerjee (former Vice-Chancellor, Calcutta University), Dr. Amitava Bose (former Director, IIM Calcutta) and Dr. Sugata Marjit (former Chairman, West Bengal State Council of Higher Education). The panel discussion was moderated by Dr. Alok Ray, Professor, Heritage Business School.

- TEQIP-II sponsored workshop on “Computational Biology and Protein Structure Prediction” was organized by the Department of Biotechnology from 23rd September to 27th September 2013. The workshop was addressed by Dr. Chitra Dutta, Indian Institute of Chemical Biology, Dr. Pinakpani Chakraborty, Bose Institute, Dr. Dhananjay Bhattacharyya, Saha Institute of Nuclear Physics, Dr. Soumalee Basu, Calcutta University, Dr. Chhabinath Mondal, National Institute of Pharmaceutical Education and Research, Dr. Rajgopal Chattopadhyay, Bose Institute, Dr. Rahul Banerjee, Saha Institute of Nuclear Physics, Dr. Saikat Chakrabarti, Indian Institute of Chemical Biology and Dr. Subhra Ghosh Dastidar, Bose Institute, Kolkata.
- National Science Day was celebrated by the Department of Biotechnology on 1st October 2013. The programme was funded by the West Bengal State Council of Science and Technology and the Department of Science and Technology, Govt. of India, New Delhi. Dr. Maitreye Banerjee, Senior Scientist, West Bengal State Council of Science and Technology, Kolkata addressed the students and faculty members during the programme.
- A distinguished Lecture on ‘Nanoelectronics’ was organized by the Dept. of Electronics and Communication Engineering on 12th August, 2013 in association with IEEE Students’ Chapter. Dr. Durga M. Mishra from New Jersey Institute of Technology addressed the participants.
- Petroleum Conservation Research Association (PCRA) in association with Department of Chemical Engineering organized a workshop on “Energy saving techniques for industries” on 27th and 28th Sept. 2013. The workshop was addressed among others by Mr. Indrajit Bose, Executive Director, Marketing Division, Indian Oil Corporation Ltd, Mr. P.K. Raychaudhari, Director, PCRA, Mr. S. Mohanta, Addtl. Director, PCRA, Mr. A. Chakraborty, Addtl. Director, PCRA, Mr. A. Nayak, Asst. Director, National Productivity Council, Shri Joy Chakraborty, Divl. Engineer, WBREDA and Mr. Srijit Mukherjee, Schneider India Kolkata.
- Prof. Udayan Ganguly, Assistant Professor in the Department of Electrical Engineering, Indian Institute of Technology, Bombay addressed the faculty members and students on 18th December 2013, under ‘Distinguished Lecture Programme’ scheme. Department of Electronics and Communication Engineering in collaboration with IEEE EDS Students’ Chapter organised the event.
- Prof. (Dr.) Amritesh Sengupta, IISc, addressed the students and faculty members during an interactive session on “Next Generation 2-D Channel Material based Mofsets: Overview and Simulations Tools” under IEEE students chapter on 4th Sept. 2013.
- Drawing competition organized by Rotaract Club HIT-K on 16th August 2013 for the students.
- Workshop organized at Department of Biotechnology on “Analytical techniques for characterisation of Macro molecules under TEQIP-II from 30th Jan to 1st February 2013.
- A group of 4 Students of Final Year B.Tech (ECE) won awards in “Texas Instruments India Analog Design Contest” on 5th April 2013 out of 350 participants from 102 colleges in India. HIT-K became the only institute in West Bengal to win such an award.
- Ayesha Khandekar, B.Tech (Biotech) student came 1st in technical Paper presentation at All India Inter Engg. College Meet 2013 held on 22nd & 23rd March organized by Forum of Scientists Engineers and Technologists.
- 12 B. Tech students participated in Summer Research Programme at New Jersey Institute of Technology on 21st June 2013.
- Prof. Victor Hruby from University of Arizona visited HIT-K on 7th Feb 2013 during an interactive seminar jointly organized by the Department of Chemical Engineering and the Department of Biotechnology under TEQIP-II.
- International Theatre Workshop organized by Bratyaajon was held on 30th April 2013 in the campus. Prof. Bratya Basu, Hon’ble Minister-in-charge, Dept. of Education addressed the participants.
- NATCONIC (National Conference on Instrumentation and Control) 2013 was organized by Department of Applied Electronics and Instrumentation Engg. HIT-K during 26th and 27th Feb 2013. The inaugural function was addressed by Prof. (Dr.) Biswajit Ghosh from School of Energy Studies, Jadavpur University, and Prof. (Dr.) Kalyan Kumar Mallick from Department of Electronics and Telecommunication Engineering, Jadavpur University.
- National Science Day was celebrated at HIT-K on 26th Feb 2013 in association with National Environment Science, Academy West Bengal Chapter. Students participated in a lively debate on “Pricing of Drinking Water”.
- Student Council of HIT-K organised Third Film Festival on 19th & 20th April 2013. The inaugural address was delivered by Ms. Aditi Roy, eminent Director of the Film “Aboshese”, eminent Photographer Mr. Asis Sanyal & Prof. Shyamal Sengupta, Satyajit Ray Films & Television Institute (SRFTI) Kolkata.

- Eclecia 2013 HIT-K annual cultural fest was held during 4th May to 6th May 2013. There were 30 number of activities and 20 participant colleges. The closing ceremony of Eclecia witnessed a marvellous performance by Bombay Vikings which included Neeraj Sridhar and his team.
- To mark World Cancer Day on 4th Feb 2013, Dr. Vikas Agarwal, Chairman, Global Cancer Trust addressed the students and faculty of Heritage Institute of Technology (HIT-K).

#### **Year 2012:**

- Entrepreneurship Development Cell of Heritage Institute of Technology, Kolkata, organized a Colloquium on Entrepreneurship - 'KNOT' (Key Note on Technopreneurship) 2012 on 28th & 29th September. Students from various engineering colleges in Kolkata and Durgapur participated in the event. The colleges included were Bengal College of Engineering and Technology, Durgapur Institute of Advanced Technology, Pailan College of Management and Technology and Seacom Engineering College.
- IIT Entrepreneurship Awareness Drive was organized on 5th November 2012 at HIT.
- Stressing on the importance of sustainable development, Biotechnology Engineering Department, HIT organized a seminar which was addressed by Dr. A.K. Ghosh, Director, Centre for Environment and Development on 22nd September 2012.
- The Ex-Chairman, Centre for Applied Research in Electronics, IIT Delhi Prof. A. B. Bhattacharya was at the Heritage Campus for a session on VLSI design for the students on 16th October 2012. It was jointly organized by IEEE Electron devices society, IEEE EDS Students Chapter, HIT, Department of ECE, HIT and IC Design Lab. DST, Govt. of India
- Jyotirmoy Club organized a picnic on Sunday, 23rd December 2012 at The Heritage School for underprivileged children, which was attended by 1300 students.
- Students of Heritage Institute of Technology participated in the Summer Research Programme conducted by New Jersey Institute of Technology (NJIT), USA during July-August 2012.
- Prof. Bikash Sinha, Homi Bhabha Professor, Variable Energy Cyclotron Center (VECC), Department of Atomic Energy, Government of India, visited HIT for a lecture on Higgs Boson, the God Particle, on 8th August 2012.
- World Environment Day was celebrated on 5th June 2012 at the Heritage Campus.
- Blood Donation Camp organized by the HIT students for Kalyani, a charitable medical centre run by Kalyan Bharti Trust.
- Students of Heritage Institute of Technology organized a health camp for the underprivileged in association with Lion's Club on 22nd January 2012. Many patients were treated in Kalyani, a free charitable medical center run by KBT.
- The Campus Orientation Meeting for Professional, Academic and Social Success (COMPASS) 2012 (induction and orientation programme for the new B.Tech students) was inaugurated on 2nd August 2012 by Dr. Basab Chaudhuri, Registrar, Calcutta University as Chief Guest and Dr. Zahid Gangjee as Guest of Honour.

#### **5.3.3 How often does the collect feedback from students for improving support service? How is the feedback used?**

Every year the college collects feedback from students of outgoing batch and studying student on various issues relating to academic and infrastructural development etc. These feedbacks are analyzed and suggestions are given for improvements of support services. The college principal discusses relevant issues with the respective faculty members and takes necessary action for improvement.

#### **5.3.4 Does the College have a mechanism to seek and use data and feedback from its graduates and employers, to improve the growth and development of the College?**

Yes, HITK has established a system to get regular feedback from graduate and employers for growth and development of the college.

#### **5.3.5 How does the college involve and encourage students to publish materials like catalogues, wall magazines, College magazine, and other material? List the major publications/materials brought out by the students during the previous academic session.**

The college encourages students to contribute articles to college magazine. These articles are edited and published in college magazine. Students are involved in various committee, such as college magazine committee, library committee, etc.

**5.3.6 Does the college have a student council or any similar body? Give detail on its constitution, major activities and funding.**

Yes, the formation of students union based on marks basis. The chairman, students union is by rotation among humanities, science and commerce departments. All the nominees should have no arrears or backlogs in the previous semester.

Students Union:

<b>Post</b>	<b>Name, year, stream</b>	<b>Mobile No.</b>
<b>President</b>	Prof. Krishanu Datta Assoc. Professor, Dept. of ECE	9830039964
<b>Member (Ex-Officio)</b>	Mr. Clayton M. Moses Academic Advisor & Head, Student Affairs Centre	9830078222
<b>Vice President</b>	Mr. Shankhadeep Sarkar, 4 <sup>th</sup> yr ChE Roll No.: 115515	8335021794
<b>General Secretary</b>	Mr. Devjyoti Upadhaya, 3 <sup>rd</sup> yr ME Roll No.: 125723	9775577077 (New) 9933717007 (Old)
<b>Treasurer</b>	Mr. Anand Priyadarshi, 3 <sup>rd</sup> yr CSE-B Roll No.: 125174	9674493562
<b>Assistant Treasurer</b>	Mr. Akash Dutta, 3 <sup>rd</sup> yr ECE-D Roll No.: 1252188	9051300482
<b>Convenor, ECLECIA</b>	Mr. Srijan Kashyap, 3 <sup>rd</sup> yr AEIE Roll No. : 125333	8583976153
<b>Assistant General Secretary 1 (UG)</b>	Kumar Anshuman, 3 <sup>rd</sup> yr IT Roll No. : 125406	8334020051
<b>Assistant General Secretary 2 (UG)</b>	Mr. Vurikiti Prashant, 3 <sup>rd</sup> yr ECE-B Roll No.: 125295	9641050010
<b>Assistant General Secretary (PG)</b>	Mr. Sourav Mitra, 1 <sup>st</sup> yr M.Tech. ECE-VLSI Roll No.: 1496011	8972665115
<b>Assistant Secretary-1 (Cultural)</b>	Alhan Aziz Khan, 2 <sup>nd</sup> yr ECE-A Roll No.: 1352026	9051440110
<b>Assistant Secretary-2 (Cultural)</b>	Mr. Prashant Parashar, 2 <sup>nd</sup> yr CE Roll No.: 1358016	8100712901
<b>Assistant Secretary-1 (Games &amp; Sports)</b>	Mr. Dipan Mondal, 3 <sup>rd</sup> yr EE Roll No.: 125918	8017225927
<b>Assistant Secretary-2 (Games &amp; Sports)</b>	Mr. Mrinmoy Dey, 3 <sup>rd</sup> yr BT Roll No.: 125635	9903657203
<b>Assistant Secretary (Literary)</b>	Mr. Tanmoy Bagani, 2 <sup>nd</sup> yr ChE Roll No.: 1355002	9051738337
<b>Assistant Secretary (Club Co-ordination)</b>	Mr. Aghadeep Saha, 2 <sup>nd</sup> yr BT Roll No.: 1356033	9007953389

The constitution of the student's council is enclosed in **Annexure C.I.**  
These students play an active role for the smarter functioning of the college.

**5.3.7 Give details of various academic and administrative bodies that have student representative on them. Provide details of their activities.**

Student representatives are given opportunities to express their views in the management meetings, principal meeting and department meetings. The IQ AC also plays active roll to promote student centric academic activities.

**Any Additional Information:**

- 1) Wi-Fi connectivity throughout the campus.
- 2) Full-fledged branch of Punjab National Bank with ATM facility and having mobile banking facility on the campus.
- 3) Gym facilities are available.
- 4) Transport facility- Students from different areas of surrounding villages can make use of the college bus.
- 5) Canteen facility on the campus.

**Strengths:**

- Strong motivations to students to organize and participate in various co-curricular and extra-curricular activities.
- Students are encouraged to participate in various games and sports.
- Student's involvement in all councils, committees, academics and administrative boards to discuss and provide help in their interests, performances and achievements.
- Excellent placement and training support for holistic development of the individual for personal enhancement and career growth
- Strong mentoring system to provide valuable advices to students by counselling and guiding them in their academic and non-academic needs.
- High students' success rate in GATE/ CAT/GRE / TOEFL
- Student workshops for softskill training as well as additional technical trainings are conducted regularly.
- Special tutorial classes are being held for weaker students and students admitted through lateral entry.
- Financial assistance is available for students from economically challenged background.
- Diverse student Diasporas ensure better social awareness.
- Complete ragging free campus has made studying here enjoyable.

**Weaknesses**

- Time constraint for academic, co- curricular and extra-curricular activities for few students due to long travelling time between home and institute
- Focused, and conceptualised reading is lacking in some students
- Communication skills among rural based students needs improvement.

**Opportunities**

- Execution of various programmes by planning and implementing developmental projects.
- Working in different awareness programmes thereby developing their character, social consciousness and commitment, discipline and healthy attitudes towards the society.
- Many of the neighbouring state students are opting for education in this state.
- Global demand for technical manpower is ever growing.

**Challenges**

- Effectively motivating the students in conducting and actively involving in most interdisciplinary activities
- To support the under-privileged / weak students

## **D.6 CRITERION VI: Governance, Leadership and Management**

### **6.1 Institutional Vision and Leadership**

#### **6.1.1 State the Vision and Mission of the College:**

##### **Vision of the Institute:**

To prepare dynamic and caring citizens to meet the challenges of global society while retaining their traditional values

##### **Mission of the Institute:**

- To prepare students with strong foundation in their disciplines and other areas of learning
- To provide an environment for critical and innovative thinking, and to encourage life-long learning
- To develop entrepreneurial and professional skills
- To promote research & developmental activities and interaction with industry
- To inculcate leadership qualities for serving the society

#### **6.1.2 Does the mission statement define the College's distinctive characteristics in terms of addressing the needs of the society, the students it seeks to serve, College's traditions and value orientations, vision for the future, etc.?**

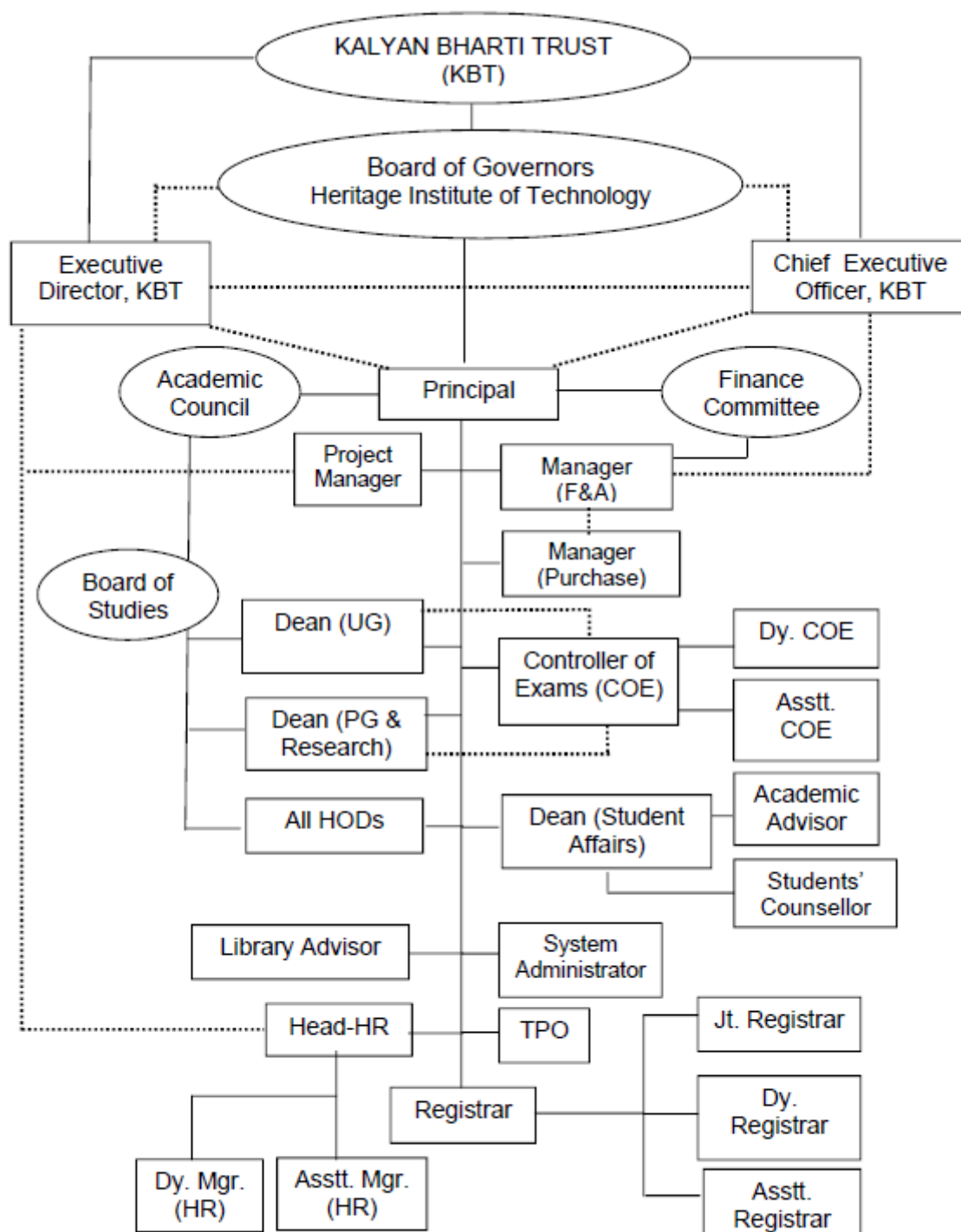
The mission of the institute has been comprehensively designed with unique characteristic in terms of preparing students with strong foundation in their disciplines and other areas of learning. The mission of the Institute put forward 4 (four) significant characteristics that the student would acquire by undergoing the teaching-learning process as adopted by our Institute. It develops student's entrepreneurial and professional skills with strong focus on research and developmental activities and also provides an environment for critical and lateral thinking. Last but not the least, it also inculcate student's leadership qualities for serving the society at large.

#### **6.1.3 How is the leadership involved in**

- Ensuring the organization's management system development, implementation and continuous improvement
- Interaction with stakeholders
- Reinforcing culture of excellence
- Identifying needs and championing organizational development(OD)?

The Leadership hierarchy in our Institute is as follows:

### Basic Organizational Structure (Organogram)



*NB: Levels do not indicate positional status and hierarchy. Individual designations may change from time to time, with the approval of the competent authority, without disturbing the basic structure.*

### **Ensuring the organization's management system development, implementation and continuous improvement:**

The management of the Institute always looks for Vision and Mission of the Institution which are in tune with the objective of higher education policy of our country, which aims to provide quality technical education to the satisfaction of our stake holders.

#### **➤ Interaction with stakeholders**

There is a mechanism in our Institute to obtain the feedback from the parents and this is analyzed by the Principal, Dean (UG), Dean (PG & Research), Dean (Student Affair) and HODs. After analysis a plan of action is prepared and forwarded to the Management for its approval.

There is also a regular feedback from students on all teachers at the end of each semester. The feedback is analyzed by the concerned HOD and appropriate course of action namely counseling of teachers, organizing faculty development program etc. is planned.

#### **➤ Reinforcing culture of excellence**

The management and the higher authorities of the Institute realize and encourage the fact that the vertical growth of the Institution in terms of transforming into a Centre of Excellence is necessary reinforcing research and innovation, well planned teaching – learning process etc. The Principal in consultation with Dean(s), the HOD prepares the action plan to bridge the knowledge gap conducting seminars, workshops, industry oriented courses, guest lectures by leading academicians and industrialist and frequent visit of students to industries to develop their hands-on-training. The Principal, Dean(s), HODs and members of the faculty encourage the students to publish papers in National and International Conferences as well as to participate in workshops, Industry-Institute Interaction program.

#### **6.1.4 Were any of the senior leadership positions of the College vacant for more than a year? If so, indicate the reasons.**

None of the senior leadership position is vacant.

#### **6.1.5 Does the College ensure that all positions in its various statutory bodies are filled and conduct of meetings at the stipulated intervals?**

The statutory bodies such as Governing Body, Advisory Council, Academic Council, Board of Studies comprises of eminent personalities of institution of high repute as well as industries as per the guidelines framed by the UGC. The meetings of the above statutory bodies are being conducted at stipulated intervals and minutes of the meeting are readily available. Any vacancy arising out, being taken care of immediately to fill up the vacancy.

#### **6.1.6 Does the College promote a culture of participative management? If yes, indicate the levels of participative management.**

The Institute promotes participative management. All major decisions are taken by the Principal in consultation with Dean(s), all HODs and senior members of faculty. Meetings with Dean(s), all HODs and senior members of faculty are being convened regularly.

#### **6.1.7 Give details of the academic and administrative leadership provided by the University to the College?**

The affiliating University nominates various eminent personalities for the Institute Governing Body, Academic Council and Faculties selection interviewes for giving various academic inputs which will improve the overall quality of education in the Institute in tune with the Vision and Mission of the Institute.



**6.1.8 How does the College groom the leadership at various levels?**

The main focus is on developing transformational leaders through giving freedom to do various activities independently at various levels. Professor, Associate Professor and Assistant Professors prepare plans in the departmental academic committee meeting for overall development of the department as well as development of various laboratories. Members of faculty also discharge additional duties like mentoring our students from 1<sup>st</sup> year to 4<sup>th</sup> year.

**6.1.9 Has the College evolved any strategy for knowledge management? If yes, give details.**

The Institute has a website where all up-to-date information is available. The Institute has an intranet facilities through which important information, document are shared. It may be noted that we are continuing to receive E-Journals & E-books through i) ASTM Digital Library, ii) IEEE (ASPP), iii) J-GATE (E&T, Mgmt), iv) RMIT, v) EPW and vi) SAGE Online. Besides, the Institute also subscribes for NPTEL, a joint initiative of IITs and IISc., Bangalore, funded by MHRD, GOI, thus allowing access to web courses and video courses, prepared by senior members of faculty of those institutes.

**6.1.10 How are the following values reflected in various functions of the College?**

- Contributing to national development
- Fostering global competencies among students
- Inculcating a value system among students
- Promoting use of technology
- Quest for excellence

**Contributing to national development**

- Establish themselves as professionals in industries/R&D laboratories/academic sectors, or engage in advanced studies.
- Demonstrate their ability to work successfully as a member of a professional team and function effectively as responsible professionals.
- Service to mankind through various activities namely organizing Blood Donation Camp, NSS Service, visit to village to provide education to underprivileged children.

**Fostering global competencies among students**

- Special emphasis is given to the development of soft skill in order to sustain in global competition.
- Subject experts from institution of repute and industry are invited to deliver special lectures on new trends in technology and development.
- Students are encouraged to get involved in different R&D and Industry oriented projects.
- The Institute has an Entrepreneurship Development Cell to encourage our students to do innovative research and to become entrepreneurs.

**Inculcating a value system among students**

- The Institute organize cultural and spiritual programs for the students
- The Institute offers a course on human values and professional ethics of credit: 2 to develop human values amongst the student community
- Rotaract Club of the Institute organize many social activities namely Blood Donation Camp, NSS Service, visit to village to provide education to underprivileged children.

**Promoting use of technology**

- Organizing number of workshops, seminars for the faculties of upcoming technologies
- Organizing International Conferences for the members of the faculty on cutting edge technology.
- Specialized training programs are conducted for technical staff, library staff etc.

### Quest for excellence

- The Institute obtained NBA for all 6 eligible B.Tech. programs w.e.f. 18.09.2013 for a period of 2 years except CSE Department obtained NBA accreditation for a period of 5 years w.e.f. 04.02.2014
- UGC has conferred fresh autonomous status to Heritage Institute of Technology, Kolkata under the “UGC autonomous colleges scheme” initially for a period of six years w.e.f the academic year i.e. 2014-2015 to 2019-2020.
- We follow well developed teaching-learning methodology

#### 6.1.11 Give details of the UGC autonomous review committee's recommendations and its compliance.

UGC has conferred fresh autonomous status to Heritage Institute of Technology, Kolkata under the “**UGC autonomous colleges scheme**” initially for a period of six years w.e.f the academic year i.e. 2014-2015 to 2019-2020. The Institute has started functioning as autonomous institute from July 2014 and review will be taken up subsequently in due course of time.

### 6.2 Strategy Development and Deployment

#### 6.2.1 Does the College have a Perspective Plan for development? If so, give the aspects considered in development of policy and strategy.

Yes. Institute has a Perspective Plan for development.  
Aspects considered are given below:

#### Quality policy

- To compete with global benchmarking of excellence through efforts to prepare dynamic and caring citizens.
- To encourage and foster quality in daily practices in different areas of activity.
- To imbibe self-evaluation and continuous correction.

#### Teaching and learning

- Institute recruits well qualified, skilled and experienced faculty.
- Special lectures, seminars and workshops are arranged by inviting Elite personalities to present lecture on recent research topics for the students and faculties to enhance their knowledge.
- Encouraging faculty to go for higher studies.
- Institute encourages the students for participation through project work, research paper presentation, attending seminars and workshop in recent technologies.
- The academic progress of the students is continuously monitored by the continuous performance assessment in theory and practical tests.

#### Research and development

- Faculties are encouraged to pursue research by providing them individual system with internet facility and digital library.
- Supporting to publish technical papers in conferences and journals in Local and outstations and offering financial assistance for registration and travel.
- Students are encouraged to present papers in seminars and conferences in Local and outstations.’
- Encouraging faculty members to submit research proposals to various funding Organizations.

#### Community engagement

- To fulfill societal commitment, Rotaract Club of the Institute (Udaan) under the parent body Rotary Club of Mahanagar has been established, which is very active.

- Rotaract Club conducts programs like blood donation camps, tree plantation, relief and rehabilitation to disaster struck areas etc.
- Kalyan Bharti Trust, parent body behind Heritage Group of Institutions had received the third prize in the category of Best Communication Campaign (External Public) for the Heritage Calender in the All India Public Relations Society of India Award Ceremony 2015 held at Ahmedabad.
- The Institute has a Social Awareness & Community Service Club (SPARSH).

### Human resource planning and development

- The institution recruits faculty members and administrative staff members based on the guidelines provided by the university.
- The institution appoints qualified faculties and staffs through open advertisement and interview by expert committee.
- The recruited faculties are encouraged to attend faculty development program to enhance the teaching learning process.

### Industry interaction

- The institute facilitates the experts from industry to interact with students by arranging guest lecturers to enrich them with the latest updates and its technicalities.
- Involvement of industry experts in academic activities like course planning for autonomy.
- A Memorandum Of Understanding (MOU) was signed between Heritage Institute of Technology, Kolkata (HITK) and Centre of Excellence for Green Energy and Sensor System (CEGESS), Indian Institute of Engineering Science and Technology, Shibpur (IEST) with the objective of collaborative Research and Development activities on efficient solar cells development utilizing the state-of-the-art laboratory facilities of CEGESS, IEST, Shibpur and other relevant academic programmes such as conducting an M.Tech. course on 'Renewable Energy' at HITK .

### Internationalization

- Various faculty members of the Institution have collaborative and joint research projects and have also jointly published their research work with their international partners.

### 6.2.2 Enunciate the internal organizational structure of the College for decision making processes and their effectiveness.

The Institute has various statutory committees where decision for handling several academic and administrative issues is taken under the chairmanship of Directors and Principal. Representatives from all communities of the institution even the representatives of the local bodies and other stakeholders participate to the meetings/programmes organized by such statutory committees.

### Functions of Board of Governors

#### Board of Governors: Composition & Functions

S.No	Name of Member of BoG	Qualifications and position in the current engagements	Position in the BoG	Nominated by
<b>Chairperson</b>				
1	Shri P. R. Agarwala	B.Com., LLB, Chairman, Rupa & Co. Ltd.	Chairman	Kalyan Bharti Trust
<b>Members of the ✓Trust/Society/Management</b>				
2	Shri Vikram Swarup	B.M.E.(H), MD, Paharpur Cooling Towers	Vice-Chairman	Kalyan Bharti Trust
3	Shri Vishambhar Saran	B. E., Mining, Chairman, Visa Steel Ltd.	Member	Kalyan Bharti Trust

4	Shri H.P. Budhia	B.Com., Chairman, Patton International Ltd.	Member	Kalyan Bharti Trust
5	Shri N. P. Dalmia	B.Com, Director, Dalmia Securities Pvt. Ltd.	Member	Kalyan Bharti Trust
6	Shri Siddharth Swarup	PGDBM, BE, GM (Works) Paharpur Cooling Towers Ltd	Member	Kalyan Bharti Trust
<b>Two faculty members of the Institution</b>				
7	Prof. (Dr) N. P. Nayak	Ph.D., Professor & HOD, Dept. of Physica	Member	Principal, HITK
8	Ms. Satarupa Bagchi Biswas	M. Tech, Asstt. Professor & DC, Dept. of Information Technology	Member	Principal, HITK
<b>One nominee of the AICTE</b>				
9.		Regional Officer, ERO AICTE, Kolkata		
<b>One nominee of the UGC</b>				
10	Swami Atmapriyananda	Vice Chancellor, Ramkrishna Mission Vivekananda University	Member	UGC (Ex-Officio)
<b>One nominee of the State Government</b>				
11	Smt. Madhumita Roy	Additional Secy. Dept. of Higher Education Bikash Bhawan, 6 <sup>th</sup> Floor	Member	Govt. of West Bengal
<b>One nominee of the University to which the Institution is affiliated.</b>				
12	Prof. Parameswar De	Ph.D., Ex-Professor, Ex. Professor & Head Dept. of Chemical Engg.	Member	MAKAUT
<b>Head of the Institution, Ex-officio</b>				
13	Prof.(Dr.) Pranay Chaudhuri	Ph.D., Principal, Heritage Institute of Technology	Member- Secretary	Kalyan Bharti Trust

**Permanent Invitees**

1. Shri H.K. Chaudhary, Chairman, Kalyan Bharti Trust
2. Shri Sajjan Bhajanka, Chairman, Century Ply Boards (I) Ltd.

**Special Invitees**

3. Shri Jaydeep Chitlangia, Chairman, Sarda Plywood Industries Ltd.
4. Prof. (Dr.) Sajal Dasgupta, Director of Technical Education, Govt. of West Bengal
5. Shri Probir Roy, Director, Kalyan Bharti Trust
6. Shri P.K. Agarwal, Chief Executive Officer, Kalyan Bharti Trust
7. Prof. B.B. Paira, Advisor – Higher Education, Kalyan Bharti Trust
8. Prof. K. K. Chaudhuri, Advisor, HBS
9. Prof. (Dr.) D.C. Ray, TEQIP – II Co-ordinator, HIT
10. Prof. Bimalendu B. Bhattacharya, TEQIP, nominee
11. Prof. (Dr.) S. Biswas, Deputy Director, HITK

12. Prof. B.R.Saha, Registrar, HITK
13. Dr. R. P. Sinha, Head – H.R
14. Shri Manoj Saraogi, Manager – Chief Finance Officer
15. Prof. (Dr.) Sidharta Roy, Dean UG & Controller of Examinations
16. Shri Arvind Srivastava, Joint Registrar

- To create teaching, administrative, technical and other posts under the Institute and to ratify appointments thereto for the efficient management of the affairs of the Institute and to regulate their recruitment and conditions of service, in accordance with the Statutes, Rules & Regulations of the Institute and the relevant provisions made by other competent authorities like AICTE, UGC, MAKAUT and the Govt. of West Bengal.
- To provide necessary guidance for effective execution of the instructional programmes and maintenance of proper academic atmosphere and discipline.
- To review the results of examinations and to suggest for academic improvements on the recommendations of the Academic Council
- To ensure that all information returns, reports and other materials as required by AICTE / UGC / MAKAUT or the Govt. of West Bengal are made available promptly
- to make sure that directions issued by MAKAUT are carried out expeditiously
- To hold, control and administer the properties and funds of the Institute
- To approve the Annual Budget on the recommendations of the Finance Committee and sanction expenditure as may be required
- To provide for promotion of welfare of students, their residences, health, recreation and sports and to exercise such supervision and control as will secure discipline, health and well being of the students
- To enter into agreements for and on behalf of the Institute which will be signed by the Principal as the Member Secretary of the Board of Governors.
- To appoint Committee(s) or Sub-Committee(s) for disposal of any business of the Institute or for rendering advice in any matter pertaining to the Institute.
- To delegate to such extent, as it may deem necessary, any of its powers to any senior member of faculty or Committee or Sub-committee constituted by the Board of Governors
- To perform such other additional functions and to carry such duties as may, from time to time, be assigned to it by the Kalyan Bharti Trust.



**Copy of the Governing body minutes of 43<sup>rd</sup> meeting enclosed as Annexure C.3**

## Functions of Academic Council

### Academic Council Members:

Chairman

1 Prof. (Dr.) Pranay Chaudhuri

Members

- 2 Prof. (Dr.) Madhurima Chattopadhyay (AEIE)
- 3 Prof. (Dr.) Srabanti Basu (BT)
- 4 Prof. (Dr.) Pinaki Bhattacharya (ChE)
- 5 Prof. (Dr.) Debarati De (Chem)
- 6 Prof. (Dr.) Tapas Sadhu (CE)
- 7 Prof. (Dr.) Subhashis Majumder (CSE)
- 8 Prof. (Dr.) Satadal Mal (EE)
- 9 Prof. (Dr.) Prabir Banerjee (ECE)
- 10 Prof. (Dr.) Suparna Chakraborty (Hum)
- 11 Prof. (Dr.) Tapan Chakrabarti (IT)
- 12 Prof. (Dr.) Anindita M. Bhattacharya (Maths)
- 13 Prof. (Dr.) Sukanta Sarkar (ME)
- 14 Prof. (Dr.) N.P. Nayak (Phy)
- 15 Prof. (Dr.) Siddhartha Ray, Dean (UG)
- 16 Prof. (Dr.) Subhabrata Sengupta, Dean (PG & Research)
- 17 Prof. (Dr.) A.M. Ghosh, Nominee BOG
- 18 Prof. Manoj Kumar Mitra, Nominee BOG
- 19 Mr. Ivan Saha, Nominee BOG
- 20 Prof. B.B. Paira, Nominee BOG
- 21 Dr. Syed Rafikul Islam, Nominee WBUT
- 22 Prof. (Dr.) Prasid Syam, Nominee WBUT
- 23 Prof. (Dr.) Raja Datta, Nominee WBUT
- 24 Prof. Krishanu Datta, Faculty Representative
- 25 Prof. Kalarab Ray, Faculty Representative
- 26 Prof. Sreeparna Dasgupta, Faculty Representative
- 27 Prof. Nirman Ganguly, Faculty Representative
- 28 Prof. Kalarab Roy, Member Secretary

- Scrutinize and approve the proposals of the Board of Studies with regard to courses of study, academic regulations, curricula, syllabi and modifications thereof, instructional and evaluation arrangements, methods, procedures relevant thereto, panel of examiners etc., provided that where the Academic Council differs on any proposal, it will have the right to return the matter for reconsideration to the Boards of Studies or reject it, after giving reasons to do so.
- Make regulations regarding the admission of students to different programmes of study in the Institute.
- Make regulations for sports, extra-curricular activities, and proper maintenance and functioning of the playgrounds and hostels.
- Make proposals to the Board of Governors for establishment of a new department / centre for study and research.
- Recommend to the Board of Governors proposals for institution of new programmes of study.
- Recommend to the Board of Governors institution of scholarships, studentships,
- Fellowships, prizes and medals, and to frame regulations for the award of the same.
- Submit each year its Annual Report to the Board of Governors.
- Perform such other functions as may be assigned by the Board of Governors.

### Functions of Boards of Studies

Composition:

Department-wise Boards of Studies (BOS) will have the following composition :

HOD concerned .....	Chairman
All regular members of faculty of the department.....	Members

Two experts in the subject from outside the Institute ..... Members  
to be nominated by the Academic Council  
One expert to be nominated by the Vice Chancellor ..... Member  
from a panel of six recommended by the Institute Principal  
One representative from industry / corporate sector / allied..... Member  
area relating to placement  
One meritorious alumnus to be nominated by the Principal..... Member  
The term of nominated members shall be 2 (two) years

N.B.:

The Chairman, Boards of Studies may, with the approval of the Principal, specially invite:

- a. Experts from outside the Institute whenever special courses of study are to be formulated
  - b. One Member of Faculty from each of the supporting departments
  - c. Other member(s) of staff of the same department.
- Prepare syllabi for various courses keeping in view the objectives of the Institute, interest of the stakeholders and national requirement for consideration and approval of the Academic Council.
  - Suggest methodologies for innovative teaching and evaluation techniques.
  - Suggest panel of names to the Academic Council for appointment of examiners.
  - Co-ordinate research, teaching, extension and other academic activities in the department / Institute.

### Functions of Finance Committee

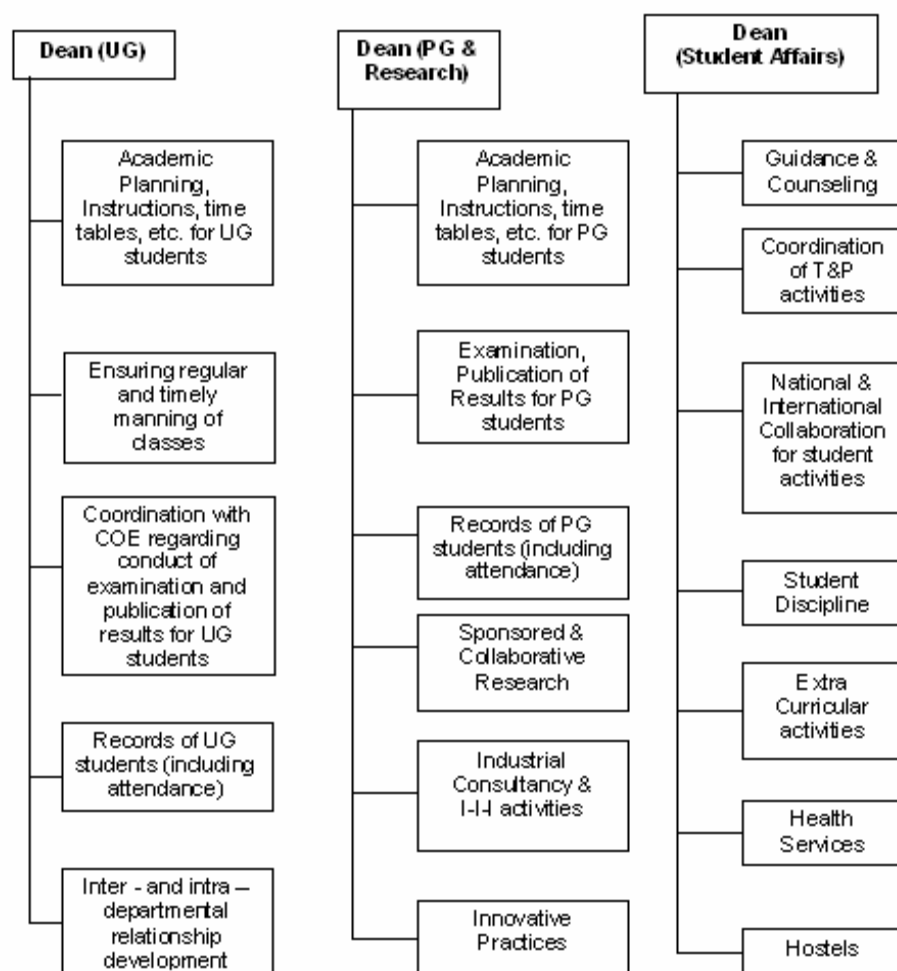
Finance Committee Members:

- |    |                              |   |          |
|----|------------------------------|---|----------|
| 1. | Prof. (Dr.) Pranay Chaudhuri | - | Chairman |
| 2. | Prof. (Dr.) S. Biswas        | - | Member   |
| 3. | Shri Manoj Saraogi           | - | Member   |

The Finance Committee will be an Advisory Body to the Board of Governors and will meet at least twice a year to:

- Prepare budget estimates before the commencement of the financial year.
- Shall maintain a watch over the progress of income and expenditure provided for in the Budget.
- Prepare revised estimate after the 2nd quarter of a financial year.
- Make necessary arrangement for auditing the accounts at the close of a financial year.

Functional areas of Deans :



### 6.2.3 Specify how many planned proposals were initiated/implemented, during the last four years. Give details.

Title of the Project	Funding Agency	PI	Amount	Remarks
Post-Disaster Situation Analysis & Resource Mgmt.	ITRA	Dr. Pranay Chaudhuri, Principal	Rs. 43.55 lakh (out of Rs. 4.28 crore)	A multi -institutional research project jointly with IIT Kgp, IIMC, BESU, NIT Dgp & Kalyani GEC.
Development of capacitive type MEMS based bio-pressure sensor for assessing various physiological activities	SERB, DST	Dr. Madhurima Chattopadhyay, Dept. of AEIE	Rs. 14,34,000/-	Approved under FAST TRACK SCHEME FOR YOUNG SCIENTIST
Search for New Physics beyond Standard Model : Insights from LHC and neutrino experiments	SERB, DST	Dr. Abhijit Samanta, Dept. of Phy	Rs. 14,64,000/-	
Development of Process for the Production of Lactic Acid for Biodegradable Plastics	RPS, AICTE	Dr. S. Sengupta (BT) & Dr. R. Chatterjee (BT)	Rs. 10,50,000/-	AICTE funded projects



Title of the Project	Funding Agency	PI	Amount	Remarks
Computerized Control of Industrial Process by Developing Som based Self Tuning Fuzzy & Neuro-Fuzzy Controller	RPS, AICTE	Prof. Arabinda Kr. Pal (AEIE)	Rs. 8,75,000/-	AICTE funded projects
Conversion of De-proteinated whey to ethanol	RPS, AICTE	Prof. Sangita Bhattacharjee (ChE)	Rs. 13,67,000/-	AICTE funded projects
Study of Channel model and Non-Linear Effects in High Speed free space optical Local Area Network Link	RPS, AICTE	Prof. Siladitya Sen (ECE)	Rs. 19,00,000/-	AICTE funded projects
MODROBS	AICTE	Dept. of AEIE	Rs. 15,00,000/-	AICTE funded
MODROBS	AICTE	Dept. of ECE	Rs. 15,00,000/-	AICTE funded
MODROBS	AICTE	Dept. of ChE	Rs. 12,10,000/-	AICTE funded
MODROBS	AICTE	Dept. of IT	Rs. 11,00,000/-	AICTE funded
MODROBS	AICTE	Dept. of CSE	Rs. 9,35,000/-	AICTE funded
MODROBS	AICTE	Dept. of BT	Rs. 7,70,000/-	AICTE funded
MODROBS	AICTE	Dept. of Chemistry	Rs. 4,00,000/-	AICTE funded
Entrepreneurship Development Cell	AICTE		Rs. 7,50,000/-	AICTE funded
Industry Institute Partnership Cell	AICTE		Rs. 7,00,000/-	AICTE funded
Technology development of liquid phase adsorption of mercury using low-cost adsorbent for better management of industrial wastes	NIT & DST	Dr. S. Basu (BT) with Co-investigators from NIT, Dgp & Dept. of Ch.E., CU	Rs. 7,50,000/-	NIT & DST funded
Isolation of mercury resistant microbes from industrial wastes and their application for heavy metal removal	UGC	Dr. S. Basu (BT) with Co-investigator	Rs. 85,000/-	UGC funded from Scottish Church College
Study of biochemical changes in aquatic algae due to heavy metals stress and their potentiality for bioremediation of heavy metals	US Govt. & GOI	Dr. S. Basu (BT)	12000 USD	(under Fullbright-Nehru Environmental Leadership Programme sponsored by US Govt. & GOI)

Proposals	Action Taken
Apply for Autonomous status under affiliating University	Achieved autonomous status under affiliating university.

Increase of intake in B.Tech(CSE) from 120 to 180	Intake increased from 120 to 180.
Increase of intake in M.Tech(CSE) from 18 to 36	Intake increased from 18 to 36.
Increase of intake in B.Tech(ECE) from 120 to 180.	Intake increased from 120 to 180.
Increase of intake in B.Tech (Civil Engg) from 60 to 120.	Intake increased from 60 to 120.
Increase of intake in B.Tech (Mechanical Engg) from 60 to 120.	Intake increased from 60 to 120.

**6.2.4 Does the institution have a formal policy to ensure quality? How is it designed, driven, deployed and reviewed?**

Yes, the quality policy of the institute is

- *To compete with global benchmarking of excellence through efforts to prepare dynamic and caring citizens.*
- *To encourage and foster quality in daily practices in different areas of activity.*
- *To imbibe self-evaluation and continuous correction.*

The quality is ensured and maintained through different bodies such as Executive Council, Academic Council, Academic Planning and Evaluation Board, Board of Studies, Examination Committee and Internal Quality Assurance Cell (IQAC).

**Deployment** Website - <http://www.heritageit.edu>

- Brochures
- Display Boards
- Inauguration day of 1st year students
- Interaction meetings with parent, alumni and Industry Experts.

**6.2.5 How does the College ensure that grievances / complaints are promptly attended to and resolved effectively? Is there a mechanism to analyze the nature of grievances for promoting better stakeholder-relationship?**

- Institute has a cell under the guidance of the Dean of Students Welfare where grievances/complaints related with students are taken care of.
- For rest of the stakeholders, all such grievances/complaints are taken care of by the Office of the Registrar.
- Anti-Ragging Committee and Anti-Ragging Squad are constituted for ensuring the directions of Hon'ble Supreme Court of India and Raghavan Committee Recommendation.
- No major grievance is ever occurred or heard by the committee.
- The Grievance Redressal Committee having the following composition:
  - Prof. (Dr.) Pranay Chaudhuri, Principal
  - Prof. (Dr.) D.C. Ray, Former Jt. Director & Emeritus Professor
  - Prof. (Dr.) S. Biswas, Dy. Director
  - Prof. B.R.Saha, Registrar
  - Prof. Siladitya Sen (ECE)
  - Prof. (Dr.) Sulagna Chatterjee (ChE)
  - Prof. (Dr.) Madhurima Chattopadhyay, (AEIE)
- Internal Complaints Committee (against sexual harassment)- A policy against sexual harassment, as defined under The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013, has been framed and duly approved by the Board of Governors, in terms of which there shall be an Internal Complaints Committee with at least 4 (four) lady members as under

- Dr. Sulagna Chatterjee, Professor, Dept. of ChE , Chairperson
- Dr. Siuli Roy, Professor & Director, CAC, Member (Faculty)
- Dr. Prabir Banerjee, Professor & HOD, Dept. of ECE, Member (Faculty)
- Dr. Sukanta Sarkar, Professor & HOD, Dept. of ME, Member (Faculty)
- Dr. N. P. Nayak, Professor & HOD, Dept. of Physics, Member (Faculty)
- Ms. Madhubanti Dutta, Dy. Manager – HR, Member (Admn.)
- Rtn. Mrs. Gomathy Venkateswar, Centre for Ecological Movement, Member (NGO Representative)

#### **6.2.6 Does the college have a mechanism for analyzing student feedback on institutional performance? If yes, what was the institutional response?**

Yes.

College obtains feedback from students.

- Alumni feedback.
- Exit feedback.
- Students feedback

##### **Alumni feedback**

- Alumni feedback is collected every year. It includes students experience in the institute along with what sort of improvements are required in syllabi, teaching and learning process, industry oriented programmes, seminars and workshops, Computer Facilities, Internet & Wi-Fi, Sports and Cultural facilities, Classrooms etc.

##### **Exit feedback**

- Exit feedback is taken to accommodate overall experience of a student in the institute. It includes attributes like library facility, guidance and support from the college, faculty availability and how quality of the academic programs can be enhanced.

##### **Student's feedback**

- Student's feedback is collected twice in a semester.
- It includes attributes like course content and coverage, Presentation skill, regularity and punctuality, Interactive Teaching methodology, motivation skill, availability and approachability of each faculty.
- Principal and HODs check the performance of each faculty, if it is not satisfactory appropriate measures are taken by counseling, guidance from senior faculty, attending faculty development programs etc.
- Appreciation letters are issued for excellent teaching.

#### **6.2.7 In what way the affiliating University helped the College to identify the developmental needs of the College?**

- The affiliating University helps the Institute in its functioning by nominating its representatives on various bodies like Board of Governors, Academic Council, Board of Studies of various departments.
- The University maintains a software CWMS to update infrastructural facilities available to the Institute as well as the information for Faculty and Staff. After analysis of the Information given to the University Portal, the University sends the feedback to the concerned Institute. After receiving this feedback the Institute takes the corrective actions.

#### **6.2.8 Does the affiliating university have a functional College Development Council (CDC) or Board of College and University Development (BCUD)?**

If yes, in what way College is benefitted.

- The affiliating University has a full time Inspector of Colleges, who is available for consultation as and when necessary.
- The Institute benefits from the suggestion offered by the inspection team while introducing a new academic program, increase in intake, closure of course, and extension of approval of all existing courses.
- University nominates various educationists in various bodies like Board of Governors, Academic Council, Board of Studies, who provide suggestion about various academic matters which are in tune with the developments taking place in the University.

#### **6.2.9 How does the College get feedback from non-teaching, teaching, parents and alumni on its functioning and how it is utilized?**

- The feedback received from the students concerning the academic activities is reviewed regularly.
- The feedback received from the parents and industries in which our institution students are employed through placements is collected with the Management regularly.
- The feedback receive from alumni is considered while reviewing the teaching learning process.

The feedbacks concerned to academic activities are discussed in the College Academic Committee meeting and are taken into account with regard to the following:

- budgetary allocations
- Infrastructure improvement
- Class Routine for the Academic Year

#### **6.2.10 Does the College encourage autonomy to its academic departments and how does it ensure accountability?**

Yes, the college encourages autonomy to its academic departments. Academic independence and autonomy is under the overall control of Board of Studies, Academic Council and Executive Council. The institute ensures accountability by following process:

- The head of the departments controls the department and departmental matters.
- Student's appraisal ensures they are satisfied or not regarding courses taught, faculty, library and laboratories.
- Annual Report is collected from each faculty at the end of academic year which includes records of publications, participation or organize conferences/workshop/seminars/special lectures, subjects taught, result analysis etc. This ensures responsibility of each faculty towards self-improvement as well as departmental improvement.

#### **6.2.11 Does the College conduct performance auditing of its various departments?**

Yes. The Institute has academic committee constituted as per guidelines of the UGC. The academic committee prepares the overall norms to be maintained in academic as well as administrative matter for every department. The performance of the students in internal examinations, mid semester examination as well as the end semester examinations are analysed across the departments and plan of actions is taken up for further improvement in this regard.

### **6.3 Faculty Empowerment Strategies**

#### **6.3.1 What are the efforts made by the institution to enhance the professional development of its teaching and non teaching staff?**

The Institute has an active and efficient cell which assists the faculty members to apply for Faculty Development / Improvement Programs, research projects, seminars, workshop, refresher courses etc.

The Institute continually conducts Faculty Development Programs which help in improving the teaching methods and develop new teaching methodologies.

The Institute promotes participation of the faculty members in various technical and research Program organized by the institutions like IITs, J.U, NITs etc.

Eminent experts from India and abroad are invited to deliver talks for the enrichment of the faculty members.

The Management also provides as per need financial assistance both for the conduct of Seminars, Workshop etc. and for the participation of the faculty members irrespective of the fact whether they are in the aided-stream or unaided stream.

Each department conducts workshop, seminars, orientation programs for faculty members and non-teaching staff. The newly appointed staff is exposed to interact with the senior staff and Heads of the Department frequently in preparing the lesson plans, teaching notes, teaching methodology and class room control etc.

The faculty is also empowered through membership in various academic and professional Committees at national and international levels.

#### For the year 2016

Sl. No	Date	Program	Category	Guest	Fund
1	1/15/2016	Faculty Development Programme	Faculty Development	Dr.Harish Chaudhry of Management Education Dept - IIT Delhi	12769

#### For the year 2015

Sl. No	Date	Program	Category	Guest	Fund
1	10th February, 2015	Industry Oriented Project Development	Workshop organised by IT Dept, HIT	1) Sandip Sadhukhan, Employed with Tech Mahendra.	Funded by TEQIP - II
2	17th march, 2015	Industrial Safety & HAZOP analysis	Workshop organised by ChE Dept, HIT	1) Mr Dipak Pahari, an eminent chemical engineer & industrial safety & HAZOP analyst.	Funded by TEQIP - II
3	18th -20th March, 2015	Workshop on operation and maintenance of Sophisticated Instruments for Technical Assistants	Workshop organised by BT Dept, HIT	1) Dr. Amit Kr De, from Dey's Medical 2) Dr. Prabal Chakraborty, From Towa Optics(India) pvt. Ltd. 3) Dr. Sagarmoy Ghosh, Assistant Professor, Dept. of Microbiology. CU	Funded by TEQIP - II
4	19th & 20th March, 2015	Workshop on Solitary waste management	Workshop organised by ChE Dept, HIT	1) Dr. R.N.Singh, CSIR Emeritus Professor & Former Director, NEERI 2) Dr. Kalyan Rudra, Chairman, Westbengal Pollution Control Board & Internationally acclaimed river expert. 3) Arunava Majumdar, Emeritus Professor, JU & member of arsenic, fluoride task force, WB.	Funded by TEQIP - II

				<p>4) Arun Kanti Biswas, Ministry of Environment &amp; Forest Expert in West Bengal Pollution Control Board &amp; Former Deputy Director , National Environmental Engineering Research Institute.</p> <p>5) Somnath Narayan, Superintending Engineer, West Bengal Pollution Control Board.</p>	
5	29th March, 2015	Distinguished Lectures on Chemical Engineering	Workshop organised by ChE Dept, HIT	<p>1) Asit Kumar Das, Senior Vice President &amp; Head, Reliance Technology Group, Jamnagar</p> <p>2) Mr. Ramachandra Dutta, Chief Inspector of Factories, Govt. of WB</p>	Funded by TEQIP - II
6	6th – 10th July, 2015	Embedded Systems and PCB Design	Workshop organised by AEIE Dept, HIT	<p>1) Anup Kr. Sarkar, Asst, professor in Dream Institute of Technology, &amp; Expert of Baid Power Services Pvt. Ltd, Kolkata.</p> <p>2) Arindam Sarkar, Expert of Baid Power Services Pvt. Ltd, Kolkata.</p> <p>3) Sujoy Mukherjee, Research Scholar, Dept of Electronics and Telecommunication Engineering &amp; Guest faculty of JU.</p>	Funded by TEQIP - II
7	7/20/2015	Faculty Development Programme on Presentation Skill	Faculty Development	British Council	32200
	7/21/2015	Faculty Development Programme on Presentation Skill			
	7/23/2015	Faculty Development Programme on Presentation Skill			
	7/24/2015	Faculty Development Programme on Presentation Skill			
8	6th – 12th August, 2015	Faculty Development Programme on "Image Processing and data mining using open source tools.	Workshop organised by IT Dept, HIT	1) Prof. M. Nordin Zakaria, Head, High Performance Computing Centre (HPCC) RIO.	Funded by TEQIP - II

				2) Mr. Mohammad Fazil Ahamat Jalauddin,	
				3) Prof. Amitava Chatterjee	

**For the year 2014**

Sl. No	Date	Program	Category	Guest	Fund
1	1/7/2014	Faculty Development Programme	Faculty Development	By NITTTR	66012
2	1/8/2014	Faculty Development Programme	Faculty Development		
3	1/9/2014	Faculty Development Programme	Faculty Development		
4	13th – 15th January, 2014	International Conference on Applied Algorithm, (ICAA)	CSE & IT	1) Christos Zaroliagis', Professor, Department of Computer Engineering & Informatics, University of Paris.	Funded by TEQIP - II
				2) Susanne Albers', Humboldt Universitat zu Berlin, Germany	
				3) Prof. Dimitrios Gunopulos', Professor, Department of Informatics and Telecommunication National and Kapodistrian University of Athens.	
				4) Rina Panigrahy, Microsoft Research, Mountain View, CA, USA	
				5) Prof. Bhargab B Bhattacharya, Indian Statistical Institute, Kolkata.	
5	16th – 17th January, 2014	International Conference on Electronics Communication and Instrumentation (ICECI)	ECE & AEIE	1) Samar K Saha, Compact Modeling Suvolta, Inc, Usa Director	Funded by TEQIP - II
				2) Prof. Shikharesh Majumdar ,Director Real Time and Distributed Systems Group & Associate Chair of Graduate Studies, Systems and Computer Engineering	
				3) Alex Mason, Reader in Smart Technologies at Liverpool John Moores University.	
6	13th – 14th March, 2014	National Conference on Recent Trends in Power Engineering's (Electrical Engineering department)	Workshop organised by EE Dept, HIT	1) Prof. (Dr.) D.P.Kothari, Ex. Director of School of Energy Studies, IIT Delhi	Funded by TEQIP - II
				2) Prof. M.U.Deshpande, Mentor of TEQIP	
				3) Mr. Arup Roy Choudhury, MD, NTPC	
				4) Prof. (Dr.) Swapan Goswami, EE, Jadavpur University.	
				5) Prof. (Dr.) Abhijit Chakravorti, EE, BESUS	
7	20th March, 2014	Professional Ethics : Honesty is still the beat policy	Workshop organised by Humanities Dept, HIT	1) Prof. Gopa Dutta, Lady Brabourne College also ex-VC Gour Bangla Univ, Malda	Funded by TEQIP - II
				2) Mr. Kunal Sarkar, Medical Practitioner	
				3) Mr, Samir Datta, Lawyer	
				4) Mr. Timir Baran Chatterjee, Senior Vice President DIC India LTD.	

Sl. No	Date	Program	Category	Guest	Fund
8	27th March, 2014	Workshop on 'Occupational Health & Safety with related Environmental Issues'	Workshop organised by ME Dept, HIT	1) Dr. Amitava Mustafi, EX HOD & Prof. of Electrical Engineering-BESU & Ex Director NITTTTR	Funded by TEQIP - II
				2) Dr. Tapas Kr. Gupta, Chief Engineer, West Bengal Pollution Control Board	
				3) Mr. Saroj Kumar Sarkar, Ex Superintending Engineer, West Bengal State Electricity Board.	
				4) Dr. P.K. Gangopadhyay An MBBS & Doctorate in Occupational & Environmental Health	
				5) Mr. Sujoy Ghosh, Consultant-Environmental Pollution.	
				6) Mr. Amar Nath Bhadra, Consultant-Boiler Safety	
9	4th April, 2014	Disaster Risk Reduction	Workshop organised by ChE Dept, HIT	1) Chandan Ghosh, Professor & Head, NDMA,	Funded by TEQIP - II
				2) Amit Chaudhuri, Former Joint Secretary, Disaster Management Department.	
				3) Anish Banerjee, Lead Technical expert, NDMA	
10	24th April, 2014	Foundry Equipmeny	Workshop organised by ME Dept, HIT	1) Mr. Bimal Kumar Basak, Director, The Wesman Engineering Co.	Funded by TEQIP - II
11	7/9/2014	Computer Training	Staff Development	Mr.Somenath Sengupta - AP	4840
12	13th – 14th August, 2014	National Conference on Mathematical Traends in Physical Science(NCMTPS 2014)	Workshop organised by Mathematics & Physics Dept, HIT	1) Prof. Suman Chakraborty, IIT KGP	Funded by TEQIP - II
				2) Prof. Tanuka chattopadhyay, CU, Astrophysics	
				3) Prof.R.N.Mukherjee,	
				4) Prof.Narayan Banerjee, IISER, Kolkata	
				5) Prof.Archan S. Majumdar, SNBNCBS, Kolkata	
				6) Prof.G.P.Rajasekhar, Fluid Mechanics, IIT KGP	
				7) Prof.Anjan Ananda Sen, Professor of Jamila Milia Islamia University	
				8) Prof.Sirshendu De, Fluid Mechanics, IIT KGP	



Sl. No	Date	Program	Category	Guest	Fund
13	1st September, 2014	How many is too many Quest for the sweet spot of collaboration in software development & Research	Workshop organised by CSE Dept, HIT	1) Dr. Subhajit Datta, Singapore Universitu of Technology and Design.	Funded by TEQIP - II
14	26th Sept. 2014	Faculty Development programme on Biotechnology and membrane science	Workshop organised by ChE Dept, HIT	1) Prof. Vincenza Calabro, University of Calabria, Italy.	Funded by TEQIP - II
				2) Prof. Stefano Curcio, University of Calabria, Italy.	
				3)Dr. Sudip Chakraborty, Senior Research Scientist, University of Calabria, Italy.	

**For the year 2013**

Sl. No	Date	Program	Category	Guest	Fund
1	1/4/2013	Encouragement of Faculty and Staff Development	For Faculty & Staff Development	Noble Laureate - Dr. Ei-ichi Negishi	Funded by TEQIP - II
2	1/6/2013	Encouragement of Faculty and Staff Development	For Faculty & Staff Development	Noble Laureate - Dr. Yuan T Lee	Funded by TEQIP - II
3	24-01-2013 to 25-01-2013	Complex & Social Network	Workshop organised by CSE Dept, HIT	1) Dr. Niloy Ganguly, Associate Professor, IIT Kharagpur,	Funded by TEQIP - II
				2) Dr. Anmimesh Mukherjee, Assistant Professor, IIT, Kharagpur,	
				3) Dr. Amit A.Nanvati, Senior Researcher, IBM	
				4) Dr. Sitabhara Sinha, Professor, Institute of Mathematical Sciences	
4	1/31/2013	"Academic Excellence through CAQI"	Enhancement of Managerial Capacity - For Faculty Development (HOD & Faculty Members)	Prof.Manoj Das	24530
	2/1/2013				
5	30th January to 1st February, 2013	Analytical Techniques for Characterization of Biological Macromolecules	Workshop organised by CSE Dept, HIT	1) Dr. Debi Prasad Sarkar, Professor, Department of Biotechnology, University of Delhi,	Funded by TEQIP – II
				2) Dr. Debashish Mitra, Scientist 'G', National Centre for Cell Sciences (NCCS), Pune	
				3) Dr. Rabindranath Mukhopadhyaya, Former Scientist, Advanced centre for Treatment, Research and Education in Cancer	
6	2/22/2013	"Computer Literacy"	Staff Development - Class -IV Staff	Mr.Arijit Chakraborty- TA CSE Dept	1272
7	2/22/2013	"From Instructor – led teaching to student –centric learning"	Faculty Development	Dr.Harish Chaudhry of Management Edication Dept -IIT Delhi	7764
8	6/27/2013	Motivation, Attitudinal Change & Personality Development"	Staff Development	Dr.Chandrima Banerjee, PhD (IIT Mumbai), an experienced trainer & Head - DSL.	22515
	6/28/2013	Motivation, Attitudinal Change & Personality Development"			

Sl. No	Date	Program	Category	Guest	Fund
9	15th to 19th July 2013	Continuing Education Programme on " Machine Intelligence"	Workshop organised by IT Dept, HIT	1)Prof.Malay Kumar Kundu.(ISI Institute kolkata) 2)Prof C.A Murthy. ((ISI Institute kolkata) 3)Dr. Rajat Kr. Dey. ((ISI Institute kolkata) 4)Dr. Pradipta Majhi. (ISI Institute kolkata) 5)Prof. Mandar Mitra (CVPR ,ISI Institute kolkata) 6)Prof.Paramartha Dutta,Department of Computer and System Sciences,Visva Bharati University	Funded by TEQIP – II
10	22nd -26th July 2013	Workshop on refresher course on algorithm organized by "Computer Science Engineering	Workshop organised by CSE Dept, HIT	1) Prof. Chandan Mazumdar.(Department of CSE of Jadavpur University) 2) Prof. Sarbani Mukhopadhyaya.(Department of CSE,BIT, Kolkata ) 3) Prof Arijit Basu.(ACMU, ISI Kolkata) 4) Prof. Sudebkumar Prasant Pal.(Department of CSE , IIT Kharagpur) 5) Prof. Subhasish Majumder.(Department of CSE, Heritage Institute) 6) Prof. Subhas Chandra Nandy.(ACMU, ISI Kolkata) 7) Prof. Krishnendu Mukhopadhyaya.(ACMU, ISI Kolkata) 8) Prof. Prosenjit Gupta.(Department of CSE, Heritage Institute) 9) Prof.Arindam Biswas(Department of IT, BESU, Shibpur, Howrah) 10) Prof. Susmita Sur-Koley(ACMU, ISI Kolkata)	Funded by TEQIP – II
11	23rd to 24th July,2013	Conducting Education Programme For Teaching Assistants of ECE Department	Workshop organised by ECE Dept, HIT	National Small Industries Corporation LTD	Funded by TEQIP – II
12	7/25/2013	Orientation Programme	Faculty Development	Prof.Manoj Das	22830
	8/25/2013	Orientation Programme			
13	29th July to 31st July,2013	Workshop on "Research Methodology" organised by Mechanical Engineering	Workshop organised by ME Dept, HIT	1) Jaya Sil.(Prof. CSE BESU) 2) Dr. Bijan Sarkar.(Prof & former head of Production engg. Dept of Jadavpur University) 3) Dr. T.K Ghoshal.(Honorary Emeritus Professor of E.E dept of Jadavpur University) 4) S.P. Mukherjee. (EX proff. Of C.U)	Funded by TEQIP – II
14	23rd to 27th September 2013	Workshop on Computational Biology & Protein Structure Prediction Organized by Biotechnology Dept	Workshop organised by BT Dept, HIT	1)Dr.Dhananjay Bhattacharyya, Saha Institute of Nuclear Physics,kolkata 2)Dr.Soumalee Basu, University of Calcutta 3)Dr. Rajgopal Chattopadhyaya, Bose Institute, kolkata	Funded by TEQIP – II

Sl. No	Date	Program	Category	Guest	Fund
				4)Dr.Chhabinath Mondal, NIPER,Kolkata 5)Dr.Saikat Chakrabarti, Indian Institute of Chemical Biology, kolkata  6)Dr.Debnath Pal, IISc, Bangalore 7)Chitra Dutta, Indian institute of Chemical Biology, kolkata  8)Dr.Pinakpani Chakrabarti. Senior Professor & head, Centre of Excellence in Bioinformatics, Bose Institute,Kolkata  9)Rahul Banerjee, Professor,Saha institute of Nuclear Physics	
15	27th -28th September 2013	Workshop on "Energy Conservation Techniques in Industries	Workshop organised by ChE Dept, HIT	1)Joy Chakraborty, Divisional Engineer, WBREDA, Department of power and NES Govt. of W.B  2)Amitava Chakraborty, Additional Director PCRA  3)S.Mohanta , Additional Director PCRA, ER  4) Abhijit Nayak, Assistant Director, National Productivity Council  6) P.K. Raychaudhuri, CRC and Director, PCRA, ER 7)	Funded by TEQIP – II
16	24th - 25th October 2013	Workshop on Mobile computer & Wireless Sensor Network organized by "Computer Science Engineerings"	Workshop organised by CSE Dept, HIT	1) Prof.Iti Saha Misra, Professor, Department of Electronics & Telecommunication Engineering, Jadavpur University,Kolkata  2) Prof.Debashis Saha, Professor, MIS & Computer Science Group, Indian Institute of Management, Kolkata  3) Prof.Krishnendu Mukhopadhyaya, Professor, Advanced Computing & Microelectronic Unit, Indian Statistical Institute, Kolkata  4) Mr.Debi Prasad Pati, CoE Lead, EntSol-NTDC  5) Prof. Nitul Dutta, Senior Associate Professor, Dept of Computer Science Engineering, Rajkot, Gujrat	Funded by TEQIP – II
17	8th November, 2013	Higher Education in India Challenge Ahead	Workshop organised by ME Dept, HIT	1) Dr. Amitava Bose, Former Director, IIMC, Joka.  2) Dr. Asis Banerjee, Former Vice Chancellor, CU  3) Dr. Sugata Marjit, Former Chairman, Westbengal State Council of Higher Education	Funded by TEQIP – II
18	11/9/2013	Student Centric Learning	Faculty Development	Dr.Harish Chaudhry of Management Edication Dept -IIT Delhi	23667
19	12th-13th November, 2013	Workshop on VLSI Design and Technology	Workshop organised by ECE Dept, HIT	1) Prof. Susmita Sur Kolay.  2) Prof. Chandan Kumar Sarkar.  3) Prof. Susanta Sen.	Funded by TEQIP – II

Sl. No	Date	Program	Category	Guest	Fund
				4) Prof. Madhav P.Deshai, from IIT Bombay	

**For the year 2012**

Sl. No	Date	Program	Category	Guest	Fund
1	29.06.2012	Prog 1- "Budgeting & Financial Management"	For Faculty & Staff Development (Principal;Director;Dy.Director;Jt.Director, Registrar, HOD-Non Academic & HOD & DC - Academic)	Dr. Gagan Pareek – Assistant Professor – MEC Dept.	Rs. 5500/-
		Prog 2- "Motivation"	For Faculty & Staff Development ( HOD-Non Academic & HOD & DC - Academic)		
2	12.07.2012 13.07.2012	Selected Research Topics in Computer Science: State-of-the-art Perspectives	Workshop organised by CSE Dept, HIT	1) Dr. Sandeep Shukla, Professor, Bradley Department of Electrical and Computer Engg, Virginia Tech, USA, 2) Dr. Prosenjit Gupta, Professor Heritage Institute of Technology, 3) Dr. Vishwani D. Agarwal, Professor, Department of Electrical and Computer Engineering, Auburn University, USA, 4) Dr. Partha Pratim Das, Professor, Department of Computer Science and Engineering, IIT, Kharagpur.	Funded by TEQIP - II
3	17.07.2012 - 19.07.2012	Wireless Networking	Workshop organised by IT Dept, HIT	1) Prof.(Dr.) Bhabani P. Sinha, ISI, Kolkata 2) Prof. (Dr.) Arobinda Gupta, IIT, Kharagpur 3) Prof. (Dr.) Sipra Das Bit, BESU 4) Prof. (Dr.) Krishnendu Mukhopadhyay, ISI, Kolkata 5) Prof.(Dr.) Nabanita Das, ISI, Kolkata 6) Prof. (Dr.) Bhaskar Sardar of Jadavpur University.	Funded by TEQIP - II
4	7/21/2012	"Changing Role of Teachers"	Faculty Development	Dr.Harish Chaudhry of Management Education Dept -IIT Delhi	39010
		Group A			
		Group -B			
5	21.08.2012 22.08.2012	Reliable Microwave Communication	Workshop organised by CSE Dept, HIT	1) Prof(Dr.)Kankar Subhra Dasgupta Director ,Indian Institute of Space Science Technology. 2) Prof.(Dr.) Salil Kr Sanyal.ETCE Department,Jadavpur University. 3) Dr. Rajeswari Chattopadhyay, CEO , New Technology Application, Bangalore. 4) Shri Alok Nath Chattopadhyay,MD, New Technology Application, Bangalore	Funded by TEQIP - II

### 6.3.2 What are the strategies adopted by the institution for faculty empowerment through training, retraining and motivating the employees for the roles and responsibility they perform?

- Various strategies adopted by the Institute include :
- Periodical Academic Audit
  - Continuous Appraisal
  - Presentation and Reporting before the Planning and Evaluation Committee
  - Staff development programs for the skill up-gradation and training of the staff.

- Invitation of professional trainers to motivate the faculty members for self-evaluation and find solutions for their strengths and weaknesses.
- The review of the performance appraisal reports has helped in understanding the strength and weakness of faculty members. The basic purpose of the appraisal is to motivate the staff.
- All the staff is encouraged to attend seminars and workshops and keep in touch with latest theories and concepts on their subjects.

**6.3.3 Provide details on the performance appraisal system of the staff to evaluate and ensure that information on multiple activities is appropriately captured and considered for better appraisal.**

There are two appraisal methods adopted by the Institute. One is submission of Self Appraisal Report (SAR) and other is UGC prescribed Performa Based Assessment (PBAS) Performa for Assessment Performance Indicator (API). Each faculty fills the SAR every year.

The benefits of the SAR and PBAS-API have lead to increase their aptitude in research performance, interest in seminar participation, and motivations for undertaking the University activities.

For non-teaching staff, the annual confidential reports are normally used for promotions and also to identify quality work among the staff and give promotions based on merit.

Every year for encouraging the faculty members the institute gives prize for faculty of the year based on teaching, research and other activities.

**6.3.4 What are the welfare schemes available for teaching and non-teaching staff? What percentage of staff have benefitted from these schemes in the last four years? Give details.**

The following are the welfare schemes available for teaching and non-teaching staff:

Free Bus facility at regular intervals is provided for the employees from Ruby Hospital Junction to college and back.

Maternity Leave: 120 Days

Medical Leave / Casual Leave / Earn leave: 10 Days/ 12Days/ 10 Days.

Duty Leave facility wherever applicable.

Provident Fund: 12% of (Basic + DA).

i) Facilitation of faculty participation in programs for professional development, organized by the College and also other agencies, through grant of leave and providing financial incentives.

ii) Organizing sports and cultural activities in which all staff can participate.

iii) Canteen facilities for students and staff.

iv) Outdoor activities including recreational picnic for staff.

**6.3.5 What are the measures taken by the Institution for attracting and retaining eminent faculty?**

The Institution has the following provisions to attract and retain eminent and talented faculties :

- Teachers have free access to Institutional facilities to carry out research work.
- The Institution meets all expenditures incurred by the teachers in presenting papers at National and International seminars, registration fees, TA, DA and other expenses including on-duty leave.
- The College funds seed money to short-term and long-term teacher-led student projects.
- Institutional support is provided to teachers who undertake funded projects.
- The institution encourages students and faculty to take up summer programmes in research institutes such as NJ University, USA etc so that they get wider exposure.
- The faculty is deputed to undergo advanced training in National and Inter-National Research laboratories.
- Professors from reputed universities are invited to give guest lectures to enhance the research capabilities of faculty members and PG students.

**6.3.6 Has the university conducted a gender audit during the last four years? If yes, mention a few salient findings.**

Although there is no formal Gender Audit, however, gender data for faculty, technical staff and administrative staff are collected from the HR department. The enrolment data are documented and analyzed.

The male female ratio of Faculty: 151 : 91 (1.66 : 1)

The male female ratio of technical staff : 60 : 39 (1.54 :1)

The male female ratio of administrative staff : 38 : 9 (4.22 :1)

**6.3.7 Does the university conduct any gender sensitization programmes for its faculty?**

The college has an active "Sexual Harassment Against Women" Cell. Apart from members from different departments an NGO representative is included as a member of the cell. The various programs include conduct of seminars, workshops, lectures of eminent scholars and activists or a combination of these in the field of gender issues. University conducts gender sensitization programs for its faculty. Dr. Chandrima Banerjee, Head: DSL conducted a seminar and talk on "Women Empowerment and Gender Sensitization" for students as well as faculty members.

**6.3.8 What is the impact of the University's Academic Staff College Programmes in enhancing the competencies of the university faculty?**

The Academic Staff College has yet to be established in the University.

**6.4 Financial Management & Resource Mobilization**

**6.4.1 What is the institutional mechanism to monitor effective and efficient use of financial resources?**

- a. Preparation of institutional & departmental budget and quarterly review.
- b. Effective procurement system for various non-recurring & recurring expenditures

**6.4.2 Does the college have a mechanism for internal & external audit? Give details**

Yes, Internal Audit is assigned to a practicing Chartered Accountant firm and audit is conducted on quarterly basis for all the systems involved in various areas of operations. The report is submitted to the management on a quarterly basis and reviewed regularly for improvements. Further as required by the law Statutory Audit is also carried out every year.

**6.4.3 Provide audited income & expenditure statement of academic and administrative activities of the previous for years.**

Audited Annual Accounts for the financial year 2011-12, 2012-13, 2013-14 & 2014-15 enclosed (vide Annexure C.2)

**6.4.4 Have the accounts been audited regularly? What are the major audit objections and how are they complied with?**

Yes, the accounts have been audited regularly. There are no major objections.

**6.4.5 Narrate the efforts taken by the College for resource mobilization.**

- a. Effective system of realization of fee, wherein there are no defaulting students.
- b. Efforts are taken to ensure that there is no vacancy.
- c. Sanction of grants by AICTE, TEQIP & various government authorities
- d. Financial support from the Trust, whenever required

**6.4.6 Is there any provision for the College to maintain the "Corpus Fund"? If yes, give details**

The institution does maintain Corpus Fund namely the Development Fund & the Reserve Fund.

The balance as on 31st March 2015 is these accounts are as follows:

Development Fund- 274.09 lacs  
Reserve Fund - 336.36 lacs

## **6.5 Internal Quality Assurance System (IQAS)**

### **6.5.1 Does the college conduct an academic audit of its departments? If yes, give details.**

The college conducts in-depth academic audit of the respective departments by collecting information pertaining to various academic activities. Information is sought on the various courses offered by the departments, the curricula, the number of faculty members, the research activities carried out by the faculty members, the various conferences / workshops attended and invited lectures delivered by the faculty members, their publications in books, journals and conference proceedings, the performance of the students in semester examinations. Such information from all concerned departments is compiled in an annual report, which enables analysis the performance during the year.

### **6.5.2 Based on the recommendations of academic audit what specific measures have been taken by the college to improve teaching, learning and evaluation?**

Based on the academic activities of the respective departments compiled in the annual report, the college decides on the course offerings, the revision of the syllabi / curricula, the faculty strength, the evaluation process for students, the nature of conferences / workshops to organize / attend. Accordingly, the syllabi / curricula are revised, new faculty members are appointed, the examination rules are amended, the conference / workshop calendars are planned.

### **6.5.3 Is there a central body within the college to continuously review the teaching learning process? Give details of its structure, methodologies of operations and outcome?**

The Board of Studies (BOS) of each department meets regularly during a year to review the teaching-learning process. Each BOS, chaired by the respective Head of the Department (HOD), consists of all faculties of that department, some faculties from other departments, and a few external subject matter experts from the academia and the industry. The recommendations of each BOS are placed before the Academic Council, chaired by the Principal, for final ratification and approval.

### **6.5.4 How has IQAC contributed to institutionalizing quality assurance strategies and processes?**

The IQAC committee, chaired by the Principal, and consisting of various HOD's, some faculty members, senior officials and senior management of the college, deliberates on the various quality related issues involving the college. Recommendations / Suggestions from the IQAC are referred to the relevant statutory bodies of the college, like the Academic Council or the BOS, for further discussion / consideration and subsequent implementation.

### **6.5.5 Does the IQAC have external members on its committees? If so, mention any significant contribution made by such members.**

NO

### **6.5.6 Has the IQAC conducted any study on the incremental academic growth of students from disadvantaged sections of society?**

NO

### **6.5.7 What policies are in place for the periodic review of administrative and academic departments, subject areas, research centres, etc.?**

The relevant statutory bodies of the college, like the Academic Council or the BOS, IQAC committee, carry out regular reviews of the manner in which these bodies function to identify opportunities for

improvement. Necessary measures at appropriate levels are taken to ensure effective functioning of the constituent parts of the college.

**Any other relevant information if any:**

**SWOC ANALYSIS**

**Strengths:**

- Byelaws include service rules, admissions, programme regulations and financial & administrative delegation of authority and other important areas.
- Complete transparency in budgeting, incurring of expenditure, monthly expenditure and budget utilization reviews and finalization of external audited balance sheet.
- Adopted the ICAI standards of accounting as per UGC.
- The Finance is managed by the Finance Committee. Periodical review conducted by the Finance Committee and the Utilization of funds is subject to internal and external audits.
- Monitoring of Admission, Affiliation and academic programmes, Research and Development, Examination and Sports activities by highly qualified and experienced of the Institute.

**Weakness:**

- The Institute mostly relies on its own resources to support its academics and research and developmental activities.
- Limitation in government funding for research activities.
- Cadre ratio imbalance due to acute shortage of adequately qualified and experienced faculty.

**Opportunities:**

- The administrative process of the Institute is fully transparent, which enable the administrator to work with motivation for the benefit of the Institution.
- Partnership with more Industries and International organizations, which helps in faculty and student exchange, semester abroad programmes and internship at abroad universities.
- The Institution fulfils the major demand of the Country through technical education. In present scenario, our country requires ten times more engineering graduates for global need and this unprecedented demand opens new opportunities for developing administrative and management models to match quality with quantity and achieve inclusiveness, thus providing leadership to rest of India.

**Challenges:**

- Retention of senior faculty members and academic administrator.
- Quickly building robust infrastructure facilities as per growing demands of the Institution.



## CRITERION VII: INNOVATION AND BEST PRACTICES

### 7.1 Environment Consciousness

#### 7.1.1 Does the Institute conduct a Green Audit of its campus and facilities?

College has a committee headed by G.M. project, which monitors the various environmental activities in the campus. Since inception, the college has given importance to the growth of eco-friendly atmosphere in the campus. Thus the College has adopted various actions to retain the greenery of the campus and it has been observed that it produces a positive impact on the beholder and helps in developing an eco-friendly attitude in all.

#### 7.1.2 What are the initiatives taken by the college to make the campus eco-friendly?

Following initiatives have been taken by the college to make the campus eco-friendly

- Upgrading of existing lighting system from conventional light to CFL/LED light to save power.
- All taps, flusher are monitored periodically, to minimize the water wastage.
- Paints and polish have been changed to eco-friendly paints and polish.
- To enable proper waste reduction, sewage treatment plant is installed in the campus where the waste water is recycled and used for campus irrigation.
- Solar power plants are installed with local utilization without battery backup.
- No Smoking Campus

#### Energy conservation:

- The light and fans are switched off by the security guard or staff after the completion of the last lecture of the day. Fans and light in the staff rooms are switched off when faculty moves out.
- Single switch is used to switch off room power supply of fans and light points.
- Created consciousness among the staff and students on energy conservation.
- Class rooms are constructed with sufficient ventilation and light so that the use of electricity can be minimized.
- Intimating staff and students to turn off lights and fans in hostel and college whenever not needed.
- There are large numbers of computers in different labs. LCD monitors are used in the labs to consume less energy. Most of the computers are modernized and updated.
- The UPS Batteries are maintained in good condition which reduces charging of current of batteries.
- Conversion of exiting lighting system to energy saving LED.
- Conservation & up keep of all existing plumbing system to prevent water loss in the form of leakages.
- Upkeep of all electrical equipment to prevent excess energy loss & short circuits.
- Installation, monitoring & upkeep of energy management system.
- Installation, monitoring & upkeep of automated water level controllers with solenoid valves to prevent excessive water loss due to overflow in water tanks.
- All the maintenance activities are controlled by computerised Maintenance System (CMMS).

#### Use of renewable energy:

- Two solar power plants are installed in the roof of the A-building and B-building and operating now to produce 100 kWp capacities with local utilization without battery backup.
- 2 × 50 kWp units with 2 string inverters are installed to generate the required power. Number of parts are 405 each @50 kWp. The cost of the project is 2.0 crore, 1.0 crore, subsidy was received from the Jawaharlal Nehru National Solar Mission from the Ministry of New and Renewable Energies and State Government.
- The plant generates approximately 1.0 lacs unit every year to relieve the electricity board to some extent.

**Check dam construction:**      **NA**

**Efforts for Carbon neutrality:**

- College provides bus and sumo facilities to the faculty and staff from Ruby to college and from college to Ruby with an aim to avoid the use of individual vehicles and thus reducing the carbon emission.
- More saplings are planted every year in various locations to reduce the carbon load.
- College campus is on its way to become 100% LED campus in country. Next to it, a 40W tube-light is being replaced with 12W with LED with same lumens and no loss of light. Moreover, a street lamp of 250W will be changed with 85W LED to save large number electrical units annually. Not only it will save electricity but it will also compress the carbon emissions that emits from tube light chokes.
- Electricity will be generated from solar energy that is being installed, with electricity as its backup.
- All the vehicles are regularly checked for pollution control to restrict carbon emission.
- The dead leaves and waste paper are not burnt in the campus and instead they are put into compost pits. The campus is totally plastic free.

**Plantation:**

- The campus is filled with greenery, in and around, with conscious efforts of the Institution. Approximately 2900 plants and trees are grown all over the campus.
- Well-trained team of 15 gardeners daily maintain the plantation within the Campus.
- 45% of the total open area is covered with trees.
- Water from recycled waste water from sewage treatment plant used for gardening.
- Regular plantation of new types of trees and plants to enhance beautification.

**Hazardous waste management:** The College does not generate any hazardous or radioactive wastes.

**E-waste management:** The College does not generate any e-waste. Computers, UPS and Printing systems are sent to specialised scrap dealers for safe disposal.

**7.2 INNOVATIONS****7.2.1 Has the institution adopted any mechanism/ process for internal quality checks?**

The college has adopted mechanism/process for internal quality checks through departmental and institutional administration, which supervise and monitor the conduct of academic and administrative activity regularly. The mechanisms/ processes are as follows:

- I. Ensuring effectiveness in teaching
- II. Uninterrupted teaching-learning
- III. Effective learning
- IV. Daily attendance monitoring of students
- V. Ensuring uniform course coverage
- VI. Effective evaluation
- VII. Encouragement for R&D

These points are elaborately described as follows:

**I. Ensuring effectiveness in teaching:**

There are facilities of projectors and laptops in every department which the faculty can use whenever necessary during teaching.

Online faculty appraisal by students are conducted once every year within the 3rd week of commencement of the even semester courses. These feedbacks are conveyed to each of the respective faculty. The faculty with feedback scores that are not up to the mark are counselled. This innovative process increases the effectiveness in teaching and hence the quality.

Every department provides the following materials to the students to make them self-learners:

- a. **Course materials:** This contain the syllabus and rudiments of each of the units in the respective subject, which provide the overall idea and depth up to which the study is to be

carried out. Assignments are provided which contain questions and problems to be solved by the students developing their learning and problem-solving ability.

- b. **Laboratory manuals:** For every experiment and/or fieldwork manuals are provided. It contains Objective, theory, procedure, equipment or materials used, glimpses of analysis and results. This helps the student in performing the required job, extract the results and analyse them to draw conclusions.
- c. **Visual aid:** Presentation of the subject topic in the classrooms and laboratories with visual aids such as projectors make learning the learning interesting and long lasting.

## **II. Uninterrupted teaching-learning:**

Entrepreneur Resource Planning (ERP) system ensures uninterrupted teaching-learning process. Daily faculty attendance is linked innovatively to the attendance of the students during their allotted class as per timetable. This ensures that no class remains free without a teacher any day. If any faculty is on a leave then the concerned teacher or the HOD is required to make an alternative arrangement for taking his/her scheduled classes. This maintains the discipline and continuity of the course.

## **III. Effective learning:**

In both the autonomous and affiliated modes of Heritage Institute of Technology, Kolkata (HITK), class tests are conducted twice in a semester which is leading to effective learning and self-assessment of the students. In addition, assignments are given in each semester per subject so that students develop the habit of self-study and solving problems. Weightage is given to class attendance as well. In the U.G. level the total marks for class test is 30 out of which 5, 10 and 15 marks are allotted to attendance, assignments and test scores respectively. This is promoting the student attendance and improving the academic environment.

## **IV. Daily attendance monitoring of students:**

In all the departments faculty mentors are assigned to individual students who monitor the attendance of each student under their mentorship. Problems of irregular and/or continuous absenteeism are reported to the parents of respective students. As per WBUT rules a minimum of 75% attendance is mandatory for being eligible to sit for the University Examination and Campus Interview. But students are advised to make attendance 100%.

## **V. Ensuring uniform course coverage:**

HoDs and Departmental Coordinators (DCs) constantly monitor the progress of course coverage on both theory and sessional classes. This ensures uniform course coverage matching the mid-test requirements. They also ensure that the tutorials and assignments are regularly conducted as per time schedules. The college ensures maintenance of schedules for mid-tests and semesters.

## **VI. Effective evaluation:**

Evaluation in theory subjects are as follows:

Class test marks: 30  
Semester exam marks: 70  
Total: 100

## **VII Encouragement for R&D:**

The College aspires for excellence. This aim promotes research and development alongside quality teaching

### **BEST PRACTICE -1**

i) **Title of the Practice:** Encouraging Faculty of the Institute through the Annual Award Program.

ii) **Objective of the Practice:**

- To create an environment of encouragement, motivation and recognition

- To boost satisfaction level of teachers that directly impacts the teaching – learning environment of the institute.

*“Everyone inside them has a piece of good news. The good news is you don’t know how great you can be...What you can accomplish! And what your potential is.”*

### iii) The Context

In times, when quality seems a myth, it is a challenge to uphold the integrity of the work that we do. One’s sense of engagement and satisfaction at work goes a long way in determining the output, both quantitatively and qualitatively. It is therefore important for an academic institution to develop such practices through which it can encourage, acknowledge and appreciate the efforts of those people who are steadily contributing and are quintessential to its growth. Such practices lead to a better academic environment in the institute.

### iv) The Practice

On September 5 each year, the institute celebrates its Foundation day and it is on this day that the **Annual Awards of Excellence** are handed over to members of the faculty and staff. **Annual Award of Excellence** to deserving members of faculty and staff, are presented in the following five categories:

- outstanding teaching
- outstanding research accomplishments
- outstanding service to the HIT(Heritage Institute of Technology) Community
- outstanding contribution to public service
- to include the private sector and the non-government community and
- all-round excellent performance in a combination of two or more of the above areas

### v) Evidence of Success

The institute boasts of well qualified faculty and staff.

- With every passing year, the selection committee is finding it more and more challenging to select one out of many nominations for the awards. This is testimony of the increasing level of motivation, not merely for the sake of winning the award, but more for the sake of their research or teaching getting recognition.
- While they pursue their efforts to achieve knowledge and excellence in their respective fields of expertise, faculty members are sometimes required to associate with other institutes (national / international) for carrying out research activities. During such time, the faculty at times has opportunity to take up more lucrative offers. However, a strong sense of attachment and belongingness is the reason for them not to break their ties with this institute. It can be said with much confidence that mutual recognition and admiration of one’s contribution leads to a positive bonding between the college management and the faculty.

### vi) Problem encountered and Resources required

No problems in particular had to be encountered to kick-start this practice as the college management was more than keen to do its bit to encourage and motivate their faculty and staff.

Regarding requirement of resources, a committee is formed to look into details such as budget approvals, inviting nominations, setting up jury etc.

## BEST PRACTICE 2

- i) **Title of the Practice:** Holistic education of students to enhance their employability and ensure inculcation of other professional and personal skills.

**ii) Objective of the Practice:**

- To not only aim at making them employable but also ensure inculcation of emotional, cognitive, corporal, and social values.
- To achieve high placement records.

**iii) The Context:**

Students, in these era of globalization, are immersed in thoughts of fulfilling their professional and material aspirations. In this process, they at times do not adhere to certain basic dos and don'ts of professional as well as personal life. The institute considers this its responsibility to groom the students to face challenges in life in the right manner and spirit.

**iv) The Practice:**

Along with courses in English language, Language Laboratory (since First year of B.Tech), which aim at improving English Language skills, students are offered a variety of other Humanities courses such as Values and Ethics in Profession, Organization Behaviour, Economics for Engineers, Principles of Management etc. These courses cover a wide gamut of preparation that one must have to succeed in all endeavours in life. A new course titled 'Personality Development' will be introduced in the Third year B.Tech curriculum of 2016-2017 that will expose students to several key aspects of psychic grooming.

**v) Evidence of Success:**

A well placed alumni is clear evidence of the success of this endeavour. Moreover, high placements records and feedback about students from placement companies adds further to the conviction.

**STRENGTHS:**

- Eco-friendly campus.
- Autonomous Institution
- Entrepreneur Resource Planning (ERP) system ensures uninterrupted teaching-learning process.
- TEQIP Phase II is supporting the institute.
- New Examination System under autonomy ensuring timely examination and declaration of results.
- Two language labs, equipped with state-of-art facilities, are the assets of the Institute. Courses involving language lab provide students with sample Opportunities to develop their communication skills and overall personalities.

**WEAKNESSES:**

- Lack of consultancy projects funded by industries and Government.
- Limited number of senior faculty with industry experience.
- Large number of students from vernacular medium.

**OPPORTUNITIES:**

- To set up a well-equipped sewage water treatment to treat waste water.
- Use of valuable inputs from alumni to improve in academics, research and placements in industries and institutes.

**CHALLENGES:**

- Install more solar power plants to fulfil 100% electricity requirement of the campus.
- Encouragement of R&D by proper funding
- Conducting smooth examination in parallel systems under 1) autonomy and 2) under MAKAUT (formerly WBUT).
- Introduced flexible competency based curriculum.

# **PART – D EVALUATIVE REPORTS OF THE DEPARTMENTS**

1. Name of the Department & Its year of establishment :	Department of Applied Electronics & Instrumentation Engineering
	2001

2. Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., etc.) :
- UG : -B.Tech (Applied Electronics and Instrumentation Engg.)
- PG : -M.Tech (Applied Electronics and Instrumentation Engg.)

3. Interdisciplinary courses and departments involved:

The curriculum for the Programmes in this Department avails expertise from the Department of Electrical Engg, the Department of Electronics and communication Engg, Department of Computer science and Dept of Mechanical Engg.

Programme	Course	Department involved
B.Tech	Mathematics-I&II, Numerical Methods,	Mathematics
	Physics-I&II,	Physics
	Chemistry-I, Basic Environmental Engineering & Elementary Biology ,	Chemistry
	Values & Ethics in Profession, Organizational Behavior, Business english	Humanities
	Engg. Drawing, workshop, Engg. Mechanics, Engg. Thermodynamics & Fluid Mechanics	Mechanical Engg.
	Data Structure & Algorithm, Data Base Management System and Computer Networking	Computer science Engg.
	Data Structure & Algorithm, Data Base Management System and Computer Networking	Information technology
	Communication Theory	Electronics and Communication Engg.,
B. Tech	Basic Electrical Engg., Field theory	Electrical engg.
	Economics for Engineers, Principles of Management	Management
M. Tech	Bio sensors	Biotechnology
	Cloud computing	CSE
	Operation reasearch & optimization technoques	Mathematics

4. Annual/ semester/choice based credit system :

Credit based semester system

5. Participation of the department in the courses offered by other departments

Department	Subject offered to the department
E. C. E	Microprocessor and Microcontroller
C. S. E	Microprocessor and Microcontroller
E. E	Sensors and Transducers
M. E	Industrial Instrumentation

## 6. Number of teaching posts sanctioned and filled (Professors/Associate Professors/Asst. Professors)

	Sanctioned	Filled
Professor	2	1
Associate Professor	3	3
Assistant Professor	10	11
Total	15	15

## 7. Faculty profile with name, qualification, designation, specialization (D.Sc./D.Litt./ Ph.D./M.Phil., etc.)

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. students guided in last 4 years
Madhurima Chattopadhyay	Ph.D.	Professor & Head	<ul style="list-style-type: none"> <li>MEMS based sensor</li> <li>Instrumentation for BLDC motor</li> <li>Electrical impedance topography and different application in instrumentation.</li> </ul>	17	3 a) Deborshi Chackroborty (Enrolled in Jadavpur University) b) Swati Dey (Enrolled in MAKAUT) c) Surajit Bagchi (Enrolled in MAKAUT)
Surajit Bagchi	M.Tech.	Associate Prof	<ul style="list-style-type: none"> <li>Bio medical Instrumentation</li> </ul>	25	0
Arabinda Kumar Pal	MTech	Associate Prof	<ul style="list-style-type: none"> <li>Soft computing</li> <li>Control engg</li> <li>Process control system</li> </ul>	22	0
Santanu Ghorai	PhD	Associate Prof	<ul style="list-style-type: none"> <li>Signal &amp; image processing</li> <li>Machine learning algorithm</li> </ul>	15	1 a) Pradip Saha (Registered in Jadavpur University)
Soumik Das	PhD	Asst.Prof	<ul style="list-style-type: none"> <li>Power electronics</li> <li>Energy studies</li> </ul>	10	0
Anil Kr. Bag	PhD	Asst.Prof	<ul style="list-style-type: none"> <li>Process control</li> <li>Industrial Instrumentation</li> <li>Sensors and Transducers</li> </ul>	13	0
Pradip Saha	MTech	Asst.Prof	<ul style="list-style-type: none"> <li>Signal processing</li> <li>Pattern recognition</li> </ul>	10	0
Indrajit Naskar	MTech	Asst.Prof	<ul style="list-style-type: none"> <li>Electronics circuits</li> <li>Control engg</li> <li>Sensors and Transducers</li> </ul>	14	0
Reshma Sengupta	MTech	Asst.Prof	<ul style="list-style-type: none"> <li>Instrumentation</li> <li>Control engg</li> </ul>	9	0
Arindam Sarkar	MTech	Asst.Prof	<ul style="list-style-type: none"> <li>Power electronics</li> <li>Opto electronics</li> </ul>	7	0
Samiul Alam	MTech	Asst.Prof	<ul style="list-style-type: none"> <li>Biomedical instrumentation</li> </ul>	9	0
Damayanti Ghosh	MTech	Asst.Prof	<ul style="list-style-type: none"> <li>Microprocessor &amp; Microcontroller</li> <li>Electronic measurement</li> <li>Biomedical instrumentation</li> </ul>	7	0
Samik Chakraborty	MTech	Asst.Prof	<ul style="list-style-type: none"> <li>Signal processing</li> <li>Industrial Instrumentation</li> <li>Bio medical instrumentation</li> </ul>	5	0
Debjyoti Chowdhury	M. Tech	Asst. Prof.	<ul style="list-style-type: none"> <li>Mechatronics</li> <li>Embedded system</li> <li>Microelectronics devices</li> </ul>	4	0



## Adjunct Assistant Professor

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. students guided in last 4 years
Tulika Ojha	M. Tech	Adjunct Assistant Professor	Electronics and Instrumentation	Nil	Nil

8. Percentage of classes taken by temporary faculty – programme-wise information : Nil

9. Programme-wise Student Teacher Ratio:

Serial No	Course	Ratio
1	B.Tech (AEIE)	15:1
2	M.Tech (AEIE)	12:1

10. Number of academic support staff (technical) and administrative staff: sanctioned and filled

	Sanctioned	Filled
Administrative Staff	0	0
Support staff (Technical)	8	8

11. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Mention names of funding agencies and grants received project-wise.

a) National funding agencies

Year	Name of the project	Investigator	Funding Agency	Amount	Date	Status
	Title: Development of capacitive type MEMS based bio-pressure sensor for assessing various physiological activities.	Dr.Madhurima Chattopadhyay Professor & H. O. D	Science and Engineering Research Board (SERB), DST	14,34,000/-	June 2013 to June 2016	Ongoing

12. Departmental projects funded by DST-FIST; DBT, ICSSR, etc.; total grants received : Nil

Year	Name of the project	Funding Agency	Amount	Date	Status
2013	Title: Development of capacitive type MEMS based bio-pressure sensor for assessing various physiological activities.	Science and Engineering Research Board (SERB), DST	14,34,000/-	June 2013 to June 2016	Ongoing
2011	Computerized Control of Industrial Process by Developing SOM-based Self –Tuning fuzzy & Neuro-Fuzzy Controller	AICTE 8023/RID/RPS-24/2010-11 dtd 31.03.2011 &200-62/FIN/04/05/2368 dtd 20.05.2011	8,75000/-	on 3 <sup>rd</sup> june ,2011,to 2013	completed

## 13. Research facility / centre with:

- State recognition Nil
- National recognition Nil
- International recognition Intellisense University (USA) Partnership Programme with Dr. Madhurima Chattopadhyay, HOD, AEIE Dept., Facility- Intellisuite module for total MEMS solution. Total cost- Rs-50 Lakh, Date- 8th April 2015

## 14. Publications:

- Number of papers published in peer reviewed journals (national / international)

National 0

International 39

Year		Publication
2015	National	0
	International	13
2014	National	0
	International	8
2013	National	0
	International	9
2012	National	0
	International	7
2011	National	0
	International	2

## Detail journal publication:

## 2015:

- Prof. (Dr.) Madhurima Chattopadhyay, "A new scheme for reducing breathing trouble through MEMS based capacitive pressure sensor", *International Journal on Microsystems Technology, Springer*, November, 2015, DOI 10.1007/s00542-015-2707-0.
- Prof. (Dr.) Anil Kumar Bag, "Monitoring the Fermentation Process and Detection of Optimum Fermentation Time of Black Tea Using an Electronic Tongue", *IEEE Sensors Journal*, November, 2015, DOI:10.1109/JSEN.2015.2455535.
- Prof. (Dr.) Anil Kumar Bag "Incremental FCM technique for black tea quality evaluation using an electronic nose", *Fuzzy Information and Engineering, Elsevier*, July, 2015.
- Prof. (Dr.) Anil Kumar Bag, "A Rough Set based method for Aiming Angle tuning of luminaries for Outdoor Sports Lighting", *Lighting Res. Technol*, August, 2015, DOI: 10.1177/1477153515597565.
- Prof.(Dr.) Madhurima Chattopadhyay – Overview on recent development in Bio-MEMS pressure sensors, *IISRR- Int. Journal of Research*, pp: 43-49, 2015, ISSN: 2394-6873.
- Prof.(Dr.) Madhurima Chattopadhyay, "A Cost effective Real Time Implementation of Smart Bracelet using MEMS Accelerometer for Monitoring physiological activity of Stay-alone elderly persons", March, 2015, ISSN: 2394-6873.
- Prof.(Dr.) Madhurima Chattopadhyay, "Study on Recent Development on MEMS Pressure Sensors in Biomedical Applications", *National Symposium on Recent Trends in Instrumentation Science and Technology*, vol.1, pp. 43, March, 2015, ISSN: 2394-6873.
- Prof.(Dr.) Madhurima Chattopadhyay, "Performance Evaluation of Two Types of MEMS Micro Switches for Radio Frequency Applications: A Simulation Study", *National Symposium on Recent Trends in Instrumentation Science and Technology*, vol.1, pp. 102, March, 2015, ISSN: 2394-6873.
- Prof. Arabinda Kumar Pal, "Design an Interval Type-2 Fuzzy PI & PID Controller for Nonlinear System", *International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering*, vol. 4, no. 1, pp.187-193, January, 2015, ISSN: 2278-8875.
- Prof. Indrajit Naskar, "Design an Interval Type -2 Fuzzy PI & PID Controller for Nonlinear System", *International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering*, vol. 4, no. 1, pp. 187-193, January, 2015, ISSN: 2278-8875.
- Prof. Sreeparna Dasgupta, "Design & Implementation of DC Motor Speed Control by Armature Voltage Variation using Wireless Technology", *International Journal of Advance Research in Science and Engineering (IJARSE)*, Vol. 4, no. 1, Mar., 2015, ISSN: 2319-8354E.

- Prof. Reshna Sengupta, "Design & Implementation of DC Motor Speed Control by Armature Voltage Variation using Wireless Technology", *International Journal of Advance Research in Science and Engineering (IJARSE)*, Vol. 4, no. 1, Mar., 2015, ISSN: 2319-8354E.
- Prof. Arindam Sarkar, "Performance Evaluation of Two Types of MEMS Micro Switches for Radio Frequency Applications: A simulation Study", *National Symposium on Recent Trends in Instrumentation Science and Technology*, vol. 1, pp. 102, March, 2015.

2014:

- Prof. Sreeparna Dasgupta, "Design and Development of A Low Cost Scheme for Wireless Speed Control of A DC Motor Using PWM", *International Journal of Electronics and Computer Science Engineering*, vol. 3, no. 3, pp. 301-306, July, 2014, ISSN: 2277-1956.
- Prof. Reshna Sengupta, "Design and Development of A Low Cost Scheme for Wireless Speed Control of A DC Motor Using PWM", *International Journal of Electronics and Computer Science Engineering*, vol. 3, no. 3, pp. 301-306, July, 2014, ISSN: 2277-1956.
- Prof. (Dr.) Madhurima Chattopadhyay, "A Simulation Based Geometrical Analysis Of MEMS Capacitive Pressure Sensors for High Absolute Pressure Measurement", *International Journal of Emerging Technology and Advanced Engineering*, ISO 9001:2008 Certified Journal, volume 4, no. 7, pp. 23-28, Apr., 2014, ISSN: 2250-2459.
- Prof.(Dr.) Madhurima Chattopadhyay, "Performance Analysis of Sensored and Sensorless Drive of BLDC Motor using Different Types of DC/DC Converters in MATLAB/ SIMULINK Platform", *International Journal of Electrical, Electronics and Data Communication*, vol. 2, no. 6, pp. 54-58, 2014, ISSN: 2320-2084.
- Prof.(Dr.) Madhurima Chattopadhyay, "Identification of Conductive and Non-Conductive Elements in 2-Dimensional Electrical Impedance Tomography using Finite Element Method", *International Journal of Electrical, Electronics and Data Communication*, vol. 2, no. 6, pp. 64-68, 2014, ISSN: 2320-2084.
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- Dr. Santanu Ghorai, "A Novel Technique of Black Tea Quality Prediction Using Electronic Tongue Signals", *IEEE Transactions on Instrumentation and Measurement*, 7th Feb., 2014.
- Pradip Saha, "A Novel Technique of Black Tea Quality Prediction Using Electronic Tongue Signals", *IEEE Transactions on Instrumentation and Measur.*, 7th Feb., 2014.

2013:

- Prof.(Dr.) Madhurima Chattopadhyay, "Resistivity Imaging of a Phantom with Irregular Inhomogeneities with 16 Copper Electrodes Based Sensory System in 2 Dimensional Electrical Impedance Tomography", *UACEE International Journal of Advancements in Electronics and Electrical Engineering – IJAEEE*, 9th Sep., 2013, ISSN 2319 –7498.
- Prof. Arabinda Kumar Pal, "An Adaptive PD-Type FLC and Its Real Time Implementation to Overhead Crane Control", *International Journal of Emerging Technologies in Computational and Applied Sciences*, December, 2013.
- Prof. Surajit Bagchi, "Electrical Simulation of Human Cardio-Vascular System and Real-Time Tele-monitoring of Cardiac Status of the Patients", *Journal of Association of Engineers (Ji.AEI)*, vol. 83, no.2, April-June, 2013, ISSN :0368-1106.
- Prof. (Dr.) Madhurima Chattopadhyay, "Dynamic Modeling and Stability Analysis of Human Respiratory System for Investigation of the Severity of Fibrosis in Lungs", *IJAREEIE*, Feb., 2013, ISSN: 2278 – 8875.
- Prof. (Dr.) Santanu Ghorai, "Automatic Defect Detection on Hot Rolled Flat Steel Products", *IEEE Trans. on Instrum. and Measur.*, vol. 62, no. 3, pp. 612-621, March, 2013, DOI: 10.1109/TIM.2012.2218677.
- Prof. Arabinda Kumar Pal, "Design of Self-Tuning Fuzzy PI Controller in LABVIEW for control of a Real time process", *International Journal of Electronics & Computer Science Engineering*, March, 2013.
- Prof. Indrajit Naskar, "Design of Self-Tuning Fuzzy PI Controller in LABVIEW for control of a Real time process", *International Journal of Electronics & Computer Science Engineering*, March, 2013.
- Prof. Surajit Bagchi, "Electrical Simulation of Human Cardio-Vascular System and Real-Time Telemonitoring of cardiac status of the patients", *Journal of the Association of Engineers*, April, 2013, ISSN: 0368-1106.

- Prof. Indrajit Naskar, "Speed Measurement & Control using IBM Processor", International journal of electronics and computer science engineering, Feb., 2013, ISSN: 2277-1956.

2012:

- Prof. Surajit Bagchi, "Noninvasive Estimation of Consciousness Level By FFT Method", International Journal of Engineering Research and Applications (IJERA), September- October, 2012, ISSN: 2248-9622.
- Prof. (Dr.) Madhurima Chattopadhyay, "Performance analysis of an innovative sensory system based spirometer for diagnostic evaluation of COPD and CRPD diseases", UACEE International Journal of Advances in Electronics Engineering, vol. 2, no. 3, August, 2012, ISSN: 2278 - 215X.
- Prof. Arabinda Kumar Pal, "Speed Control of DC Motor using Relay Feedback Tuned PI, Fuzzy PI and Self-Tuned Fuzzy PI Controller", Control Theory and Informatics, Vol. 2, no.1, 2012.
- Prof. Saurabh Pal, "Improvement of Classification Accuracy of ECG based Biometric Authentication by Data Modelling Measurement", ELSEVIER science, March, 2012.
- Prof. Saurabh Pal, "Empirical Mode Decomposition based ECG enhancement and QRS Detection", ELSEVIER science, Vol. 42, no. 1, January, 2012.
- Prof. Saurabh Pal, "Detection of Cardiac Arrhythmic Beats by Logical Classifier using Binary Coding", International Journal of Science, Measurement and Technology, April, 2012.
- Prof. S. Bagchi, "Noninvasive Estimation of Consciousness Level By FFT Method", International Journal of Engineering Research and Applications (IJERA), September- October, 2012, ISSN: 2248-9622.

2011:

- Prof. Arabinda Kumar Pal, "Rule Extraction through Self-Organizing Map for a Self-tuning fuzzy logic controller", Advanced Materials Research Journal, 2012.
- Prof. Arabinda Kumar Pal, "Development of a self-tuning fuzzy controller through relay feedback approach", Computational Intelligence and Information Technology, Springer, November, 2011.

▪ **Monographs: 1**

Dr. Madhurima Chattopadhyay, "Some investigation on aperture size in RF ion traps", Lap Lambert Academic Publishing, ISBN: 978-3-8484-4169-3.

▪ **Chapter(s) in Books: 14**

2015

- Prof.(Dr.) Madhurima Chattopadhyay, "A New Scheme for Determination of Respiration Rate in Human Being Using MEMS Based Capacitive Pressure" Next Generation Sensors and Systems (Springer), vol. 16, pp.143-160 Sensor (ISBN: 978-3-319-21671-3), August, 2015.
- Prof. (Dr.) Madhurima Chattopadhyay, "Monitoring of the Lung Fluid Movement and Estimation of Lung Area Using Electrical Impedance Tomography" (ISBN: 978-3-319-21671-3) Next Generation Sensors and Systems (Springer), vol. 16, pp. 161-190, August, 2015.
- Prof. (Dr.) Madhurima Chattopadhyay, "Real -time Implementation of Electromyography for Hand Gesture Detection Using Micro Accelerometer" Publisher: Springer, 2015.
- Prof. (Dr.) Madhurima Chattopadhyay, "A Real Time Gesture Recognition with Wrist Mounted Accelerometer" (DOI: 10.1007/978-81-322-2247-7, ISBN: 978-81-322-2246-0 Online ISBN: 978-81-322-2247-7) Second International Conference INDIA 2015, Springer Book Chapter, Volume 2, Series: Advances in Intelligent Systems and Computing, Vol. 340, pp. 245-253, Copyright 2015.
- Prof. Arabinda Kumar Pal, "Design a Fuzzy Logic Controller with a Non-fuzzy Tuning Scheme for Swing up and Stabilization of Inverted Pendulum" Book Chapter: Intelligent Computing, Communication and Devices (ICCD 2014), Springer, pp. 221-230, January 1, 2015.

2014

- Prof. (Dr.) Madhurima Chattopadhyay, "Real-Time Monitoring of Respiratory Diseases of Distantly Located Elderly Impaired Patients" (DOI: 10.1007/978-3-319-02318-2\_2) Sensing Technology: Current Status and Future Trends I, Smart Sensors, Measurement and Instrumentation ,Volume 7, DOI: 10.1007/978-3-319-02318-2\_2, Springer International Publishing Switzerland 2014 January, 2014.
- Prof Surajit Bagchi, "Real-Time Monitoring of Respiratory Diseases of Distantly Located Elderly Impaired Patients" (DOI: 10.1007/978-3-319-02318-2\_2) Sensing Technology: Current Status and Future Trends I, Smart Sensors, Measurement and Instrumentation, Volume 7, DOI: 10.1007/978-

- 3-319-02318-2\_2, Springer International Publishing Switzerland, January, 2014.
- Prof. (Dr.) Madhurima Chattopadhyay, Book Chapter in Next Generation Sensors and Systems, Volume16 , 2014, pp 143-160, Chapter Title: A New Scheme for Determination of Respiration Rate in Human Being Using MEMS Based Capacitive Pressure Sensor, eBook ISBN: 978-3-319-21671-3, DOI: 10.1007/978-3-319-21671-3, Name: Springer International Publishing Switzerland.
  - Prof. (Dr.) Madhurima Chattopadhyay – Book Chapter in Next Generation Sensors and Systems, Volume16 , 2014, pp 161-190, Chapter Title: Monitoring of the Lung Fluid Movement and Estimation of Lung Area Using Electrical Impedance Tomography, eBook ISBN: 978-3-319-21671-3, DOI: 10.1007/978-3-319-21671-3, Name: Springer International Publishing Switzerland.
  - Prof. (Dr.) Santanu Ghorai “Multiclass Kernel Classifiers for Quality Estimation of Black Tea Using Electronic Nose” (DOI: 10.1007/978-3-319-02315-1\_2, pp. 141-160) Sensing Technology: Current Status and Future Trends II, Smart Sensors, Measurement and Instrumentation 8, DOI: 10.1007/978-3-319-02315-1\_2, pp. 141-160, © Springer International Publishing Switzerland, 2014 (chapter 7) January, 2014.
  - Prof. (Dr.) Santanu Ghorai “Optimization of Sensor Array in Electronic Nose by Combinational Feature Selection Method” (DOI: 10.1007/978-3-319-02315-1\_2, pp. 189-206) Sensing Technology: Current Status and Future Trends II, Smart Sensors, Measurement and Instrumentation 8, DOI: 10.1007/978-3-319-02315-1\_2, pp. 189-206, © Springer International Publishing Switzerland, 2014 (chapter 9) January, 2014.
  - Prof. Pradip Saha “Multiclass Kernel Classifiers for Quality Estimation of Black Tea Using Electronic Nose” (DOI: 10.1007/978-3-319-02315-1\_2, pp. 141-160) Sensing Technology: Current Status and Future Trends II, Smart Sensors, Measurement and Instrumentation 8, DOI: 10.1007/978-3-319-02315-1\_2, pp. 141-160, © Springer International Publishing Switzerland, 2014 (chapter 7) January, 2014.
  - Prof. Pradip Saha “Optimization of Sensor Array in Electronic Nose by Combinational Feature Selection Method” (DOI: 10.1007/978-3-319-02315-1\_2, pp. 189-206) Sensing Technology: Current Status and Future Trends II, Smart Sensors, Measurement and Instrumentation 8, DOI: 10.1007/978-3-319-02315-1\_2, pp. 189-206, © Springer International Publishing Switzerland, 2014 (chapter 9) January, 2014.

2012

- Madhurima Chattopadhyay – Some Investigations on Aperture Size on RF Ion Traps- Approximation of Electrical Fields and Multipoles, published by LAP LAMBERT Academic Publishing GmbH & Co. KG, Karen Holmes (Acquisition Editor), April, 2012, ISBN -978-3-8484-4169-3.
- Editing Books : Nil
- Books with ISBN numbers with details of publishers:
  - Indrajit Naskar, “A Text Book of Analogue Electronics” Chhaya prakasani, Kolkata, ISBN - 978-93-82918-55-4, 2015.
  - Dr. Madhurima Chattopadhyay “Some investigation on aperture size on RF- ion traps- approximation of electrical field on multipoles,” LAP LAMBERT Academic Publishing, Germany, ISBN-978-3-8484-4169-3, April 2012.
  - Dr.Santanu Ghorai “Advance in proximal kernel classifier,” LAP LAMBERT Academic Publishing, Germany, ISBN-978-3-659-27836-5, November 2012.
- Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.) : Nil
- Citation Index-range/average: 0-100
- SNIP : 0.1.03
- SJR : 0.1.2
- Impact factor-range/average:0-4
- h-index : 0-7

15. Details of patents and income generated: 1

Dr. Madhurima Chattopadhyay, “A CPAP respirator system using MEMS sensor”, Patent No. 1333/KOL/2015 (Filed).

16. Areas of consultancy and income generated: Nil

17. Faculty recharging strategies:

The faculty members are required to attend short term programmes, refresher courses, Symposium, conference, workshop as part of their career advancement schedule to update their knowledge and keep pace with the recent development in the subjects and research aspect. Such also periodically conducted by the various departments for the benefit of faculty members.

Faculty name	Workshop/ Seminar/ Conference/ FDP	Date
Prof. (Dr.) Madhurima Chattopadhyay	Hands on Workshop on Embedded Systems and PCB Design" under TEQIP-II	06-10 July'2015 Heritage Institute of Technology
	TCS Workshop on 'Cloud computing'	10 <sup>th</sup> Aug. 2012, HITK
	2nd International Conference on Power, Circuit and Information Technologies (ICPCIT-2015)	2015
	Information systems Design and Intelligent Applications (INDIA-2015)	2015
Prof. (Dr.) Madhurima Chattopadhyay	2nd International Conference on Microelectronics, Circuits & Systems	2015
	Third International Conference on Computer, Communication, Control and Information Technology (C3IT)	2015
	INUP Familiarization Workshop on "Nanofabrication Technologies	2015, IIT Patna
	ITR International Conference	2014
	1st International Conference on Computational Intelligence: Modelling, Techniques and Applications (CIMTA- 2013)	2013
	Second Intl. Conf. on Advances in Electronics, Electrical and Computer Engineering (EEC 2013)	June, 2013
	2nd International Conference on Computing, Communication and Sensor Network- CCSN-2013	2013
	2nd International Conference on Control, communication, computer and Information Technology (C3IT-2012)	2012
	International Conference on Advanced Communication Control and Computing Technologies (ICACCCT)	2012
	5th International Conference on Computer and Devices for Communication (CODEC 2012)	2012, Kolkata
	FDP on Cloud Computing	2012, at HIT, Kolkata
	6th International Conference on Sensing Technology (ICST-12), Kolkata	2012
	International Conference on Advances in Electronics, Electrical and Computer Science Engineering( EEC -12)	2012
	International Conference on Advances in Engineering, Science and Management (ICAESM)	2012
	4th International Conferences on Recent Advances in Mathematics, Technology and Management,	2012
	2nd Annual International Conference IEMCON-2012	2012
	International Conference on Recent Advances in Mathematical Sciences & Applications	2011
	Work Shop on VLSI Design: Recent Trends and Technologies, NSEC, Kolkata	2011

Faculty name	Workshop/ Seminar/ Conference/ FDP	Date
Dr. Santanu Ghorai	International Conference on Systems in Medicine and Biology 2016 (ICSMB-2016)	Jan. 4-6, 2016, Indian Institute of Technology, Kharagpur, West Bengal
	Third International Conference on Computer, Communication, Control and Information Technology (C3IT 2015)	Feb. 7-8, 2015, Academia of Technology, Hooghly, West Bengal
	FDP on Effective Teaching	17-19 <sup>th</sup> Nov., 2014, IIT KGP
	FDP on Embedded Systems and PCB Design	July 6-10, 2015, Department of AEIE, Heritage Institute of Technology
	1 <sup>st</sup> International Conference on Control, Instrumentation, Energy and Communication (CIEC14)	Jan. 31st to Feb. 2, 2014, Dept. of Applied Physics, University of Kolkata
	Short term course on FPGA Prototyping using Verilog	June 16-28, 2014. Dept. of CSE, IIT KGP
	Workshop on Computational Biology and Protein Structure Prediction	Sept. 23-27, 2013, Heritage Institute of Technology, Kolkata,
	Workshop on VLSI Design and Technology	Nov. 12-13, 2013, Heritage Institute of Technology, Kolkata,
	Workshop on Mobile Computing & Wireless Sensor Network	Oct. 24-25, 2013, Heritage Institute of Technology, Kolkata,
	Third International Conference on Emerging Applications of Information Technology (EAIT 2012)	Nov. 29-1st Dec., 2012, Indian Statistical Institute, Kolkata
	2nd International Conference on Computer, Communication, Control and Information Technology ( C3IT-2012),	Feb. 25 - 26, 2012, Academia of Technology, Hooghly, West Bengal
	Workshop on Bioinformatics	Feb. 15-17, 2012, Indian Statistical Institute, Kolkata
	Refresher course on Control Engineering and Information Technology in Mechatronics: Roles Played and Future Potentials	July 2-22, 2011, UGC Academic Staff College, Jadavpur University,
		20-22 January'2016, Heritage Institute of Technology
Arabinda Kumar Pal	International conference on advances in bioprocess engineering and technology (ICABET-2016)	20-22 January'2016, Heritage Institute of Technology
	Hands on Workshop on Embedded Systems and PCB Design" under TEQIP-II	06-10 July'2015 Heritage Institute of Technology
	IEEE international conference on Emerging Applications of Information Technology	19-21 Dec'2014, ISI, Kolkata
	Workshoh on MATLAB and Simulink for Engineering Education	07 Nov.'2014, Park Hotel, Kolkata
	Workshop on "How to publish a technical paper with IEEE",	08 Aug.'2014 Jadavpur University
	Springer international conference on Intelligent Computing, Communication and Devices	18-19 April'2014, SOA University, Odisha
	IEEE international conference on Electronics Communication and Instrumentation	16-17 Jan'2014, Heritage Institute of Technology
	One week continuing education program on "Machine Intelligence" under TEQIP-II	15-19 July'2013, Heritage Institute of Technology
	National Conference on Instrumentation and Control	26-27 Feb.'2013, Heritage Institute of Technology

Faculty name	Workshop/ Seminar/ Conference/ FDP	Date
	National Workshop on Vistas of Advanced Control Theory with Aerospace Applications under the auspices of UGC SAP DRS I	2-3 July '2012, Department of Applied Physics (CU) in association with IET-UK
	International Conference on Frontiers in Intelligent Computing: Theory and Applications Bhubeneshwar	22-23 Dec.'2012, SOA University, Odisha
	IEEE International conference on advanced communication , control and compuing technologies	23-25 August'2012, Ramanathapuram, Tamilnadu
	Academic Meet 2012,	30-31Mar.' 2012, Kolkata
	International Conference on Control, Communication and power Engineering	7-8 Nov.'2011, Pune, India
Prof. Surojit Bagchi	Hands on Workshop on Embedded Systems and PCB Design" under TEQIP-II	06-10 July'2015 Heritage Institute of Technology
	Workshop on Pedagogy	02 weeks, 2014
	FDP on Advanced Microcontrollers	5-days, 2013, IIT KGP
	ICST 12	18-21 Dec., 2012
Samik Chakraborty	FDP on Student Psychology	18th April, 2011 / HIT-K
	Seminar on "YOKOGAWA training module & simulation" by YOKOGAWA India Ltd	22nd February,2012 / HIT-K
	Seminar cum workshop on "Foundation Field bus training module" by Peppl+Fuchs	24th February,2012 / HIT-K
Samik Chakraborty	Seminar on "Vacuum Technology" by VECC	24th April, 2012 / HIT-K
	Seminar cum workshop on "Selected topics in computer science: State-of-the-art-perspectives"	12th & 13th July, 2012 / HIT-K
	FDP on "Wireless Networking"	17th – 19th July, 2012 / HIT-K
	Seminar on "Advancements in Biomedical Signal Processing" organized by IET chapter, Kolkata	22nd September, 2012/ Applied Physics Dept., Calcutta University
	Workshop on "Big data" by TCS	27th September, 2012 / HIT-K
	Workshop on "Machine intelligence"	15th – 19th July, 2013 / HIT-K
	"Mobile computing & wireless sensor Networks"	24th – 25th October,2013 / HIT-K
	Workshop on "Embedded Systems and PCB Design"	6th – 10th July, 2015 / HIT-K
	Communication Skills Workshop on "Presentations"	20th -21st July, 2015 / HIT-K
	Workshop on "Image Processing and Data Mining using Open Source Tools"	6th August – 12th August, 2015 / HIT-K
	2016 2nd International Conference on Control, Instrumentation, Energy & Communication (CIEC)	28th January – 30th January, 2016 / Applied Physics Dept., Calcutta University
Dr. Soumik Das	Communication Skills Workshop on "Presentations"	20th -21st July, 2015 / HIT-K
	Workshop on "Image Processing and Data Mining using Open Source Tools"	6th August – 12th August, 2015 / HIT-K
	2016 2nd International Conference on Control, Instrumentation, Energy & Communication (CIEC)	28th January – 30th January, 2016 / Applied Physics Dept., Calcutta University
	TEQIP sponsored International Conference on Electronics Communication and Instrumentation (ICECI-2014).	02 Days (16th – 17th January, 2014), Heritage Institute of Technology, Kolkata.
	Faculty Development Program on "Privacy Presentation Mechanism in Internet-of-Things (IOT)" conducted by Tata Consultancy Services.	01 Day (21st August, 2012), Heritage Institute of Technology, Kolkata.



Faculty name	Workshop/ Seminar/ Conference/ FDP	Date
Pradip Saha	Hands on Faculty development programme on Embedded Systems and PCB design	6-10 July, 2015 / Dept. of AEIE, Heritage Institute of Technology, Kolkata
	Workshoh on MATLAB and Simulink for Engineering Education	07 Nov., 2014, Park Hotel, Kolkata
	TEQIP sponsored International Conference on Electronics Communication and Instrumentation (ICECI-2014).	02 Days (16th – 17th January, 2014), Heritage Institute of Technology, Kolkata.
Pradip Saha	Workshop on Mobile Computing & Wireless Sensor Network	Oct. 24-25, 2013, Heritage Institute of Technology, Kolkata,
	One week continuing education program on “Machine Intelligence” under TEQIP-II	15-19 July 2013, Heritage Institute of Technology
	National Conference on Instrumentation and Control	26-27 Feb., 2013, Heritage Institute of Technology
	ICST 12	18-21 Dec., 2012
	Faculty Development Program on “Privacy Presentation Mechanism in Internet-of-Things (IOT)” conducted by Tata Consultancy Services.	01 Day (21 <sup>st</sup> August, 2012), Heritage Institute of Technology, Kolkata.
	FDP on Wireless Networking	17-19 July 2012 / Dept. of IT, Heritage Institute of Technology, Kolkata
	Seminar on Vacuum Technology	24th April 2012 / Heritage Institute of Technology, Kolkata
	SEMINAR-Power electronics device and application	4 <sup>th</sup> April, 2012
	Workshop on Foundation Fieldbus Technology	24th February 2012 / Heritage Institute of Technology, Kolkata
	CONFERENCE- 1 <sup>st</sup> National conference on Instrumentation and Control (NATCONIC-2011 )	6-7 <sup>th</sup> January, 2011
Samiul Alam	IEEE International Conference on Signal Processing, Informatics, Communication and Energy Systems (IEEE SPICES)	19-21 February, 2015 / National Institute of Technology Calicut, Kerala, India
	Short Term Course on Faculty development Programme for Effective Teaching	24-26 September 2014 / Jointly organized by Centre for Educational Technology and Continuing Education Centre, IIT Kharagpur, Under TEQIP-II
	3rd International Conference on Communication and Signal Processing, ICCSP 2014	3-5th April 2014 / Adhiparashakthi Engineering College, Tamilnadu
	Short term course on Continuing education program on Machine Intelligence	15-19th July 2013 / Dept. of IT, Heritage Institute of Technology, Kolkata
	FDP on Wireless Networking	17-19 July 2012 / Dept. of IT, Heritage Institute of Technology, Kolkata
	Refresher Course Recent trends in biomedical Engineering	11-30 June 2012 / School of Biosence and Engineering, Jadavpur University
	Seminar on Vacuum Technology	24th April 2012 / Heritage Institute of Technology, Kolkata
	Seminar on YOKOGAWA training module & simulation	22nd February 2012 / Heritage Institute of Technology, Kolkata

Faculty name	Workshop/ Seminar/ Conference/ FDP	Date
	Workshop on Foundation Fieldbus Technology	24th February 2012 / Heritage Institute of Technology,Kolkata
	National workshop on Condition Monitoring of Electrical Equipment	16th December 2011/ Department of Applied Physics, University of Calcutta
	IEEE International Conference on Communication and Industrial Application , ICCIA 2011	26-28 December 2011/ Narula Institute of Technology, Kolkata
Indrajit Naskar	SEMINAR- 1.Energy Technology for tomorrow in conjunction with instrumentation Engineering 2. Sensors for disease detection	6 <sup>th</sup> Nov., 2015
	FDP-Embedded System And PCB Design	06-10 Jul., 2015
	FDP on presentation skill by British council	20-21 Jul., 2015
	TEQIP sponsored International Conference on Electronics Communication and Instrumentation (ICECI-2014).	02 Days (16th – 17th January, 2014), Heritage Institute of Technology, Kolkata.
	SEMINAR-Embedded system	1 <sup>st</sup> Aug., 2014
	FDP -Machine intelligence	15-19 july,2013
	CONFERENCE -2 <sup>nd</sup> National conference on Instrumentation and Control(NATCONIC-2013)	26-27 <sup>th</sup> February, 2013
	FDP- on big data	July, 2012
	WORKSHOP- selected topic in computer science :state of the art perspectives	12-13 July, 2012
	WORKSHOP on wireless communication and computing	20 <sup>th</sup> Jan., 2012
	FDP-Wireless SensorNetworking	17-19 July 2012
	SEMINAR-Vacuum Technology	24.04.2012
	SEMINAR-Power electronics device and application	4 <sup>th</sup> April, 2012
	CONFERENCE- 1 <sup>st</sup> National conference on Instrumentation and Control (NATCONIC-2011 )	6-7 <sup>th</sup> January, 2011
Reshma Sengupta	FDP on ' Embedded system and PCB design' under TEQIP-II	06.07.15-10.07.15, HITK
	Workshop on 'Mobile Computing & Wireless Sensor Networks' under TEQIP-II	24.10.13- 25.10.13, HITK
	TCS Workshop on 'Cloud computing'	10.08.12, HITK
	Traning on changing role of the teacher- TEQIP-II	21.07.12, HITK
	FDP on 'Wireless Networking'-by IT dept.	17.07.12- 19.07.12, HITK
	Seminar on 'Vacuum Technology'-by AEIE dept.	24.04.12, HITK
	Seminar-cum -workshop on 'Foundation Fieldbus training module'-by Pepprl+Fuchs	24.02.12, HITK
	Seminar on 'YOKOGAWA training module & simulation'-by YOKOGAWA India Ltd.	22.02.12, HITK
	Workshop on 'Wireless Communication & Computing:Current trends & research'-by IT dept	20.01.12, HITK
	Seminar on 'Fieldbus Technology'- by Pepprl+Fuchs	25.10.11, HITK
Damayanti Ghosh	1.Seminar on Energy Technology for tomorrow in conjunction with Instrumentation Engineering. 2. Sensors for disease detection.	06.11.2015 at HITK
	FDP on Embedded System and PCB Design (TEQIP-II)	06/07/2015 -10/07/2015 at HITK
	FDP on Changing role of the teacher- TEQIP-II	21.07.12.

Faculty name	Workshop/ Seminar/ Conference/ FDP	Date
	FDP on 'Wireless Networking' - by IT dept, HITK	17.07.12- 19.07.12
	Seminar on 'Vacuum Technology'-by AEIE dept., HITK	24.04.12
	Seminar on 'Foundation Fieldbus training module' – by Pepprl+Fuchs	24.02.2012
	Seminar on 'YOKOGAWA training module & simulation' – b y YOKOGAWA India Ltd.-	20.02.2012
	Seminar on 'Fieldbus Technology' - by Pepprl+Fuchs	25.11.2011
Arindam Sarkar	7 <sup>th</sup> ISSS National Conference on MEMS, Smart Materials, Structures & Systems	23 <sup>rd</sup> -25 <sup>th</sup> Sep, 2015
	Five Days Hand on FDP on Embedded Systems and PCB Design.	06 <sup>th</sup> -10 <sup>th</sup> July, 2015
	Academia Workshop on “Instrumentation & Control” Organized by PCI	10 <sup>th</sup> -11 <sup>th</sup> Nov, 2014
	Pedagogy for effective use of ICT in Engineering Education	12 <sup>th</sup> June -02 <sup>nd</sup> Aug, 2014
	National Conference on Recent Developments and Applications of Nano Science and Technology	14 <sup>th</sup> -15 <sup>th</sup> Sep, 2012
Dr. Anil Kumar Bag	Intelligent Sensing Technologies and Instrumentation	from 05.01.2016 to 09.01.2016, NIT Patna
	Communication Skills Workshop on “Presentations	from 23 and 24 July 2015, Dept. of AEIE, HIT-K
	Embedded systems and PCB Design	from 02.12.2014 to 12.12.2014
	Two-week ISTE Workshop on “Control Systems	from 02.12.2014 to 12.12.2014, IIT-KGP
	Seminar on Application of near infra red (NIR) technology for tea quality analysis	5th March 2014, C-DAC, Kolkata, Jadavpur University and Tea Research Association, Toklai
Dr. Anil Kumar Bag	Workshop on “Quartz crystal microbalance (QCM) and Surface Acoustic wave (SAW) sensors,	13 & 14 May 2013, Dept. of IEE, Jadavpur University
	UGC sponsored national level seminar on “Complementary Applications in Nanotechnology,	26 March 2012, dept. of Physics, New Alipore College and Paschim Bangla Bigyan Mancha, at New Alipore College
	Complementary Seminar on “MATLAB & Simulink for Engineering Education	21 December, 2011, Mathworks India at Kolkata
Debjyoti Chowdhury	Workshop on “Industrial Automation and Control”	28th January, 2016, Haldia Institute of Technology, Haldia

## 18. Student projects

- percentage of students who have done in-house projects including inter-departmental:  
UG: 98%, PG: 95%
- percentage of students doing project in collaboration with industries / institutes:  
UG: 02%, PG: 05%

## 19. Awards / recognition received at national and international level by

- Faculty

- Mr. Debjyoti Chowdhury received Gandhian Young Technological award with project entitle "Cost Effective Self-stabalizing Smart Hand Held Platform (spoon/pen) For Ederly or parkinson's Disease Patients" under the guidance of Dr. Madhurima Chattopadhyay as a part of his doctoral work. They were awarded at Rastrapati Bhawan Auditorium, New Delhi on 13<sup>th</sup> March 2016 for their astounding contribution under which they were 22<sup>nd</sup> team to win the Gandhian Young Technological award beside other 43 teams from all over the country out of 2638 applications.
- Dr. Madhurima Chattopadhyay received certificate of honour for delivering an invited talk at the National Workshop on Industrial Automation and Control (IAC 2016) at Haldia Institute of Technology, Jan. 25-29, 2016.
- Dr. Madhurima Chattopadhyay nominated as an external expert at recruitment and assessment centre (RAC) for scientist (E) for DRDO, 8th March, 2015.
- Dr. Madhurima Chattopadhyay received certificate of honour from Department of Instrumentation Science for delivering an invited talk, Jadavpur University, 19-21 March, 2015.
- Dr. Madhurima Chattopadhyay received certificate of honour from Department of Instrumentation Science, Jadavpur University, 21-22 March, 2014.
- Dr. Madhurima Chattopadhyay empanelled as a Ph.D Supervisor for the subject Applied Electronics & Instrumentation Engineering under the category of Technology, MAKAUT (Formerly known as West Bengal University of Technology), 2013.
- Doctoral / Post doctoral fellows: Nil
- Students :
- Arunav Mitra won the Institute of Smart Structure and System (ISSS) Post Graduate Student Award for the year 2015 organized by Dept. of Aerospace Engg., IISc, and Bangalore.
- Deborshi Chakraborty, 2nd year M.Tech students in AEIE received best poster paper award in 5th International Conference on Computer and Device for Communication (CODEC-2012) organized by Institute of Radio Physics and Electronics, CU, sponsored by IEEE Calcutta section.

20. Seminars / Conferences / Workshops organized and the source of funding (national and international) with details of outstanding participants, if any.

Sr. no	Title of Seminars/ Conferences/Workshops conducted	Convener	Date of Seminars/ Conferences /Workshops	Funding
1.	1. Energy Technology for tomorrow in conjunction with instrumentation Engineering 2. Sensors for disease detection	Dr. Madhurima Chattopadhyay	6 <sup>th</sup> Nov., 2015	funded by TEQIP-II
2.	Embedded system and PCB design,	Dr. Madhurima Chattopadhyay	6-10 <sup>th</sup> Jul., 2015	funded by TEQIP-II
3.	Importance of embedded and other electronics system	Dr. Madhurima Chattopadhyay	14 <sup>th</sup> Nov., 2014	funded by TEQIP-II
4.	Embedded system	Dr. Madhurima Chattopadhyay	1 <sup>st</sup> Aug., 2014	funded by TEQIP-II
5.	Analytical instrumentation	Dr. Madhurima Chattopadhyay	1 <sup>st</sup> Aug., 2014	funded by TEQIP-II
6.	Instrumentation- in industry Practical- Aspects	S. Bagchi	23 <sup>rd</sup> Feb., 2013	funded by TEQIP-II
7.	Vacuum technology	A.K. Pal	24 <sup>th</sup> April, 2012	Funded by Institute

Sr. no	Title of Seminars/ Conferences/Workshops conducted	Convener	Date of Seminars/ Conferences /Workshops	Funding
8.	Power electronics device and application	A.K. Pal	4 <sup>th</sup> April, 2012	Funded by Institute
9.	International conference on electronics communication and instrumentation (ICECI), Technically sponsored by IEEE,	S. Bagchi	16-17 <sup>th</sup> January, 2014	funded by TEQIP-II
10.	2 <sup>nd</sup> National conference on Instrumentation and Control(NATCONIC-2013),	Dr. Santanu Ghorai Dr. Soumik Das	26-27 <sup>th</sup> February, 2013	funded by TEQIP-II
11.	1 <sup>st</sup> National conference on Instrumentation and Control (NATCONIC-2011 )	Sreeparna Dasgupta	6-7 <sup>th</sup> January, 2011	funded by CSIR Delhi, DRDO Hyderabad, and C-DAC Kolkata

## 21. Student profile course-wise:

Name of the course	Percentage of intake	Intake process
B. Tech in AEIE (4 years duration)	80%	WBJEE merit list
	10%	JEE Main merit list
	10%	Management quota
	5%	TFW
Lateral entry B. Tech in AEIE (3 years duration)	20%	JELET merit list
M. Tech in AEIE (2 years duration )	100%	PGET, conducted by MAKAUT (formerly WBUT)

## 22. Diversity of students

Name of the Course (refer question no. 2)	% of students from the College	% of students from the State	% of students from the other State	% of students from other countries
UG	NA	81.66	18.34	00
PG	5	92	3	00

## 23. How many students have cleared Civil Service, Defense Services, NET, SLET, GATE and any other competitive examinations?

Year	No. of students
2015	14
2014	12
2013	11
2012	08
2011	10

## 24. Student progression

Student progression	Percentage against enrolled
UG to PG	18%
PG to M.Phil.	Nil
PG to Ph.D.	1%
Ph.D. to Post-Doctoral	Nil
Employed	<ul style="list-style-type: none"> <li>• 71.80%</li> <li>• 9.00%</li> </ul>
Entrepreneurs	1%

## 25. Diversity of staff

Percentage of faculty who are graduates	
of the same parent university	35.71%
from other universities within the State	64.29%
from other universities from other States	Nil

## 26. Number of faculty who were awarded Ph.D., D.Sc., and D.Litt during the assessment period : 2

Name of Faculty	Degree	University
Dr. Soumik Das	Ph.D	Jadavpur University
Dr. Anil Kumar Bag	Ph.D	Jadavpur University

## 27. Present details about infrastructural facilities

- Library: Departmental library has a stock of 433 books. The total area of the library is 500 sq.ft.
- Internet facilities for staff and students: Computing facility with internet connection is available in the department - LAN (Local Area Network) connection and Wi-Fi (Wireless Fidelity) connection.
- Total number of class rooms: 06 (including a room for tutorial class)
- Class rooms withy ICT facility: ICT facility is installed in one classroom.
- Students' laboratories: 17 (UG=15, PG=2)
- Research laboratories: 01

## 28. Number of students of the department getting financial assistance from college-Gpvernment sponsored scholarship

Year	AEIE	1 <sup>ST</sup> year	2 <sup>ND</sup> year	3 <sup>RD</sup> year	4 <sup>TH</sup> year
2014-15	B. Tech			2	7
2013-14			1	11	7
2012-13		1	8	8	3
2011-12		6	8	3	1
2010-11		6	8	3	1
2014-15	M. Tech	1	0		
2013-14		0	1		
2012-13		0	0		
2011-12		0	0		
2010-11		0	0		

29. Was any need assessment exercise undertaken before the development of new program(s)?  
If so, give the methodology.  
Not Applicable
30. Does the department obtain feedback from
- faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize it?  
Yes, the department obtains the feedback from faculty on curriculum and teaching-learning evaluation and their suggestions are placed before the Board of Studies in framing the syllabus for autonomy. The faculty members teaching different subjects are directly involved in designing the course structure and syllabus of the corresponding subjects.
  - students on staff, curriculum as well as teaching-learning-evaluation and what is the response of the department to the same?  
The online feedbacks from the students are obtained centrally and the results are communicated to the faculty members through the HOD. The faculty members in turn take effective steps to improve themselves along the faculty-student coordination. Moreover, the suggestions from the students are also considered while framing the syllabus.
  - Alumni and employers on the programmes and what is the response of the department to the same?  
The suggestions from the alumni and employers are placed before the Board of Studies (BOS) for appropriate action. The alumni and employers are also invited to the meetings of the BOS for their valuable suggestions.
31. List the distinguished alumni of the department (maximum 10)

Name	Placed at
Mr. Arunava Chakraborty	General Electric, Lead System Designer
Ms. Debarati Banerjee	Math Works, Bangalore
Mr. Atanu Ranjan Mazumder	RIL, Senior Manager
Mr. Shubhabrata Dutta	Syntel inc., Senior architect
Mr. Koushik Mukherjee	Infosys, Technology Lead
Mr. Shatadru Seal	RIL, Product Manager
Mr. Nabendu Bikas Maiti	Intel Corporation , Graphics Software Engineer
Mr. Sarbajit das	Serene Corporation, Sr. consultant
Mr. Atul Kumar Mishra	IBS Software services, Solutions Architect
Mr. Anupam Baid	Baid Power Services Pvt. Ltd., Director
Mr. Sabyasachi Sarkar	TCS, Project Manager

32. Give details of student enrichment programmes (special lectures/ workshops/ seminar) with external experts.

Special lectures / Workshops / Seminar	Topic and date	Speaker/ Trainer
Seminar	Importance of Applied Electronics & Instrumentation in Industry.  Date: 04.08.2015	<ul style="list-style-type: none"> <li>▪ Dr.Nabarun Bhattacharya, Associate Director, C-DAC, Kolkata.</li> <li>▪ Mr.Arunava Chakraborty, Project Manager, Honeywell.</li> <li>▪ Mr. Sarbajit das, Founder &amp; CEO, Sundew Solutions.</li> </ul>

Special lectures / Workshops / Seminar	Topic and date	Speaker/ Trainer
Seminar under TEQIP-II	<ul style="list-style-type: none"> <li>Sensors for disease detection.</li> <li>Energy Technology for Tomorrow in Conjunction with Instrumentation Engineering.</li> </ul> Date: 06.11.2015	<ul style="list-style-type: none"> <li>Prof. Panchanan Pramanik, Ex Prof., Dept. of Chemistry, IIT Kharagpur.</li> <li>Prof. Biswajit Ghosh, Prof. Dept. of Energy Studies, JU.</li> </ul>
Seminar	<ul style="list-style-type: none"> <li>Instrumentation in IT</li> <li>Analytical Instrumentation</li> <li>Embedded System</li> </ul> Date: 31.07.2014, 01.08.2014	<ul style="list-style-type: none"> <li>Mr. Sarbajit Das, Founder &amp; CEO, Sundew Solutions Pvt. Ltd.</li> <li>Mr. Sugata Bandyopadhyay, Senior General Manager, TATA Consulting Engineers Ltd., Saltlake.</li> <li>Mr. Anupam Baid, Director, Baid Power Services Pvt. Ltd., Lake Town, Kol-89.</li> </ul>
Seminar	EMBEDDED & other Electronics System in association with EFY TECH Center, Kolkata. Date: 14.11.2014	Mr. Anup sarkar, EFY TECH Center, Kolkata.
Workshop	Industry Orientation Program on Advanced C, C++ & Data Structure. Date: 01.04.2015, 08.04.2015, 10.04.2015, 17.04.2015, 22.04.2015, 24.04.2015, 29.04.2015	Organized by the Finishing School of HITK under TEQIP-II.
Seminar	Trends in DSP based Embedded Systems. Date: 23.04.2015	Mr. Vineet Surana, Berylline Labs Pvt. Ltd.
Workshop	C-Programming Language. Date: 26.09.2013, 28.09.2013, 03.10.2013, 05.10.2013	Organized by The Equity Assurance Committee, TEQIP-II in collaboration with Dept. of AEIE, HITK.

33. List the teaching methods adopted by the faculty for different programmes

Different teaching methods adopted by the faculties as a part of their teaching methods are-

- Black board / Chalk
- OHP
- Projectors

34. How does the department ensure that programme objectives are constantly met and learning outcomes monitored?

**The PEOs of the B. Tech. Programme in AEIE:**

The graduates coming out of the B.Tech, AEIE programme of HITK are expected to attend the following within a few years of their Graduation.

- The graduates of Applied Electronics & Instrumentation Engineering Program should be able to establish them as practicing professionals in industries /R&D laboratories / academic sectors, or have achieved higher educational qualifications.
- The graduates of Applied Electronics & Instrumentation Engineering Program should be able to adapt themselves with latest developments in the discipline, including application of modern technologies.
- The graduates of Applied Electronics & Instrumentation Engineering Program should be able to demonstrate their ability to work as leaders and team members at workplace.



**The PEO of M. Tech. AEIE programme in AEIE:**

The post graduates coming out of the M. Tech AEIE program of HITK are expected to attain the following within a few years of their postgraduate:

- Establish themselves as professionals in industries/R&D laboratories/academic sectors, or engage in advanced studies in Electronics, Instrumentation, Electrical Engineering or related areas.
- Acquire technical knowledge, skill and competence to identify, comprehend and solve problems in industry, research and academics related to Electronics, Instrumentation and other related areas.
- Demonstrate their ability to work successfully as a member of a professional team and function effectively as responsible professionals.

**Programme Outcomes (POs) of B. Tech. in AEIE:**

On successful completion of the program, the graduate of AEIE, Heritage Institute of Technology, Kolkata, should be able to:

- An ability to apply knowledge of mathematics, science and engineering.
- An ability to design and conduct experiments, as well as to analyze and interpret data.
- An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
- An ability to function on multidisciplinary teams.
- An ability to identify, formulate, and solve engineering problems.
- An understanding of professional and ethical responsibility.
- An ability to communicate effectively.
- The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.
- A recognition of the need for, and an ability to engage in life-long learning.
- A knowledge of contemporary issues.
- An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.
- An ability to design and apply different types of sensors, transducers and industrial instruments.

**Programme Outcomes (POs) of M. Tech. in AEIE:**

On successful completion of the program the post graduate students of AEIE, Heritage Institute of Technology, Kolkata, should be able to:

- Acquire knowledge to evaluate, analyze and synthesize any technical problem related to the relevant subjects of the instrumentation engineering.
- Apply knowledge of mathematics, science, and engineering for the analysis and design of various problems related to industry or research and development.
- Learn different type of sensors, transducers, signal conditioning circuitry, instrumentation systems and their control loops used in an automated process plants.
- Design and apply different type of sensors using distinct micro fabrication techniques and modern engineering tools such as MATLAB and develop their profession in teaching, research and industry.
- Apply knowledge of modern signal processing techniques for signal conditioning and data interpretation with the help of technical computing software like MATLAB and digital signal processors.
- Apply the knowledge of artificial intelligence and soft computing to develop and analyze various smart instrumentation and control systems.
- Acquire knowledge on different types of analytical, optical, biomedical instruments that are frequently used in industries, clinical laboratories or in R&D.
- Interpret, represent and communicate something very effectively to the audience.
- Design and conduct experiments as well as to analyze and interpret data.
- Develop their career in teaching, research and in industry.
- Solve and analyze industrial problems, and execute research projects.

The department continuously monitors the departmental progress so as to ensure the programme educational objectives and programme outcomes are met. The monitoring is done by the following methods

Feedback of students	Students give feedbacks on respective teaching learning process and the subject
Feedback of alumni	Alumni give feedback to redefining PO's , PEO's and the curriculum
Feedback of employer	Employers give feedbacks on the basis of students performance.
Rubrics analysis	Statistical analysis of the curriculum and its applicability by the students
Class test	Internal evaluation of student progress
Seminar	Department frequently organizes seminars to enhance the domain knowledge of the students beyond syllabus
Result analysis	The scores of the students on each subject and on the whole is analyzed to understand the readiness of the student to meet the PEO and PO.

35. Highlights the participation of students and faculty in extension activities.

<b>Industrial Tour:</b>	Industrial tours are organized for 2 <sup>nd</sup> & 3 <sup>rd</sup> year B.Tech students and 1 <sup>st</sup> year M. Tech students to enable them to understand the practical application of the engineering knowledge better.
<b>Microcontroller based Project Competition</b>	Application ability of the students is encouraged by organizing interdepartmental workshop with project competition based on microcontroller.
<b>Grooming and Personality Development</b>	The Grooming and Personality Development programmes are organized with Training & Placement cell which is beneficial for students for placements.

36. Give details of "beyond syllabus scholarly activities" of the department.

Students deliver seminars on areas beyond the scope of the syllabus and on area of technical encumbrance by Faculty.

37. State whether the programme/ department is accredited / graded by other agencies. Give details.

UG programme is accredited by National Board of Accreditation (NBA) for 02 years in 2014.  
File no. 36-25/2010-NBA  
Letter no. 36-25/2010-NBA dated 04.10.2013

38. Detail any five Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department

■ Strengths

- State-of-the-art laboratory and facilities.
- Highly qualified, experienced, responsible and duty bound matrix of faculty members.
- A group of qualified, efficient and sincere technical assistants.
- Sincere and meritorious students.
- Research in the related field of Instrumentation engineering with publication in different reputed journals and conferences.
- The UG program is accredited by NBA (2013-2015).

■ Weaknesses

- Number of Ph. D qualified faculties.
- Number of placement of students in core companies.
- Insufficient funds for research scholar.

- Opportunities

- Strategic alliances with national and international institutions for offering more professional career based courses.
- Diversification of sources of revenue through better exploitation of consultancy.
- Becoming a leader in interdisciplinary and integrated learning.
- A well furnished library to get the latest technological informations.
- Students are privileged to attend seminars and workshops in other colleges.
- Courses to meet high demand for employment

- Challenges

- To promote more number of students for higher studies (PG and Ph. D).
- Risk of losing prominent faculty and staff for genuinely better opportunities at other universities.
- Growing competition from nearby public, private universities and colleges.

39. Future plan of the department

- To be a centre of excellence in the field of Instrumentation.
- The research interests of the members of the faculty of the department are diverse and representative of several areas of advance electronics and instrumentation. In the past, students have been involved in research activities in collaboration with the faculty and this effort has led to several publications. The department looks forward for involvement of more students and scholars in post graduate and doctoral research.
- Enhancement of the Industry-Institute Interaction.
- Efforts for collaborative projects with other institutions/ industries.



1. Name of the Department & Its year of establishment : Department of Biotechnology  
2002
2. Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., etc.) : UG : - B.Tech in Biotechnology  
PG : - M.Tech in Biotechnology
3. Interdisciplinary courses and departments involved:

The department offers optional courses for Humanities, Managements, Chemistry, Physics, Mathematics, Electrical Engineering, Mechanical Engineering, Electronics Engineering, Computer Engineering and Chemical Engineering departments.

Programme	Interdisciplinary Course	Offering Department
B.Tech in Biotechnology	Values & Ethics in Profession	Humanities
	Basic Environmental Engineering & Elementary Biology for BT	Chemistry
	Numerical Methods	Mathematics
	Principles & Practices of Management	Humanities
	Data Structure & Algorithm (Java and C++)	Computer Science
	Production & Operations Management	Humanities
	Data Base Management System and Computer Networking	Computer Science
M.Tech in Biotechnology	Project Management	Humanities
	Numerical Analysis and Biostatistics	Mathematics

4. Annual/ semester/choice based credit system :  
Credit based semester system
5. Participation of the department in the courses offered by other departments

Department	Subject offered by Department of Biotechnology
Information Technology	Bioinformatics
Chemistry	Chemistry of Biomolecules

6. Number of teaching posts sanctioned and filled (Professors/Associate Professors/Asst. Professors)

	Sanctioned	Filled
Professor	2	2
Associate Professor	3	1
Assistant Professor	10	12+1*
Total	15	16

\*On Lien

7. Faculty profile with name, qualification, designation, specialization  
(D.Sc./D.Litt./ Ph.D./M.Phil., etc.)

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. students guided in the last 4 years
Prof. Subhabrata Sengupta (Disting-uished Professor)	D.Sc	Professor	Industrial Enzymes	47	4
Prof. Srabanti Basu	PhD	Professor	Biochemical Toxicology and Bioremediation.	20	3
Prof. Dipankar Chaudhuri	PhD	Associate Professor	Biophysical Chemistry, Structure and function of biomolecules, Drug discovery technology development, Structure-based Drug Design, Drug Delivery, Computational Biology.	33	0
Prof. Bhaswati Chakraborty	M.Tech	Assistant Professor	Biochemical Engineering, Process optimization, Environmental Engineering	11	0
Prof. Nandan Kumar Jana	PhD	Assistant Professor	Molecular Biology, rDNA Technology, Proteomics, Drug Design, Nanotechnology.	24	0
Prof. Riddhi Goswami	PhD	Assistant Professor	Applied Cytogenetics and Toxicology, Human Epidemiology	12	0
Prof. Soma Banerjee	PhD	Assistant Professor	Plant biotechnology with relevance to pharmaceutical products, Genomics and Microbiology	18	0
Prof. Tapan Kumar Ghosh	PhD	Assistant Professor	Biochemical Engineering and Bioreactor Design	23	0
Prof. Sudipta Dey	PhD	Assistant Professor	Biochemical Engineering & Biodegradation	10	0
Prof. Kakali Mukherjee	PhD	Assistant Professor	Plant Biotechnology, Molecular Biology and Recombinant DNA Technolgy	13	0
Prof. Ruplekha Chatterjee	PhD	Assistant Professor	Industrial Enzymes	13	0
Prof. Rakha Majum-der (On lien)	PhD	Assistant Professor	Enzyme Technology, Modelling & Simulation	26	0
Prof. Plaban Chaudhuri	M.Tech	Assistant Professor	Mechanisms of Aortic Calcification	4	0
Prof. Sonali Hazra Das	M.Tech	Assistant Professor	Environmental Engineering	4	0
Prof. Sohom Chattopadhyay	PhD	Assistant Professor	Bioprocess and Enzyme Technology	6	0
Prof. Nababithi Goswami	PhD	Assistant Professor	Nonlinear Dynamics, Engineering Optimization & Process Control	6	0

8. Percentage of classes taken by temporary faculty – programme-wise information : Nil

9. Programme-wise Student Teacher Ratio:

UG	-B.Tech (Applied Electronics and Instrumentation Engg):	15:1
PG	-M.Tech(Applied Electronics and Instrumentation Engg):	12:1

## 10. Number of academic support staff (technical) and administrative staff: sanctioned and filled

	Sanctioned	Filled
Technical Staff	8	8
Administrative Staff	0	0

## 11. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Mention names of funding agencies and grants received project-wise.

a) National / State (DST-WB) : 1

b) International Funding: NIL

c) Total Grants: Nine lakh forty three thousand only

Principal Investigator	Title of the Project	Funding Agency	Duration of the Project	Grant Rs. (in lakhs)
Prof. Soma Banerjee	Screening of potential biofilm producer isolates from clinical samples and invitro determination of killing kinetics by application of some herbal agents with known anti-inflammatory action and application in animal model	DST-WB	2016-19	9.43

## 12. Departmental projects funded by DST-FIST; DBT, ICSSR, etc.; total grants received

Title of the project	Name of the faculty	Funding Agency	Year	Grant Rs.
Modernization of Microbiology laboratory for identification of New Microbial strains	Prof. S. Sengupta	MODROBS Scheme	2011-13	7.7 Lakh
Screening of potential biofilm producer isolates from clinical samples and invitro determination of killing kinetics by application of some herbal agents with known anti-inflammatory action and application in animal model	Prof Soma Banerjee	DST-WB	2016-19	9.43 Lakh
Development of a pilot plant for bio-remediation of Chromium (VI) from industrial effluent using bacterial consortium obtained from East Calcutta Wetlands. (in the pipeline)	Prof. Srabanti Basu & Prof. Bhaswati Chakraborty	DST-WB	Defence in Feb 2015	Proposed 14.06 Lakh

## 13. Research facility / centre with:

- State recognition Nil
- National recognition Nil
- International recognition Nil

## 14. Publications:

- Number of papers published in peer reviewed journals (national / international):35
- Monographs: Nil
- Chapter(s) in Books: 3

- Soumasree Chatterjee, Susmita Dutta, Srabanti Basu (2013), Removal and recovery of cadmium (II) using immobilized papain, Chapter 9, Recycling and Reuse of materials and their products, Volume 3 of the Advances in Material Science Book Series, (Eds: Y. Grohens, K. K. Sadasivuni, A. Boudenne), Pub: Apple Academic Press, USA.
- Aparupa Bhattacharyya, Srabanti Basu, Susmita Dutta (2013), Reclamation of wastes for mercury removal: A review, Chapter 11, Recycling and Reuse of materials and their products, Volume 3 of the Advances in Material Science Book Series, (Eds: Y. Grohens, K. K. Sadasivuni, A. Boudenne), Pub: Apple Academic Press, USA.
- Subhabrata Sengupta (2013) Glycosidase inhibitor: drug for future-Indian Ayurveda in modern science In: "Biology of plants and microbes" (ISBN-978-93-80663-63-0), pp. 1-7, (Eds. D. Bose & S. Roy), Pub: Levant Books , Kolkata

- Editing Books: Nil
- Books with ISBN numbers with details of publishers:
- Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.) : Nil
- Citation Index-range/average: range: 0 - 60.5
- SNIP : Nil
- SJR : Nil
- Impact factor-range/average: 0 - 5.94
- h-index : 0-5

15. Details of patents and income generated: 1

- A process for the preparation of commercially and pharmaceutically important enzymes (pectinase and acid stable disaccharidases) from the plant *Calotropis gigantea*. Mukherjee [Indian Patent application No.1104/KOL/2012. Publication date: Publication date: 28.03.2014]
- Sengupta S, Mukherjee A and Sengupta S. : A process for the development of an ultra sensitive test method for detection of mercury ion. Patent Application No. 585/KOL/2011.
- Characterization of nimbidol as an alpha-glucosidase inhibitor present in neem (*Azadirachta indica*), useful for non-insulin dependent diabetes treatment. Sengupta S, Mukherjee A. [Application No. 768/KOI/2011].
- Process for the preparation of a novel disaccharidase enzyme composition from the plant *Tinospora cordifolia* useful for disaccharide intolerance therapy. Sengupta S, Mukherjee A and Sengupta S. [Application No. 769/KOL/2011].
- Process for the preparation of a complete enzyme composition from the plant *Tinospora cordifolia* useful for hydrolysis of starch into glucose as the major end product. Sengupta S, Mukherjee A and Sengupta S. [Application No.1989/Kol/2008; Publication date: 29.04.2011].
- process for inhibiting germination of monocotyledonae and dicotyledonae plant seeds. Sengupta S, Majumder K, Mukherjee A. Application No. 664/DEL/2006 A. Publication date: 26.08.2011]

Income Generated: NIL

16. Areas of consultancy and income generated: Nil



## 17. Faculty recharging strategies:

Faculty attend in-service training, orientation, refresher courses and workshops organized in the University as well as in other Universities and institutions to recharge and rejuvenate interest. The University promotes "Faculty Improvement Programme" and "Faculty Exchange Programme" for the benefit of teachers. Faculty also organize training programmes and workshops that hone their leadership qualities and organizational skills in addition to knowledge sharing with other institutions.

## 18. Student projects

- percentage of students who have done in-house projects including inter-departmental: 93.77%
- percentage of students doing project in collaboration with industries / institutes: 6.23%

## 19. Awards / recognition received at national and international level by

- Faculty

Name of Award/Recognition	Name of Faculty	Year
Excellent Paper Award	Prof. Srabanti Basu Co-author Prof. Bhaswati Chakraborty	2014
Topcited paper certificate 2014 by Elsevier	Prof. Srabanti Basu	2014

- Doctoral / Post doctoral fellows: Nil
- Students :

Name of Award/Recognition	Name of student	Year
Indian Academy of Science Summer Research Fellowship	1. Ruptanu Banerjee 2. Siddhartha Mukherjee 3. Poulami Lodh 4. Torsha Kundu 5. Pritha Paul 6. Ayushi Vora 7. Sayani Bhattacharjee 8. Pallabi Kundu 9. Ankita Singh 10. Sucheta Ghosh 11. Saloni Nandi Majumder 12. Dhruba Dhar 13. Namrata Maiti	2015
	1. Anwesha Dutta 2. Indranil 3. Koel 4. Madhuraima 5. Nidhi Khandelwal 6. Pranav Preman 7. Riddhipratim Mondal 8. Sagnika Dutta 9. Shreya Sengupta 10. Singini Paul 11. Sougata Pramanick 12. Sangita Basak 13. Ahana Chatterjee 14. Dishary Banerjee	2014
	1. Ms. Abira 2. Ms. Debapriya 3. Ms. Pratity 4. Mr. Govinda Sharma 5. Mr. Dipayan Ghosh	2013

Name of Award/Recognition	Name of student	Year
	6. Rakesh Das - IISER	
	1. Sayantan Ghosh 2. Rupesh Agarwal 3. Payal Chirania 4. Ayesha B. Khandekar	2012
Novozyme Award	Shreyasree Bose	2014
38 <sup>th</sup> W.B. State Archery Championship – 2 <sup>nd</sup> place	Pallabi Kundu	2015
4 <sup>th</sup> Inter-district Archery Meet – 2 <sup>nd</sup> place	Pallabi Kundu	2015

20. Seminars / Conferences / Workshops organized and the source of funding (national and international) with details of outstanding participants, if any.

#### Enrichment Lecture Series

Title	Name of the Expert	Funding Agency	Date/Year	Highlights
Biotechnology and its prospects	Dr. Sudit Mukhopadhyay	Funded by TEQIP	31 <sup>st</sup> Oct 2014	Speaker is an eminent scientist in the field of Biotechnology
<i>Vibrio cholerae</i> pathogenesis in humans and zebrafish	Prof. Jeffrey H. Withey	Funded by Heritage Institute of Technology	13 <sup>th</sup> Feb 2015	Speaker is Associate Professor, Department of Immunology and Microbiology, Wayne State University School of Medicine
Role of human placental extract in wound healing	Dr. Subhasri Bandopadhyay	Funded by Heritage Institute of Technology	2 <sup>nd</sup> Aug 2013	Speaker is Chief Medical Officer, Albert david Ltd, Kolkata
Peptide chemistry and biology at the intersection of Drug Design	Dr. Victor J. Hruby	Funded by TEQIP	7 <sup>th</sup> Feb 2013	Speaker is Regent Professor Emeritus in the Biochemistry Department, University of Arizona
Sustainable Development: Myth or Reality	Dr. Ashish Ghosh	Funded by Heritage Institute of Technology	21 <sup>st</sup> Sep 2012	Speaker is Director, Environment & Development (ENDEV)
Biological and cultural determinants of autism, from genes to neural information processing to behaviour	Dr. Matthew Belmonte	Funded by Heritage Institute of Technology	3 <sup>rd</sup> Feb 2012	Speaker is Professor at University of Cornell Ithaca, USA

#### Workshop:

Title	Name of the Expert	Funding Agency	Date/Year	Highlights
Analytical Techniques for Characterization of Biological Macromolecules	<ul style="list-style-type: none"> <li>➤ Dr. Debi Prasad Sarkar, Professor, Department of Biotechnology, University of Delhi,</li> <li>➤ Dr. Debashish Mitra, Scientist 'G', National Centre for Cell Sciences (NCCS), Pune</li> <li>➤ Dr. Rabindranath Mukhopadhyaya Former Scientist, Advanced</li> </ul>	Funded by TEQIP	30 <sup>th</sup> Jan – 1 <sup>st</sup> Feb 2013	<ul style="list-style-type: none"> <li>• Organized by Department of Biotechnology</li> <li>• Benefitted both faculty and technical staff</li> </ul>

Title	Name of the Expert	Funding Agency	Date/Year	Highlights
	centre for Treatment, Research and Education in Cancer			
Workshop on Computational Biology & Protein Structure Prediction	<ul style="list-style-type: none"> <li>➤ Dr.Dhananjay Bhattacharyya, Saha Institute of Nuclear Physics, Kolkata.</li> <li>➤ Dr.Soumalee Basu, University of Calcutta</li> <li>➤ Dr. Rajgopal Chattopadhyaya, Bose Institute, Kolkata</li> <li>➤ Dr.Chhabinath Mondal, NIPER,Kolkata</li> <li>➤ Dr.Saikat Chakrabarti, Indian Institute of Chemical Biology, Kolkata</li> <li>➤ Dr.Debnath Pal, IISc, Bangalore</li> <li>➤ Chitra Dutta, Indian institute of Chemical Biology, Kolkata</li> <li>➤ Dr.Pinakpani Chakrabarti. Senior Professor &amp; head, Centre of Excellence in Bioinformatics, Bose Institute,Kolkata</li> <li>➤ Rahul Banerjee, Professor,Saha institute of Nuclear Physics</li> </ul>	Funded by TEQIP	23 <sup>rd</sup> Sep – 27 <sup>th</sup> Sep 2013	<ul style="list-style-type: none"> <li>• Organized by Biotechnology Department</li> <li>• Benefitted faculty in understanding an emerging field with hands on training.</li> </ul>
Personality and performance from downbeat to upbeat	Mr. Mrinal Chakraborty	Funded by Department of Biotechnology	8 <sup>th</sup> August 2014	<ul style="list-style-type: none"> <li>• 1 day workshop</li> <li>• By sports and youth motivator</li> <li>• For B.Tech students</li> </ul>
Workshop on operation and maintenance of Sophisticated Instruments	<ul style="list-style-type: none"> <li>➤ Dr. Amit Kumar De</li> <li>➤ Dr. Prabal Chakraborty</li> <li>➤ Dr. Sagaramoy Ghosh</li> </ul>	Funded by TEQIP	18 <sup>th</sup> to 20 <sup>th</sup> March 2015	<ul style="list-style-type: none"> <li>• For Technical Assistants</li> </ul>
Technical writing and communication skills development	Ms. Jayati Chatterjee	Funded by TEQIP Phase II	8 <sup>th</sup> Oct – 15 <sup>th</sup> Oct 2015	<ul style="list-style-type: none"> <li>• 5-days workshop</li> <li>• For B.Tech III year students</li> </ul>
Time and Stress Management	Mr. Amit Chakraborty	Department of Biotechnology, Heritage Institute of Technology	10 <sup>th</sup> Feb 2012	<ul style="list-style-type: none"> <li>• 1day interactive session on stress and time management for B.Tech students.</li> <li>• Keeping in mind the relevance of the session in today's student life it was opened to students of all departments.</li> </ul>

**Seminar/Conference**

<b>Title</b>	<b>Name of the Expert/ Invited speakers</b>	<b>Funding Agency</b>	<b>Date/Year</b>	<b>Highlights</b>
International Conference on Advances in Bioprocess Engineering and Technology: ICABET 2016	1.Prof. M.M. Sharma 2. Prof. Abraham Lenhoff 3. Prof. M.M. Sain 4. Prof. Doraiswamy 5. Prof. U. Banerjee	Funded by TEQIP Phase II	20 <sup>th</sup> Jan - 22 <sup>nd</sup> Jan 2016.	<ul style="list-style-type: none"> <li>• International Conference</li> <li>• Attended by renowned scientists across the globe</li> <li>• Selected papers for oral presentations are being published by Elsevier-Materials Today journal</li> </ul>
Biotechnology for Sustainable Development	-	Institute funded	Feb 2012	<ul style="list-style-type: none"> <li>• National Seminar</li> <li>• Eighty papers presented from different parts of India</li> <li>• One paper was from Bangladesh</li> </ul>

## 21. Student profile course-wise:

All the 60 seats of B.Tech Biotechnology are filled up as per West Bengal Joint Entrance Examination Central Counseling and JEE Main.

All the 18 seats of M.Tech Biotechnology are filled up as per PGET

<b>Name of the Course (Refer question no. 2)</b>	<b>Applications Received</b>	<b>Selected</b>		<b>Pass Percentage</b>	
		<b>Male</b>	<b>Female</b>	<b>Male</b>	<b>Female</b>
B.Tech Biotechnology (2011-15)	60	22	37	100	100
M.Tech Biotechnology (2013-15)	18	4	8	100	100

## 22. Diversity of students

<b>Name of the Course (Refer Question no. 2)</b>	<b>% of students from the College</b>	<b>% of students from the State</b>	<b>% of students from other States</b>	<b>% of students from other Countries</b>
B. Tech Biotechnology (2012-13)	-	96.23	3.77	00
B. Tech Biotechnology (2013-14)	-	93.48	6.52	00
B. Tech Biotechnology (2014-15)	-	91.53	8.47	00
B. Tech Biotechnology (2015-16)	-	88.33	11.67	00

## 23. How many students have cleared Civil Service, Defense Services, NET, SLET, GATE and any other competitive examinations?

<b>Name of Examination</b>	<b>Number of students cleared</b>
GATE 2015	16
DBT-JNU 2015	1
DBT- JRF 2015	2
GATE 2014	11
DBT- JNU 2014	2
GATE 2013	8
DBT-JRF 2012	1

## 24. Student progression

UG total students : 240

PG total students: 72

Student Progression	Percentage against enrolled
UG to PG	23
PG to M.Phil	None
PG to Ph.D.	39
Ph.D. to Post-Doctoral	NA
Employed	
➤ Campus selection	54
➤ Other than campus recruitment	1.6
Entrepreneurs	1.6

## 25. Diversity of staff

Percentage of faculty who are graduates	
Of the same parent university	6.67%
From other universities within the State	80%
From other universities from other States	13.33%

## 26. Number of faculty who were awarded Ph.D., D.Sc., and D.Litt during the assessment period : 2

Name of Faculty	Degree	University
Sudipta Dey	Ph.D	Jadavpur University
Nababithi Goswami	Ph.D	NIT, Durgapur

## 27. Present details about infrastructural facilities

- Library: Departmental seminar library has a stock of 360 books. The total area of the library is 300sq.ft.
- Internet facilities for staff and students: Computing facility with internet connection is available in the department - LAN (Local Area Network) connection and Wi-Fi (Wireless Fidelity) connection
- Total number of class rooms: 07
- Class rooms withy ICT facility: ICT facility is installed in one classroom. In the remaining six rooms portable ICT facility is available as and when required.

## ▪ Students' laboratories:

Name of the laboratory	Total area (sq.ft)
Microbiology laboratory	700
Food Technology laboratory	700
Fermentation Technology laboratory	700
Environmental laboratory	700
Molecular biology laboratory	700
rDNA technology laboratory	700
Plant tissue culture laboratory	700
Genetic engineering laboratory	700
Biochemistry laboratory	700
Immunology laboratory	700
Bioinformatics laboratory	600

## ▪ Research laboratories: 2

28. Number of students of the department getting financial assistance from college:

Year	Number of Freeships (Full/Partial)
July2015-Dec 2015	10
Jan2015- June 2015	5
July 2014- Dec 2014	5
Jan 2014- June 2014	6
July 2013- Dec 2013	6
Jan 2013- June 2013	2
July2012-Dec 2012	4

29. Was any need assessment exercise undertaken before the development of new program(s)? If so, give the methodology.

Yes. The process of development of a new program in the department is a dynamic and rigorous exercise. It involves students, alumni, faculty, representatives from reputed academic institutes, industry, research organizations.

Keeping the vision and mission statements of Heritage Institute of Technology as the primary guideline along with the suggestions made by the Academic Council and Board of Studies discussions are held between all the stake holders on introduction of a new program in the department. This also involves the feedbacks taken from the students, their performance, placement achievements, feedback from faculty etc. Workshops are conducted of the faculty members with external experts from industry, research organizations as well as other reputed universities. Department level Board of Studies is then held to discuss and formulate the structure of the new program. The recommendation of the departmental BoS is then sent to the Board of Studies (BoS) of the institute.

The BoS has faculty members, experts from industry, research organizations and from affiliated University that is Maulana Abdul Kalam University of Technology. The recommendations made by BoS are then discussed at Academic Council and suitable decisions are made. The decisions taken in the Academic Council regarding introduction of the new program are communicated to the entire staff and students through circulars and displaying notices on the notice board and through institutional electronic mail. The necessary declarations are uploaded onto the institute's website ([www.heritageit.edu](http://www.heritageit.edu)).

30. Does the department obtain feedback from

- faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize it?

Yes, the faculty does convey their feedback on curriculum as well as teaching-learning evaluation. The feedback of the faculty are considered for due deliberation in subsequent Departmental Academic Committee (DAC) meeting and necessary alterations are recommended to the BoS and taken forward from there.

Sufficient authority has been given to the faculty regarding designing of internal teaching-learning evaluation. It helps in modifying the process as per the requirement of individual course.

- students on staff, curriculum as well as teaching-learning-evaluation and what is the response of the department to the same?

Yes. Analysis of the feedback is done with the help of a software and the result is conveyed to each and every faculty member. Based on the scores made on different criteria each faculty adopts suitable corrective measures.

- Alumni and employers on the programmes and what is the response of the department to the same?

The suggestions from the alumni and employers are discussed in Departmental Academic Committee meeting and corrective suitable actions are taken like organizing workshops for students to improve upon their communication skills and technical skills.

## 31. List the distinguished alumni of the department (maximum 10)

Session	Name of the student	Designation and Affiliation
2004-08	Amit Jaiswal	Assistant Professor, IIT Mandi
2010-12	Sreetama Pal	IVF-Scientist, Urvaara IVF, Kolkata
2010-12	Soumyendu Ghosh	PO, Central Bank of India
2007-11	Jay Gandhi	Director, Dr. Gandhi's laboratory
2011-13	Md Tafseer Ansari	Manager, Training and Development, Halal India Private Limited
2007-09	Dipon Chatterjee	Food technologist & quality control managerCookme
2008-10	Sudip Ghosh	Scientist, Cadilla Pharmaceuticals
2002-06	Ayan Chatterjee	Assistant professor, Indraprastha University
2003-07	Sonali Hazra das	Assistant Professor, Heritage Institute of Technology, Kolkata
2003-07	Nandini Sarkar	Assistant Professor, NIT, Rourkela
2003-07	Swati Ray	Assistant Professor, Haldia Institute of Technology
2005-09	Diptarka Dasgupta	Scientist, Indian Institute of Petroleum, CSIR

## 32. Give details of student enrichment programmes (special lectures/ workshops/ seminar) with external experts.

## Enrichment Lecture Series

Title	Name of the Expert	Funding Agency	Date/Year	Highlights
Biotechnology and its prospects	Dr. Sudit Mukhopadhyay	Funded by TEQIP	31st Oct 2014	Speaker is an eminent scientist in the field of Biotechnology
Vibrio cholerae pathogenesis in humans and zebrafish	Prof. Jeffrey H. Withey	Funded by Heritage Institute of Technology	13th Feb 2015	Speaker is Associate Professor, Department of Immunology and Microbiology, Wayne State University School of Medicine
Role of human placental extract in wound healing	Dr. Subhasri Bandopadhyay	Funded by Heritage Institute of Technology	2nd Aug 2013	Speaker is Chief Medical Officer, Albert david Ltd, Kolkata
Peptide chemistry and biology at the intersection of Drug Design	Dr. Victor J. Hruby	Funded by TEQIP	7th Feb 2013	Speaker is Regent Professor Emeritus in the Biochemistry Department, University of Arizona
Sustainable Development: Myth or Reality	Dr. Ashish Ghosh	Funded by Heritage Institute of Technology	21st Sep 2012	Speaker is Director, Environment & Development (ENDEV)
Biological and cultural determinants of autism, from genes to neural information processing to behaviour	Dr. Matthew Belmonte	Funded by Heritage Institute of Technology	3rd Feb 2012	Speaker is Professor at University of Cornell Ithaca, USA

## Workshops:

Title	Name of the Expert	Funding Agency	Date/Year	Highlights
Personality and performance from downbeat to upbeat	Mr. Mrinal Chakraborty	Funded by Department of Biotechnology	8th Aug 2014	1 day workshop By sports and youth motivator For B.Tech students
Technical writing and communication skills development	Ms. Jayati Chatterjee	Funded by TEQIP Phase II	8th Oct - 15th Oct 2015	5-days workshop For B.Tech III year students
Thalassemia Awareness program	Dr. Ramendu Homchoudhuri	DST	4th Nov 2015	One day program For both B.Tech and M.Tech students In collaboration with Rotaract Club
Time and Stress Management	Mr. Amit Chakraborty	Department of Biotechnology, Heritage Institute of Technology	10th Feb 2012	1day interactive session on stress and time management for B.Tech students. Keeping in mind the relevance of the session in today's student life it was opened to students of all departments.

## Seminar/Conference:

Title	Name of the Expert/ Invited speakers	Funding Agency	Date/Year	Highlights
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Biotechnology for sustainable development	-	Institute funded	Feb 2012	National Seminar Eighty papers presented from different parts of India One paper was from Bangladesh

## 33. List the teaching methods adopted by the faculty for different programmes

Following are the Course Delivery Methods used in our department:

- Lectures & tutorials
- Chalk & board
- Presentation (Still and Video)
- Experimental Laboratory Work
- Assignments
- Handouts

## 34. How dose the department ensure that programme objectives are constantly met and learning outcomes monitored?

**Programme Educational Objectives: B.Tech**

Graduates of B.Tech Biotechnology programme are expected to attain within a few years of graduation:



- The graduate will demonstrate adherence to the professional codes of conduct appropriate to his or her field of study and/or practice, as well as exhibit behavior consistent with accepted standards of responsibility, risk/benefit analysis and professional accountability.
- Be engaged in a professional career in the biotechnology or other related industries.
- Work in a technically competent manner as a leader as well as team member to address challenges in engineering or their chosen profession, taking into consideration ethical and societal concerns.
- Develop their technical knowledge and professional skills by lifelong self-directed learning.

### **Programme Educational Objectives : M.Tech**

Postgraduates of the M.Tech. Biotechnology programme are expected to attain within a few years of postgraduation:

- Establish themselves as practicing professionals in Biotechnology and give directions to Biotechnology education, research and industrial applications.
- Enhance their professional knowledge and skill through academic programmes for higher degrees/ self-directed lifelong learning for application in social needs by innovative practices.
- Demonstrate their ability to work in a multi-disciplinary team with a capacity to share and disseminate knowledge.

### **Programme Outcome of B.Tech.**

Graduates of B.Tech. Biotechnology programme must demonstrate that their students attain the following Programme Outcomes:

- apply knowledge of mathematics, science, and engineering,
- design and conduct experiments, as well as to analyze and interpret data,
- a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability,
- An ability to function on multidisciplinary teams,
- An ability to identify, formulate, and solve engineering problems,
- An understanding of professional and ethical responsibility,
- An ability to communicate effectively,
- The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context,
- Recognition of the need for, and an ability to engage in life-long learning, (j) a knowledge of contemporary issues, and
- An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.
- An ability to provide a cost-effective and environment-friendly solution to a problem
- An ability to demonstrate a better understanding of diagnosis and treatment of diseases through novel biotechnological approaches.
- An ability to develop biochemical products and process for commercial uses.

### **Programme Outcomes : M.Tech.**

On successful completion of the programme the post graduate students of Biotechnology, Heritage Institute of Technology, Kolkata, will acquire:

- An ability to apply the knowledge of different aspects of Biotechnology and other allied engineering disciplines in academic sectors, industries and R & D organizations.
- An ability to understand a problem from different viewpoints, find out its novel features, design experiments accordingly, analyse results critically with precision.
- An ability to integrate different problems, find out pragmatic solutions and evaluate their impacts on society, environment, economy and human health for sustainable development.
- An ability to update themselves with modern technologies with a conceptual understanding of their advantages and limitations.

- An ability to demonstrate a capacity of working in a multi-disciplinary team, with objectivity, teamwork, self-management and emotion management to achieve a common goal.
- An ability to evaluate the commercial viability of a project and to execute the viable projects through proper use of human resources.
- An ability to communicate with the peer groups as well as society at large to share and disseminate knowledge and applications of Biotechnology and comprehend and write reports and make proper documentation and give and receive clear instructions.
- An ability to develop a desire for lifelong learning and inculcate self-learning qualities through critical observations of mistakes.
- An ability to understand the need of society, develop social and professional responsibilities and ethics.
- An ability to understand genetic makeup and process of manipulation of microorganisms, plants and humans to meet the agricultural and industrial needs.

The department continuously monitors the departmental progress so as to ensure the programme educational objectives and programme outcomes are met. The monitoring is done by the following methods:

Feedback of students	Students give feedbacks on respective teaching learning process and the subject
Rubrics analysis	Statistical analysis of the curriculum and its applicability by the students
Unit test	Internal evaluation of student progress
Result analysis	The scores of the students on each subject and on the whole is analyzed to understand the readiness of the student to meet the PEO and PO.

35. Highlights the participation of students and faculty in extension activities.

Students and faculty participate in different extension activities like Science Day celebration, Industrial tour, skit competition, Modeling competition.

Science Day Celebration	Science Day is celebrated every year in February to commemorate different scientific and technological breakthrough. Students learn their academics through different activities like quiz, debate, dramatics etc.
Industrial Tour	Industrial tours are organized for IV year B.Tech students to enable them to understand the real time industrial working environment better.
Skit Competition	Clarity on a topic is understood by asking the students of II year(III semester) B. Tech and IV year(VIII semester) B. Tech to perform skits (short drama)
Modeling Competition	Application ability of the students is encouraged by organizing modeling competition.
Debate Competition and Quiz Contest	General awareness on the scientific world beyond Biotechnology of the students is tested and encouraged by organizing debate competition and quiz contests in collaboration with NESA

36. Give details of “beyond syllabus scholarly activities” of the department.

Enrichment Series	Lecture	<ul style="list-style-type: none"> <li>➤ Biotechnology and its Prospects on 31st October 2014 by Dr. Sudit Mukhopadhyay</li> <li>➤ Vibrio cholerae pathogenesis in humans and zebrafish on 13th Feb 2015 by Prof. Jeffrey H. Withey</li> <li>➤ Role of human placental extract in wound healing on 2nd Aug 2013 by Dr. Subhasri Bandopadhyay</li> <li>➤ Peptide chemistry and biology at the intersection of Drug Design on 7th Feb 2013 by Dr. Victor J. Hruby</li> <li>➤ Sustainable Development: Myth or Reality on 21st Sep 2012 by Dr. Ashish Ghosh</li> </ul>
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	<ul style="list-style-type: none"> <li>➤ Biological and cultural determinants of autism, from genes to neural information processing to behavior on 3rd Feb 2012 by Dr. Matthew Belmonte</li> </ul>
Workshop	<ul style="list-style-type: none"> <li>➤ One day interactive session on Time and Stress Management on 10th Feb 2012 by Mr. Amit Chakraborty .</li> <li>➤ Analytical Techniques for Characterization of Biological Macromolecules” on 30th Jan – 1st Feb 2013 by <ul style="list-style-type: none"> <li>▪ Dr. Debi Prasad Sarkar, Professor, Department of Biotechnology, University of Delhi,</li> <li>▪ Dr. Debashish Mitra, Scientist 'G', National Centre for Cell Sciences (NCCS), Pune</li> <li>▪ .Dr. Rabindranath Mukhopadhyaya Former Scientist, Advanced centre for Treatment, Research and Education in Cancer</li> </ul> </li> <li>➤ Workshop on Computational Biology &amp; Protein Structure Prediction Organized by Biotechnology Dept on 23rd – 27th September 2013 by <ul style="list-style-type: none"> <li>▪ Dr.Dhananjay Bhattacharyya, Saha Institute of Nuclear Physics, Kolkata.</li> <li>▪ Dr.Soumalee Basu, University of Calcutta</li> <li>▪ Dr. Rajgopal Chattopadhyaya, Bose Institute, kolkata</li> <li>▪ Dr.Chhabinath Mondal, NIPER, Kolkata</li> <li>▪ Dr.Saikat Chakrabarti, Indian Institute of Chemical Biology, Kolkata</li> <li>▪ Dr.Debnath Pal, IISc, Bangalore</li> <li>▪ Chitra Dutta, Indian institute of Chemical Biology, Kolkata</li> <li>▪ Dr.Pinakpani Chakrabarti. Senior Professor &amp; head, Centre of Excellence in Bioinformatics, Bose Institute, Kolkata, Rahul Banerjee, Professor,Saha institute of Nuclear Physics</li> </ul> </li> <li>➤ 1 day workshop on Personality and performance from downbeat to upbeat by sports and youth motivator Mr. Mrinal Chakraborty on 8th August 2014 for B.Tech students.</li> <li>➤ Workshop on operation and maintenance of Sophisticated Instruments for Technical Assistants on 18th to 20th March 2015 by <ul style="list-style-type: none"> <li>▪ Dr. Amit Kumar De</li> <li>▪ Dr. Prabal Chakraborty</li> <li>▪ Dr. Sagaramoy Ghosh</li> </ul> </li> <li>➤ 5-days workshop on Technical writing and communication skills development by Ms. Jayati Chatterjee dated 8th October to 15th October 2015 for B.Tech III year students.</li> </ul>
Seminar/Conference	<ul style="list-style-type: none"> <li>➤ International Conference on Advances in Bioprocess Engineering and Technology: ICABET 2016 on 20th to 22nd Jan 2016 organized by Department of Biotechnology and Chemical Engineering, Heritage Institute of Technology</li> <li>➤ National Seminar on Biotechnology for Sustainable Development in Feb 2012 organized by Department of Biotechnology and Chemistry, Heritage Institute of Technology</li> </ul>

37. State whether the programme/ department is accredited / graded by other agencies. Give details.

B.Tech programme is accredited by NBA for 2 years (2013-2015)

38. Detail any five Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department

**SWOC ANALYSIS**

## ■ Strengths

1. Well qualified, experienced and dedicated faculty. 90% of the faculty members with Ph D. Two faculty members are M. Tech in Biotechnology. 100% of the faculty is ratified by affiliated university / NET/GATE/DBT-JNU qualified.
2. Sixth pay commission scales are implemented.
3. Excellent infrastructure facilities with well equipped Laboratories and Computer centre. Well stocked library with good number of national and international journals.
4. High students' success rate in GATE/ NET / DBT JNU / GRE / TOEFL
5. State of the art Placement Centre, leading in students placements in the region.
6. The UG program is accredited by NBA (2013-2015).
7. Faculty members are involved as investigators in various research projects funded by national/ state agencies and some are guiding Ph. D students in the department.
8. Student workshops for softskill training as well as additional technical trainings are conducted regularly. Special tutorial classes are being held for weaker students and students admitted through lateral entry.
9. Financial assistance is available for students from economically challenged background.
10. Availability of TEQIP grant in the college has facilitated the department in different academic spheres like participation of faculty in conferences /seminars/workshops in India and abroad.
11. Complete ragging free campus has made studying here enjoyable.

## ■ Weaknesses

- Communication skills among rural based students needs improvement.
- Presence of very few core companies during placement leads to shift of talent to IT industry.

## ■ Opportunities

- Global demand for technical manpower is ever growing.
- New technologies are emerging.
- Many of the neighbouring state students are opting for education in this state.

Autonomy status of the college has and will ensure academic progression of the college with minimum hindrances and seek funds for R&D.

## ■ Challenges

- Other universities offering similar programmes can affect the student intake.
- Effort has to be made to upgrade the department as a centre of excellence.

## 39. Future plan of the department

- Creating more infrastructural facilities in terms of bioinformatic softwares and advanced research instruments.
- Inviting more Biotechnology companies to recruit from the department so that talent drain to IT companies can be checked.
- Facilitating research environment more in the department by subscribing to more number of high impact factor journals.



1. Name of the Department : Department of Chemical Engineering  
& : 2002  
Its year of establishment
2. Names of Programmes / : UG : - B. Tech. from 2002 continuing  
Courses offered (UG, PG, PG: - from 2009 – 2012 academic year (Discontinued  
M.Phil., Ph.D., Integrated from academic year 2012-13 because of the non-  
Masters; Integrated Ph.D., etc.) availability of sufficient number of students. This might  
be due to students preferring jobs.)

3. Interdisciplinary courses and departments involved:

Technical Assistants from the Department of Chemical Engineering are extending their support to facilitate the laboratory facilities to 2nd and 3rd year students of Biotechnology Department. Department also extends laboratory facilities to the Biotechnology Department.

4. Annual/ semester/choice based credit system :

Credit Based Semester System

5. Participation of the department in the courses offered by other departments

- Students are participating in the courses offered by Humanities, Physics, Mathematics, Chemistry, Mechanical Engineering, Computer Science Engineering, Electronics & Communication Engineering and Electrical Engineering Departments.
- Department of Chemical Engineering caters Laboratory facilities and Technical manpower (Fluid Mechanics, Mass Transfer, Mechanical Operation and Process Control) to Biotechnology Department for their laboratory courses (Transfer operation).

6. Number of teaching posts sanctioned and filled (Professors/Associate Professors/Asst. Professors)

	Sanctioned	Filled
Professors	1	4
Associate Professors	2	0
Assistant Professors	9	8
Total	12	12

7. Faculty profile with name, qualification, designation, specialization  
(D.Sc./D.Litt./ Ph.D./M.Phil., etc.)

Faculty Name	Qualifications	Designation	Specialization	No. of Years of Experience	No. of Ph. D. students guided in last 4 years
Prof. (Dr.) Pinaki Bhattacharya	PhD (JU)	Professor & Head	Chemical Reaction Engineering, Biotechnology and Bioprocess Engineering	45.00	-
Prof. Bibhuti Ranjan Saha	M. Tech. (CU)	Professor & Registrar	Heat Transfer, Project Engineering, Transport Phenomena	37.00	-
Prof. (Dr.) Swami Vedajnananda	PhD (JU)	Professor	Bioprocess Engineering, Environmental Engineering	37.00	-

Prof. (Dr.) Sulagna Chatterjee	PhD (UTA)	Professor	Computational Fluid Dynamics, Flow in microchannels	13.00	-
Prof. (Dr.) Sangita Bhattacharya	PhD (JU)	Assistant Professor	Separation Process including Advanced Separation, Waste water Treatment	21.50	1 (submitted) 1 (ongoing) Bipasha Das (submitted) Trina Dutta (ongoing)
Prof. (Dr.) Alok Kumar Sen	PhD (IIT KGP)	Assistant Professor	Nano – Composite and Polymer based Sensor	35.50	-
Prof. (Dr.) Diptendu Datta	PhD (JU)	Assistant Professor	Ultrafiltration, Membrane Separation	11.00	-
Prof. Abhuday Mallick	M. Tech. (CU)	Assistant Professor	Petroleum Refinery Engineering & Petrochemicals	5.00	-
Prof. (Dr.) Pramita Sen	PhD (JU)	Assistant Professor	Reaction Engineering, Membrane technology	5.50	-
Prof. (Dr.) Dwaipayan Sen	PhD (JU)	Assistant Professor	Biomembrane reactor, nanofiltration, membrane separation	5.55	2 (Ongoing) Dibyajyoti Haldar and Sirsha Putatunda (Ongoing)
Prof. (Dr.) Aparna Ray Sarkar#	PhD (JU)	Assistant Professor	Nonconventional Energy and Pyrolysis	0.08	-
Prof. (Dr.) Avijit Ghosh*	PhD (IIT Guwahati)	Assistant Professor	Nonconventional Energy and Fuel Cell	2.00	-

JU: Jadavpur University; CU: University of Calcutta; UTA: University of Texas Austin; IIT KGP: Indian Institute of Technology Kharagpur; #Joined newly; \*Joining on 17<sup>th</sup> February, 2016

8. Percentage of classes taken by temporary faculty – programme-wise information : Nil
9. Programme-wise Student Teacher Ratio:  
UG -B.Tech (Applied Electronics and Instrumentation Engg): 15:1
10. Number of academic support staff (technical) and administrative staff: sanctioned and filled

	Sanctioned	Filled	
		Male	Female
Technical Staff	08	03	05
Administrative Staff	NIL	NIL	NIL

11. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Mention names of funding agencies and grants received project-wise.
  - AICTE-RPS project titled “Conversion of Deproteinized Whey to Ethanol” (grant amount Rs 13.67 lakhs) has been granted on 06.02.2012 to Prof. (Dr.) Sangita Bhattacharjee.
  - Project titled “Preparation of Nitro-p -dichlorobenzene via nitration of p-dichlorobenzene” with a grant amount of Rs. 60,000/- from East India Pharmaceuticals Works Pvt. Ltd. (Address: 6, Nandalal Bose Sarani, Kolkata -700071, West Bengal, India). Status of the project: Phase I completed. Principal Investigator: Prof. (Dr.) Pinaki Bhattacharya.Co- Principal Investigator: Prof. (Dr.) Diptendu Datta
  - DST (under scheme Advanced Manufacturing Technologies) Project entitled “Development of



Novel Electroflotation/Electrocoagulation Enhanced Membrane Module for Oily Waste Water Treatment” (grant amount Rs. 36.384 Lakhs) has been granted to Prof. (Dr.) Chiranjib Bhattacharjee, Professor, Department of Chemical Engineering, Jadavpur University, Kolkata and Prof. (Dr.) Dwaipayan Sen (Co-PI), Assistant Professor, Department of Chemical Engineering, Heritage Institute of Technology, Kolkata on 26.02.2016 (Ref no. DST/TSG/AMT/2015/276).

12. Departmental projects funded by DST-FIST; DBT, ICSSR, etc.; total grants received

AICTE-MODROBS grant has been sanctioned 05.03.2012 for the department (grant amount Rs 12.1 lakhs).

13. Research facility / centre with:

- State recognition Nil
- National recognition Nil
- International recognition Nil

14. Publications:

- Number of papers published in peer reviewed journals (national / international):59

Faculty Name	2015-2016	2014-2015	2013-2014	2012-2013	2011-2012
Prof. (Dr.) Pinaki Bhattacharya	2	3	5	5	1
Prof. (Dr.) Sangita Bhattacharya	0	4	4	3	1
Prof. Bibhuti Ranjan Saha	0	0	0	0	0
Prof. (Dr.) Swami Vedajnananda	0	1	0	0	0
Prof. (Dr.) Alok Kumar Sen	0	0	0	0	1
Prof. (Dr.) Sulagna Chatterjee	0	0	0	0	0
Prof. (Dr.) Diptendu Datta	0	2	0	0	1
Prof. Abhuday Mallick	1	0	0	0	1
Prof. (Dr.) Pramita Sen	1	0	1	1	0
Prof. (Dr.) Dwaipayan Sen	0	1	3	2	0
Prof. (Dr.) Aparna Ray Sarkar	0	2	4	1	0
Prof. (Dr.) Avijit Ghosh	2	1	1	3	1

- Monographs: 01

Dwaipayan Sen, “Application of membrane bioreactor in dairy waste water treatment”, LAP Lambert Academic Publishing, Germany, (ISBN: 978-3-659-30731-7) (December, 2012)

- Chapter(s) in Books: 05

- Prof. (Dr.) Sangita Bhattacharya: 02 (2014-2015)
- Prof. (Dr.) Dwaipayan Sen: 01 (2011-2012); 01 (2014-2015); 01 (2015-2016)

- Editing Books: NIL

- Books with ISBN numbers with details of publishers: 04

- Sangita Bhattacharjee, “Performance Study during Ultrafiltration of Industrial Effluent”, Lambert Academic Publishing, (ISBN: 978-3-659-28083-2) (October, 2012)
- Sangita Bhattacharjee, “Removal of Hexavalent Chromium using Rice Husk – A Comparative Study”, , Lambert Academic Publishing, 2013, (ISBN: 978-3-659-48783-5) (November 2013)
- Diptendu Datta, “Protein separation by Ultrafiltration”, Scholars’ Press Publishing, (ISBN: 978-3-639-71888-1) (September, 2014)

➤ Diptendu Datta, "Chemical Engineering Thermodynamics", Scholars' Press Publishing, 2014, (ISBN: 978-3-639-76765-0) (August 2015)

- number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.): 01 – 104
- Citation Index – range / average: 5.17 citations per article
- SNIP: 29 articles
- SJR: 29 articles
- Impact factor – range / average: 0.360 – 7.178
- h-index: 02 – 12

15. Details of patents and income generated: Nil

16. Areas of consultancy and income generated:

Chemical Reaction Engineering; INR 5,000/- only from the project titled "Preparation of Nitro-p - dichlorobenzene via nitration of p-dichlorobenzene" (PI: Prof. (Dr.) Pinaki Bhattacharya; Co-PI: Prof. (Dr.) Diptendu Datta) funded by East India Pharmaceuticals Works Pvt. Ltd., Address: 6, Nandalal Bose Sarani, Kolkata -700071, West Bengal, India)

17. Faculty recharging strategies:

Sl. No.	Name of the faculty	Date	Place	Conference name	Paper name
<b>2015-2016</b>					
1.	Prof. (Dr.) Sangita Bhattacharjee, Assistant Prof., ChE Department	2nd – 4th October, 2015	National Institute of Technology, Durgapur	Golden Jubilee International Conference on Recent Advances in Chemical and Biochemical Engineering	Removal of Arsenic from contaminated Water using Micellar-Enhanced-Ultra filtration
2.	Prof. Abhyuday Mallick, Assistant Prof., ChE Department, Prof. (Dr.) Debajyoti Goswami Assistant Prof., ChE, Prof. Arindam Mandal, Assistant Prof., ChE, Prof. (Dr.) Dwaipayan Sen, Assistant Prof., ChE Department	20th July – 24th July, 2015	Heritage Institute of Technology	Faculty development Programme by British Council	
<b>2014-2015</b>					
3.	Prof. Abhyuday Mallick, Assistant Prof., ChE Department	24th -26th September, 2014	IIT KGP	Short term course on 'Faculty Development Programme for effective Teaching' IIT KGP	Pedagogy training
4.	Prof. (Dr.) Debajyoti	24th -26th September,	IIT KGP	Short term course on 'Faculty Development	Pedagogy training

Sl. No.	Name of the faculty	Date	Place	Conference name	Paper name
	Goswami Assistant Prof., ChE Department	2014		Programme for effective Teaching' IIT KGP	
5.	Prof. Arindam Mandal, Assistant Prof., ChE Department	10th – 11th November, 2014	Indian Oil Management Academy, Haldia	Industry Academia Workshop on "Instrumentation And Control"	Advance Knowledge of "Instrumentation and Control"
6.	Prof. Arindam Mandal, Assistant Prof., ChE Department	17th -19th November, 2014	IIT KGP	Short term course on 'Faculty Development Programme for effective Teaching' IIT KGP	Pedagogy training
7.	Prof. (Dr.) Swami Vedajnananda, Professor, ChE Department	9th – 12th December 2014	Kurukshetra University, Haryana	51st annual convention of chemists, 2014	Nature Inspired Chemical Science and Technology for India
8.	Prof. (Dr.) Sulagna Chatterjee, Professor, ChE Department	6th – 7th February, 2015	Pune India	2nd International Conference Biotechnology and Bioinformatics	Numerical Analysis of fund flow under high Intensity Focused Ultrasound
<b>2013-2014</b>					
9.	Prof. (Dr.) Swami Vedjananda Professor, ChE department	19th November, 2013	Indian Institute of Chemical Engineers, Jadavpur University Campus	Workshop on Industrial Wastage Water Treatment Fundamental Treatment Technology with Recycle and Reuse	Career Development and Enhancement of Domain Knowledge in the field Wastewater Treatment
10.	Prof. (Dr.) Pramita Sen, Assistant Prof., ChE department	22nd -23rd November, 2013	CSIR-Central Glass & Ceramic Research Institute(CSIR-CGCRI)	International Conference on 'MEMBRANES APPLICATIONS' (ICMA 2013)	Synthesis of Galacto – Oligosaccharides Using Immobilized Enzyme in a Rotating disc Membrane Reactor (RDMR)
11.	Prof. (Dr.) Swami Vedjnananda, Professor, ChE Department	26th -30th December, 2013	Indian Institute of Chemical Engineering, Mumbai, Matunga	CHEMCON 2013	Performance Evaluation of a Sewage Treatment plant at Kolkata Metropolitan area Based upon Modeling of it's resource variables
12.	Prof. (Dr.) Debajyoti Goswami, Assistant Prof., ChE Department	12th-13th February, 2014	Mechanical and Engineering Department of MCKV Institute of Engineering	Workshop on low Carbon Development Carbon Capture and Carbon Sequestration Technology Route.	To apply knowledge in teaching 'Environmental Engineering' related courses in Chemical Engineering
13.	Prof. (Dr.) Diptendu Datta, Assistant Prof., ChE Department	28th – 29th June, 2014	Calcutta Regional Centre, Indian Institute of Chemical Engineers	National Conference on Recent Trends in Chemical and Allied industries: Engineering Economics and Environment	Water Quality Index Methods to Assess the Quality of Stagnant Surface Water Body- A Case Study
14.	Prof. (Dr.) Sangita Bhattacharjee, Assistant Prof., ChE Department	28th – 29th June, 2014	Calcutta Regional Centre, Indian Institute of Chemical	National Conference on Recent Trends in Chemical and Allied industries: Engineering	Optimization of Lactose Hydrolysis by $\beta$ - galactosidase in Immobilized mode

Sl. No.	Name of the faculty	Date	Place	Conference name	Paper name
			Engineers	Economics and Environment	using Response Surface Methodology
<b>2012-2013</b>					
15.	Prof. (Dr.) Sangita Bhattacharjee, Assistant Prof., ChE department	28th -29th September, 2012	Jadavpur University	National Conference on "Sustainable Development through Innovative Research"	Separation of Whey Proteins and Lactose from Casein Whey in a Tangential Flow Ultrafiltration Module
16.	Prof. (Dr.) Alope Kr. Sen, Assistant Prof., ChE department	7th – 11th January 2013	National Institute of Technology, Durgapur	Short term programme on 'EXPLORATION' Production & refining of petroleum (Conference)	NA
<b>2011-2012</b>					
17.	Prof. (Dr.) Sangita Bhattacharjee, Assistant Prof., ChE department	29th – 30th December, 2011	BUET, Dhaka	3rd International Conference on Chemical Engineering, ICChE 2011	Study on Separation of Low Molecular Weight Proteins from Casein Whey using A Batch Stirred UF Module – Effects of pH and Stirrer Speed

## 18. Student projects

- percentage of students who have done in-house projects including inter-departmental:

Academic Session	Percentage of students
2015-2016	94.6
2014-2015	100
2013-2014	100
2012-2013	100
2011-2012	100

- percentage of students doing project in collaboration with industries / institutes:

Academic Session	Percentage of students
2015-2016	5.4
2014-2015	Nil
2013-2014	Nil
2012-2013	Nil
2011-2012	Nil

## 19. Awards / recognition received at national and international level by

- Faculty

**2015 – 2016**

- Prof. (Dr.) Pinaki Bhattacharya is Ph.D. Committee Member at Biotechnology and Chemical Engineering Department, MAKAUT, West Bengal within the period

- Prof. (Dr.) Pinaki Bhattacharya is the External Member in BOS at Narula Institute of Technology, West Bengal within the period
- Prof. (Dr.) Pinaki Bhattacharya chairs a technical session in International Conference on Advances in Bioprocess Engineering and Technology 2016 at Heritage Institute of Technology, Kolkata
- Prof. (Dr.) Pinaki Bhattacharya is one of the members from the Faculty Selection Committee for the recruitments at Indian Institute of Technology Kharagpur, Indian Institute of Technology Delhi, ISM Dhanbad, National Institute of Technology Durgapur, National Institute of Technology Agartala, University of Calcutta and West Bengal Public Service Commission in different time frames within the period.
- Prof. (Dr.) Sangita Bhattacharya is the EC Member, Calcutta Regional Center, IChE within the period
- Prof. (Dr.) Swami Vedjnananda chairs a technical session in International Conference on Advances in Bioprocess Engineering and Technology 2016 at Heritage Institute of Technology, Kolkata
- Prof. (Dr.) Sulagna Chatterjee chairs a technical session in National Workshop on Solid waste management, 19 March 2015, Heritage Institute of Technology, Kolkata
- Prof. (Dr.) Sulagna Chatterjee was the Convener of International Conference on Advances in Bioprocess Engineering and Technology 2016 at Heritage Institute of Technology, Kolkata.
- Prof. Abhyuday Mallick acts as the Honorary Treasurer, IChE

**2014 – 2015**

- Prof. (Dr.) Swami Vedajnananda was the member for Member, All India Council & Treasurer, IChE for the academic year
- PhD awarded to Prof. (Dr.) Pramita Sen

**2013 – 2014**

- Prof. (Dr.) Swami Vedajnananda was selected as the member for Legal and Administrative Committee, IChE on 03.05.2014
- Prof. (Dr.) Swami Vedajnananda was the member for Member, All India Council & Treasurer, IChE for the academic year
- Prof. (Dr.) Dwaipayan Sen was recognized as the Life Member of IChE in the academic year 2013 – 14.
- PhD awarded to Prof. (Dr.) Avijit Ghosh

**2012 – 2013**

- Prof. (Dr.) Pinaki Bhattacharya had received Sisir Kumar Mitra Award for the Second Best Technical Paper published in Indian Chemical Engineer in its issue for 2012.
- Prof. (Dr.) Pinaki Bhattacharya had received IChE NRC Award for 2nd Best Paper in Indian Chemical Engineer 2012.
- Prof. (Dr.) S. Bhattacharjee is a faculty of Chemical Engineering Department of Heritage Institute of Technology, Kolkata was acknowledged for receiving The Institution Prize on December 19, 2013 for her paper entitled "Recovery of Whey Proteins and Enzymatic

Hydrolysis of Lactose Derived from Casein Whey Using a Tangential Flow Ultrafiltration Module” along with the co-authors Smt. B. Das, and Prof. (Dr.) C. Bhattacharjee.

- Prof. (Dr.) Swami Vedjnananda, Professor initiates a MOU with CSIR-NEERI (for the academic period 2010-11 to 2012-13) for joint collaborative programs/training and utilization of facilities (laboratory and library) for both faculties and students.
- PhD awarded to Prof. (Dr.) Diptendu Datta, Prof. (Dr.) Dwaipayan Sen

## 2011 – 2012

- Prof. (Dr.) Pinaki Bhattacharya was awarded with Fellowship of Indian Chemical Society (FICS) in the academic year 2011-12.
- Prof. Bibhuti Ranjan Saha acted as the Honorary Secretary, IChE within the period 2011-2012
- Doctoral / Post doctoral fellows:
  - Doctoral / post doctoral fellows: Prof. (Dr.) Pramita Sen is working as a Post-Doc Fellow at Chemical Engineering Department, IISC Bengaluru within the academic year 2015-2016.
- Students :
  - Shubham Sharma Awarded the best presentation in oral session by Indian Institute of chemical engineers (IChE) at SCHEMCON-2015.
  - Won second prize in Technical Quiz, IChE at Jadavpur University in the academic year 2013-2014.
  - Won first prize in Technical Quiz, IChE at Jadavpur University in the academic year 2012-2013.
  - Ms. Ahana Mukhopadhyay - Got award for being Branch topper among all WBUT Colleges in 2011.

20. Seminars / Conferences / Workshops organized and the source of funding (national and international) with details of outstanding participants, if any.

Sl.No.	Name of the Workshop/Seminar/Conference	Date	Funding Agency	No of Participant	Main Speakers
<b>2015-2016</b>					
1.	International Conference on Advances in Bioprocess Engineering and Technology	20 <sup>th</sup> -22 <sup>nd</sup> January, 2015	TEQIP II	179	Prof. M. M. Sharma, Fellow, INSA, India Prof. A. Lenhoff, University of Delaware, USA Prof. D. Ramkrishna, Purdue University, USA Prof. U. C. Banerjee, NIPER. India Prof. P. K. Bhattacharya, IIT Kanpur, India Prof. M. M. Sain, University of Toronto, Canada
2.	Invited talk on “Basics of Lubricants, Indian Scenario and Selection Characteristics”	23rd February, 2016	TEQIP II	25	Mr. S.K. Roy, Chief Manager (Technical Services), Balmer Lawrie & Co Ltd., Kolkata
3.	Invited Talk on “Adaptation of Bacteria to Environmental Stress Factors” and industry-institute interaction	2nd March, 2016	TEQIP II	96	Dr. Madhab Kumar Chattopadhyay, Principal Scientist, CCMB (CSIR) Hyderabad Mr A.P. Gangopadhyay, Executive Director, Indian Oil

Sl.No.	Name of the Workshop/Seminar/Conference	Date	Funding Agency	No of Participant	Main Speakers
					Corporation, Haldia Refineries Ltd.
<b>2014-2015</b>					
4.	Disaster Risk Reduction	4 <sup>th</sup> April, 2014	TEQIP II	44	1. Prof. Chandan Ghosh, NDMA 2. Sri Amit Chaudhuri, Spl. Secretary, Department of Planning, Govt. of W.B. 3. Dr. Anish Banerjee, Lead Technical expert, NDMA
5.	Faculty Development programme on Biotechnology and membrane science	26 <sup>th</sup> Sept. 2014	TEQIP II	8	1. Prof. Vincenza Calabro, University of Calabria, Italy, 2. Prof. Stefano Curcio, University of Calabria, Italy 3. Dr. Sudip Chakraborty, Senior Research Scientist, University of Calabria, Italy
6.	Industrial Safety & HAZOP analysis	17 <sup>th</sup> March, 2015	TEQIP II	27	Mr Dipak Pahari, NRG Tech Services Pvt. Ltd., Managing Director and Principal Consultant, Gujrat
7.	Workshop on Solid waste management	19 <sup>th</sup> & 20 <sup>th</sup> March, 2015	TEQIP II	59	1. Dr. R.N.Singh, INSA Senior Scientist, Emeritus Scientist (CSIR), National Geophysical Research Institute. Hyderabad 2. Dr. Kalyan Rudra, Chairman, WBPCB 3. Prof. Arunava Majumdar, Emeritus Professor, Jadavpur University, Kolkata 4. Dr. Arun Kanti Biswas, MOEF Expert in WBPCB 5. Dr. Somnath Narayan, SE, WBPCB 6. Dr. Rita Saha, Central Pollution Control Board
8.	Distinguished Lectures on Chemical Engineering	29 <sup>th</sup> March, 2015	TEQIP II	59 students	1.Dr. Asit Kumar Das, Head R&D, Refining, Reliance Industries Ltd, Jamnagar, Gujrat 2. Mr. Ramchandra Dutta, Director & Chief Inspector of Factories, Govt. of West Bengal
<b>2013-2014</b>					
9.	Workshop on "Energy Conservation Techniques in Industries"	27 <sup>th</sup> – 28 <sup>th</sup> September 2013	TEQIP II	39	1. Sri Joy Chakraborty, Divl. Engineer, WBREDA 2. Sri Amitava Chakraborty, Addtl. Director, PCRA 3. Sri S.Mohanta, Addtl. Director, PCRA

Sl.No.	Name of the Workshop/Seminar/Conference	Date	Funding Agency	No of Participant	Main Speakers
					4. Sri Indrajit Bose, Executive Director, Marketing Division, Indian Oil Corporation Ltd 5. Sri Abhijit Nayak, Asst. Director, National Productivity Council, New Delhi

## 21. Student profile course-wise:

Name of the course		No. of seats allocated	Selected		Pass Percentage <sup>1</sup>	
			Male	Female	Male	Female
B.Tech.	2015-2016	60+3+12 <sup>#</sup>	43	19	Result yet to be published	Result yet to be published
	2014-2015	60+3+12 <sup>#</sup>	38+07 <sup>#</sup>	22+04 <sup>#</sup>	100 <sup>1</sup>	100 <sup>1</sup>
	2013-2014	60+3+12 <sup>#</sup>	48+09 <sup>#</sup>	14+02 <sup>#</sup>	100 <sup>2</sup>	100 <sup>2</sup>
	2012-2013	60+3+12 <sup>#</sup>	47+08 <sup>#</sup>	15+03 <sup>#</sup>	100 <sup>3</sup>	100 <sup>3</sup>
	2011-2012	60+3+12 <sup>#</sup>	50+10 <sup>#</sup>	07+03 <sup>#</sup>	96.4 <sup>4</sup>	100.0 <sup>4</sup>

<sup>\*</sup>5% of the sanctioned AICTE intake will be tuition fee waived candidates

<sup>#</sup>20% of the sanctioned AICTE intake will be lateral entry from 3<sup>rd</sup> semester

<sup>1</sup>Based on the 2<sup>nd</sup> Semester Examinations; <sup>2</sup>Based on the 4<sup>th</sup> Semester Examinations; <sup>3</sup>Based on the 6<sup>th</sup> Semester Examinations; <sup>4</sup>Based on the 8<sup>th</sup> Semester Examinations

## 22. Diversity of students

Name of the course		% of students from the College	% of students from the State	% of students from other States	% of students from other countries
B.Tech.	2015-2016	NA	69.35%	30.65%	NIL
	2014-2015	NA	80.33%	19.67%	NIL
	2013-2014	NA	95.23%	4.77%	NIL
	2012-2013	NA	96.77%	3.23%	NIL
	2011-2012	NA	96.77%	3.23%	NIL

## 23. How many students have cleared Civil Service, Defense Services, NET, SLET, GATE and any other competitive examinations?

Academic Year	GATE	TOEFL	IELTS	GRE	CAT	MAT	Total	%Appeared	%Qualified	Batch Size
2015-2016	Outgoing Batch									
2014-2015	12	-	-	-	-	-	12	21.4	17.1	70
2013-2014	15	5	-	5	-	-	25	42	36.2	69
2012-2013	20	2	-	2	1	-	25	51.07	43.1	58
2011-2012	10	2	-	2	-	-	14	29.3	24.1	58



## 24. Student progression

Name of the course		Percentage against the enrollment	
UG to PG	2015-2016	Outgoing Batch	
	2014-2015	10.0	
	2013-2014	13.0	
	2012-2013	18.9	
	2011-2012	27.2	
PG to PhD	2015-2016	Outgoing Batch	
	2014-2015	57.1	
	2013-2014	22.3	
	2012-2013	20.0	
	2011-2012	16.7	
PhD to Post Doctoral	2015-2016	Outgoing Batch	
	2014-2015	25.0	
	2013-2014	50.0	
	2012-2013	67.0	
	2011-2012	67.0	
Employed	Campus Selection	2015-2016	Recruitment process is going on
		2014-2015	47%
		2013-2014	51%
		2012-2013	69%
		2011-2012	89%
	Other than campus recruitment	2015-2016	Recruitment process is going on
		2014-2015	1.0%
		2013-2014	4.3%
		2012-2013	3.4%
		2011-2012	1.7%
Entrepreneurs	2015-2016	Outgoing Batch	
	2014-2015	NIL	
	2013-2014	NIL	
	2012-2013	NIL	
	2011-2012	NIL	

## 25. Diversity of staff

Percentage of faculty who are graduates	
of the same parent university	8.3%
from other universities within the state	91.7%
from other universities from other states	0%

26. Number of faculty who were awarded Ph.D., D.Sc., and D.Litt during the assessment period :

Awarded with	Number of faculty
Ph.D.	01 (2014-2015); 01 (2013-2014); 02 (2012-2013)
D.Sc.	NIL
D. Litt.	NIL

27. Present details about infrastructural facilities

Infrastructure Facility	Details
Library	<u>Departmental Library:</u> Books: 150 <u>Central Library:</u> Books: Title – 516, Volume – 4856 Journals related to Chemical Engineering: International: 17, National: 14
Internet facility for staff and students	14 (Fourteen) Systems with internet facility
Total number of class rooms	04 (Four) Lecture Halls and 01 (One) Tutorial Class room
Class rooms with ICT facility	01 (One)
Student's laboratories	11 (Eleven) for conducting UG labs
Research laboratories	02 (Two)

28. Number of students of the department getting financial assistance from college:

Academic Year	Details
2010-2011	➤ 1st Year: 2 Nos. from B. Tech. ➤ 2nd Year: 3 Nos. from B. Tech. ➤ 3rd Year: 3 Nos. from B. Tech. ➤ 4th Year: 2 Nos. from B. Tech.
2011-2012	➤ 1st Year: 5 Nos. from B. Tech. ➤ 2nd Year: 3 Nos. from B. Tech. ➤ 3rd Year: 2 Nos. from B. Tech. ➤ 4th Year: 3 Nos. from B. Tech.
2012-2013	➤ 1st Year: 0 Nos. from B. Tech. ➤ 2nd Year: 2 Nos. from B. Tech. ➤ 3rd Year: 5 Nos. from B. Tech. ➤ 4th Year: 5 Nos. from B. Tech.
2013-2014	➤ 1st Year: 0 Nos. ➤ 2nd Year: 0 Nos. ➤ 3rd Year: 4 Nos. ➤ 4th Year: 0 Nos.
2014-2015	➤ 1st Year: 0 Nos. ➤ 2nd Year: 0 Nos. ➤ 3rd Year: 0 Nos. ➤ 4th Year: 3 Nos.

29. Was any need assessment exercise undertaken before the development of new program(s)? If so, give the methodology.

Yes.

A new M. Tech. Course on "Renewable Energy" has been proposed to be introduced under Chemical Engineering Department at Heritage Institute of Technology, Kolkata. For the purpose a Memorandum of Understanding (MOU) was jointly signed by Heritage Institute of Technology, Kolkata and Centre of Excellence for Green Energy and Sensor System (CEGESS), Indian Institute of Engineering Science and Technology (IIST), Shibpur on 6th July, 2015. The course curriculum was evaluated by two external experts (Both from academic and industry) in a workshop organized by the Chemical Engineering Department, Heritage Institute of Technology, Kolkata chaired by HOD.

30. Does the department obtain feedback from

- Faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?

Yes. The feedback was assessed through periodical revisions of syllabus and methods of teaching.

- students on staff, curriculum as well as teaching-learning-evaluation and what is the response of the department to the same?

Yes. All the feedbacks are discussed with the respective staff members and are advised to re-modulate their teaching methods in order to enrich the teaching-learning procedure if the feedback reflects so.

- Alumni and employers on the programmes and what is the response of the department to the same?

The suggestions from the alumni and employers are discussed in Departmental Academic Committee meeting and corrective suitable actions are taken like organizing workshops for students to improve upon their communication skills and technical skills.

31. List the distinguished alumni of the department (maximum 10)

Sl. No.	Name of Student	Batch	Present Status
1	Dr. Sonal Mazumder	2006	Assistant Professor, Department of Chemical Engineering, BITS Pilani, Pilani, Rajasthan
2	Sri Radhika Ramamurthy	2008	Working at Chennai Petroleum Corporation Ltd. a subsidiary of IOCL, India
3	Sri Abhinandan Chiney	2008	Technical Professional(R&D), at Halliburton, An American Multinational Corporation Company
4	Sri Apratim Bhattacharya	2010	Ph.D. from Lehigh Industries, Presently Simulation Engineer/Developer at Andritz, USA
5	Sri Rohit Bhowmick	2010	Working in GAIL, at Kanpur
6	Sri Mainak Biswas	2010	Working in Sumitomo Chemicals, Japan
7	Sri Bikramjit Bardhan	2011	Works in Brahmaputra Crackers and Polymers Limited, India
8	Sri Ahana Mukhopadhyay	2011	Pursuing Ph.D in Pennsylvania State University, India from 2013
9	Sri Abhinav Hazra	2011	Working at ONGC, India after M. Tech. from IIT Kanpur
10	Smt. Ishita Sarkar	2011	M.Tech from IIT Kharagpur, pursuing Ph.D at IIT Kharagpur
11	Smt. Arunima Ghoshe	2013	Working at Technip after completing M. Tech. from IIT Mumbai

32. Give details of student enrichment programmes (special lectures/ workshops/ seminar) with external experts.

Module Description	Any other contributory institute /industry	Developed/organised by	Duration	Resource persons	Target audience	Usage and citation, etc.
<b>2015-2016</b>						
Invited Lecture	Balmer Lawrie & Co Ltd., Kolkata	Prof. (Dr.) Sangita Bhattacharjee	1 day, 23rd February, 2016	Mr. S.K. Roy	Faculty member and UG students	Industry-Institute interaction
Invited Lecture	CCMB (CSIR) Hyderabad and Indian Oil Corporation, Haldia Refineries Ltd., West Bengal	Prof. (Dr.) Swami Vedajnananda and Prof. (Dr.) Avijit Ghosh	1 day, 3rd March, 2016	Dr. Madhab Kumar Chattopadhyay and Mr A.P. Gangopadhyay	Faculty member and UG students	Industry-Institute interaction
<b>2014-2015</b>						
One day Workshop	University of Calabria, Italy	Dr. Sangita Bhattacharjee	1 day, 26 <sup>th</sup> September, 2014	Prof. Vincenza Calabro, Prof. Stefano Curcio, Dr. S. Chakraborty, University of Calabria, Italy	Faculty member and UG students	To expose students and Faculty members about modelling of membrane bioreactors in integrated process for waste treatment and minimization, modelling of biotechnological and food industry process
A one day Workshop for Industrial Safety and Hazard Analysis	NRG Tech Services Pvt. Ltd.	Prof. P. Bhattacharya, H.O.D	One day, March 17, 2015.	Mr. Dipak Pahari.	Students	To expose students to different techniques of HAZOP study
Two days Workshop on Solid Waste Management	CSIR, West Bengal Pollution Control Board, CPCB, Jadavpur University	Prof. Swami Vedajnananda, Dr. Diptendu Datta	Two days, 19-20 <sup>th</sup> March, 2015	Prof. R.N. Singh, Dr. K. Rudra, Prof. A. Majumder	Faculty members and UG students	To create awareness regarding problems related to Solid Waste Management
Distinguished Lectures	Reliance Industries, Govt. of West Bengal	Prof. Swami Vedajnananda	One day, 29 <sup>th</sup> April, 2015	Dr. Asit Kumar Das, Senior Vice President and Head Mr. Ramchandra Dutta, Director & Chief Inspector of Factories, Govt. of West Bengal	Faculty members and UG students	To give ideas on new process/product development and key factors of success  To create awareness on Factories Act & Rules, Major Accident and Hazard Control Regulations (MSIHC) Rules & Emergency Preparedness Plan in relation to Chemical & allied industries
<b>2013-2014</b>						
Two Day Workshop	Petroleum Conservation Research Association	Mr. Abhyuday Mallick	2 days, September, 27-28 <sup>th</sup> , 2013	Mr. S Mohanta, Mr. J. Chakraborty	Faculty members and UG students	To create awareness about energy conservation techniques in Industries

Module Description	Any other contributory institute /industry	Developed/organised by	Duration	Resource persons	Target audience	Usage and citation, etc.
One day Workshop on Disaster Risk Reduction	National Disaster Management Authority (NDMA)	Prof. P. Bhattacharya, H.O.D	4 <sup>th</sup> April, 2014	Prof. Chandan Ghosh, Shri Amit Chaudhuri, Dr. Anish Banerjee	Faculty members and UG students	To create awareness on natural disaster and how to mitigate the risk on the disaster
<b>2012-2013</b>						
Invited Lecture	Exide Industries Limited, Research & Development Centre, Kolkata	Prof. (Dr.) Sangita Bhattacharjee	One day, 12 <sup>th</sup> March, 2013	Dr. Dipak Sen Choudhury, Executive Vice President & Chief, R&D, Industrial, Exide Industries Limited, Research & Development Centre, Kolkata	3 <sup>rd</sup> and 4 <sup>th</sup> year Students	B. Tech students got a practical insight of different ways of energy storage

33. List the teaching methods adopted by the faculty for different programmes

- Chalk, Duster, Board Markers
- OHP and LCD Projectors to present a topic using power point before the students
- Arrangement of seminar by the guest lecturers

34. How does the department ensure that programme objectives are constantly met and learning outcomes monitored?

#### **Programme Educational Objective:**

The students coming out of B.Tech program in Chemical Engineering of Heritage Institute of Technology, Kolkata after 5/10 year of graduation are expected

- to have established themselves as practicing professionals in reputed industries including PSUs and MNCs or have achieved higher educational qualifications and innovative research skill for pursuing research in R&D laboratories as well as in academic sectors.
- to have been adapted themselves with latest developments in the discipline, including application of modern technologies in the field of Chemical Engineering Science and allied areas.
- to demonstrate their ability to work in a team with leadership qualities.

#### **Programme Outcome:**

- an ability to apply knowledge of mathematics, science, and engineering,
- an ability to design and conduct experiments, as well as to analyze and interpret data,
- an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability,
- an ability to function on multidisciplinary teams,
- an ability to identify, formulate, and solve engineering problems,
- an understanding of professional and ethical responsibility,
- an ability to communicate effectively,
- the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context,
- a recognition of the need for, and an ability to engage in life-long learning,
- a knowledge of contemporary issues, and
- an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.
- an ability to apply the concepts of Transport processes such as mass, heat and momentum, Chemical Reaction Engineering and Chemical Engineering Thermodynamics to the design, operation, troubleshooting and maintenance of chemical process plants.

- an ability to apply the principles of process control and instrumentation, computer applications, materials science and Safety & HAZOP analysis to the design, operation, troubleshooting and maintenance of chemical process plants.

The department continuously monitors the departmental progress so as to ensure the programme educational objectives and programme outcomes are met. The monitoring is done by the following methods.

Feedback from the students	Students' feedback are assessed in order to meet the needs from the students and to evaluate the continuous teaching-learning process
Feedback from alumni	Alumni feedback helps to evaluate the outcome of the teaching-learning process
Feedback from employer	Feedback from the employer helps to rate the teaching-learning process in terms of students' success outside the institute
Exit survey	Exit survey from final year students are analyzed to understand the needs from the student and to assess the sufficiency of the existing facilities extended to the students
Rubrics	Rubrics assessments are assessed to understand the students' percentage can correlate the course and be able to answer the questions based on the taught course
Class Tests	Class tests will be assessed as a teaching-learning outcomes

Seminar	Seminar on different advanced topics by the students helps them to explore their ideas on different engineering aspects. It is an assessment to rate the learning of a student on the basics and how they can apply their basics in engineering
Viva-voce	It helps to assess the students' learning during their internship and their ideas on chemical engineering
Result analysis	Results are analyzed to understand the weaker section among the students and upgrade them through constant monitoring

35. Highlights the participation of students and faculty in extension activities.

- Some students from the Department (Purojit Mitra (3rd year in 2015-16) and Sayan Halder (3rd year in 2015-16)) are being actively involved in Rotaract that focuses on the development of young adults as leaders in their communities and workplaces.
- Siddhartha Roy (4th Year, 2015-16) is the member of College football team.
- Raj Sulav Talukdar (4th Year, 2015-16) is a member of EDC, HITK

36. Give details of "beyond syllabus scholarly activities" of the department.

- Soft Skill Class is there in 1st year as a preparatory course work for campus to job ready format.
- Group Discussion classes for 4th year to make ready final year students for placements.
- Grooming Session by Mr. Amitabh Mohan from HLS India, Kolkata and Ardent Computech Pvt. Ltd., Kolkata for the 4th year batch for cracking interviews.
- Industrial Tour at the end of the 3rd year to have a glimpse of actual process industry and practicing the establishment of correlation between theory and in-plant.
- Departmental Industrial Visit.

37. State whether the programme/ department is accredited / graded by other agencies. Give details.

B. Yes. The Department is accredited by National Board of Accreditation (NBA) for two years (academic session 2013-14 and 2014-15). Presently, the department is preparing for the renewal of the accreditation.

38. Detail any five Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department

▪ Strengths

- Theoretical and laboratory courses are adequate and effective.
- Beyond syllabus materials and books are available for learning that motivates the students towards higher studies.
- Faculties are effective in delivery of the topic and potential in academics.
- Faculties are in good contact with other industries and institutes.
- Sizable number of students is involved with the professional body IChE through students' chapter.
- Classroom spaces are adequate with good facilities.
- Laboratory manuals are available and the experiment is effectively delivered to the students.
- Proper safety measures are maintained in the laboratory and in the classroom.

▪ Weaknesses

- Focus should be given for getting funds from Government and Private sources.
- Spaces for faculty rooms need to be enhanced for good interactions with the students
- Smart Classroom with digital facilities.

▪ Opportunities

- Employment opportunities will be high enough in core industry and software industries.
- Opportunities will be high enough to secure good score in GATE/GRE/ TOEFL because of competent teaching-learning evaluation method.
- New technologies are emerging consistent with global demand.

▪ Challenges

- It is highly challenging to develop employability skills of students from family of first generation graduates and financially backward students.
- Efforts be made to upgrade department as center of excellence.

39. Future plan of the department

- Introduction of new M.Tech. course, named "Renewable Energy" under Department of Chemical Engineering, Heritage Institute of Technology in collaboration with IEST, Shibpur.
- Introduction of new electives on specialized topics in frontier lines of Chemical Engineering to enhance the learning outcomes of the students in purview of meeting advanced research interest and industry demands.
- Introduction of new laboratories
- Fund raising for the department by consultation project





1. Name of the Department : Department of Civil Engineering  
& Its year of establishment : 2011
2. Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., etc.) : U.G. – B.Tech Civil Engineering
3. Interdisciplinary courses and departments involved:

Name of the Interdisciplinary course	Departments involved
Business English (HMTS 1101) Language Practice Lab (Level 1) (HMTS 1111) Co-curricular activities (HMTS 1121) Indian Culture and Heritage (HMTS 2002) Language Practice Lab (Level 2) (HMTS 2011) Economics for Engineers (HU 501) Principles of Management (HU 601) Group Discussion (HU 781) Organizational Behaviour (HU 801 A) / Project Management (HU 801 B)	Department of Humanities
Physics I (PHYS 1001) Physics I Lab (PHYS 1011)	Department of Physics
Mathematics I (MATH 1101) Mathematics II (MATH 1201) Mathematics IIIA (MATH 2001) Numerical Methods (MATH 2002) Numerical Methods and Programming Lab (MATH 2012)	Department of Mathematics
Basic Electronics Engineering (ECEN 1001) Basic Electronics Engineering Lab (ECEN 1011)	Department of ECE
Engineering Mechanics (MECH 1101) Workshop Practice (MECH 1011) Engineering Thermodynamics and Fluid Mechanics (MECH 1201) Engineering Drawing (MECH 1012)	Department of Mechanical
Introduction to Computing (CSEN 1201) Introduction to Computing Lab (CSEN 1211)	Department of CSE
Chemistry I (CHEM 1001) Chemistry I Lab. (CHEM 1011)	Department of Chemistry
Basic Electrical Engineering (ELEC 1001) Basic Electrical Engineering Lab. (ELEC 1011)	Department of Electrical

## 4. Annual/ semester/choice based credit system :

Name of Programme	System
B.Tech. Civil	Credit based semester system

## 5. Participation of the department in the courses offered by other departments

NIL

## 6. Number of teaching posts sanctioned and filled (Professors/Associate Professors/Asst. Professors)

	Sanctioned	Filled
Professor	02	01
Associate Professor	04	01
Assistant Professor	10	09+05*=14
Total	16	16

\* Adjunct Assistant Professor

## 7. Faculty profile with name, qualification, designation, specialization (D.Sc./D.Litt./ Ph.D./M.Phil., etc.)

Name	Qualification	Designation	Specialization	No. of years of Experience	No. of Ph.D student guided in last 4 years
Dr. Tapas Sadhu	Ph.D.	Professor and Head of Department	Structural Engineering	32	None
Dr. Sarmila Sahoo	Ph.D.	Associate Professor	Structural Engineering	10	None
Sushovan Sarkar	M.E., M.B.A.	Assistant Professor	Environmental Engineering	25	None
Monideepa Paul	M.E.	Assistant Professor	Geotechnical Engineering	7	None
Kaustav Bakshi	M.E.	Assistant Professor	Structural Engineering	7	None
Arpita Suchismita	M.E.	Assistant Professor	Transportation Engineering	5	None
Puja Basu Chaudhuri	M.E.	Assistant Professor	Structural Engineering	4	None
Ankush Majumdar	M.E.	Assistant Professor	Environmental Engineering	3	None
Prithwish Saha	M.E.	Assistant Professor	Structural Engineering	3	None
Dr. Subha Sankar Chowdhury	Ph.D.	Assistant Professor	Geotechnical Engineering	2	None
Rudra Prasad Roy Chowdhury	M.E.	Assistant Professor	Transportation Engineering	1	None

**Adjunct Assistant Professor**

Name	Qualification	Designation	Specialization	No. of years of Experience	No. of Ph.D student guided in last 4 years
Sandip Sarkar	M.E.	Adjunct Assistant Professor	Water Resource	2	NIL

Dr. Ratna Das	Ph.D.	Adjunct Assistant Professor	Geology	17	NIL
Mainak Majumdar	M.E.	Adjunct Assistant Professor	Structural Engineering	15	NIL
Alok Sarkar	M.S.	Adjunct Assistant Professor	Structural Engineering	42	NIL
Smita Tung	M.E.	Adjunct Assistant Professor	Geotechnical Engineering	2	NIL

8. Percentage of classes taken by temporary faculty – programme-wise information : Nil

9. Programme-wise Student Teacher Ratio:  
U.G. Programme 15:1

10. Number of academic support staff (technical) and administrative staff: sanctioned and filled

	Sanctioned	Filled
Technical staff	07	07

11. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Mention names of funding agencies and grants received project-wise. Nil

12. Departmental projects funded by DST-FIST; DBT, ICSSR, etc.: Project Lab: sponsored by MODROBS, AICTE: Nil

13. Research facility / centre with:

- State recognition Nil
- National recognition Nil
- International recognition Nil

14. Publications:

- Number of papers published in peer reviewed journals (national / international): 54
- Monographs: Nil
- Chapter(s) in Books: Nil
- Editing Books : Nil
- Books with ISBN numbers with details of publishers: Nil
- Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.) :
- Citation Index-range/average:
- SNIP :
- SJR :
- Impact factor-range/average:
- h-index :

**Dr. Sarmila Sahoo:**

- Number of papers published in peer reviewed journals (national / international) : 31
- Number listed in International Database  
Web of Science: 6 Scopus: 15 Google scholar: 22
- Citation Index – range / average : 68 (Total)
- SNIP : 2.97 (max.)
- SJR : 1.376 (max.)
- Impact factor – range / average : 4.355 (max.)
- h-index : 5

**Kaustav Bakshi****Publications:**

- Number of papers published in peer reviewed journals (national / international) : 10
- Impact factor – range / average : Minimum 0.468 to maximum 1.749.
- SNIP: 2.025
- SJR: Minimum 0.14 to maximum 1.52
- Citation Index – range / average: 8
- h - index: Minimum 13 to maximum 83

**Awards:**

- University Silver Medal in B. Tech final, stood first class second.
- Gate scholarship in 2008.
- UGC Research Fellowship in Science for Meritorious Students awarded by UGC (University Grant Commission, India).
- Senior Research Fellowship awarded by CSIR (Council of Scientific and Industrial Research, India).

**Monideepa Paul****Publications:**

- Number of papers published in peer reviewed journals (national / international) :2
- Impact factor – range / average :1.2
- SNIP: NA
- SJR: 1.49
- Citation Index – range / average: 8
- h - index: 28

**Awards:**

- University Silver Medal in B. Tech final, stood first class second.
- Gate scholarship in 2008.
- UGC Research Fellowship in Science for Meritorious Students awarded by UGC (University Grant Commission, India).
- Senior Research Fellowship awarded by CSIR (Council of Scientific and Industrial Research, India).

**SUSHOVAN SARKAR****Publications:**

➤ Number of papers published in peer reviewed journals (national / international) :7

15. Details of patents and income generated: Nil

16. Areas of consultancy and income generated: Nil

17. Faculty recharging strategies: Nil

18. Student projects  
percentage of students who have done in-house projects including inter-departmental:100%  
percentage of students doing project in collaboration with industries / institutes: Nil

19. Awards / recognition received at national and international level by  
▪ Faculty:

➤ SUSHOVAN SARKAR has been awarded as the best and novel paper presenter on the paper title "Process design of aerobic hybrid bioreactor for the treatment of municipal wastewater" in Intellectual Property Right Congress organized by Patent Facilitating Center (GOI) and Patent Information Centre(GOWB), 2014.

➤ SUSHOVAN SARKAR has obtained best paper award at the international conference Recent Trends and Challenges in Civil Engineering at Allahabad, 2014

➤ has a Certificate of appreciation in Indian Water Works Association held at Science Centre Kolkata on 31.01.15

- Doctoral / Post doctoral fellows: Nil
- Students :

➤ Aupal Mondal, topper of College.

➤ Abhishek Chakraborty and Kaushik Das participated in 'Technical Quiz Contest' in "Civil-o-Pedia '14" at Hooghly Engg and Technology College and stood 3rd on Sept 13, 2014.

➤ Tanika Roy Chowdhury, as a member of College dance team, Veenus, participated in dance competition and they stood 2nd in BESU in 2013 and 1st in Future College in 2014.

➤ Tanika as a member of college drama team BODNAM, they became 2nd in "vodafone odeon youth drama festival" in kolkata.

➤ Isan Dey, Sandhitsu Mahato and Suman Maity stood 1st in three consecutive years 2013,14,15 in relay race in college sports.

➤ Sayantan, Aupal and Tanika became first in Bridge-a-bridge event in 2014 in tech fest of college, I was the coordinator of that event. In 2015, Saikat, Bhawanand and Soumya Garai became first.

➤ Isan and Bodhayan sarbagya as a member of college football team won against many colleges as bit patna, ism dhanbad etc.

➤ There are many more.. all cannot be compiled in short time..many achievements were done by kaushik in sports, i did not get reply from him till now...in relay, girls team came first in 2015, tanika was a member of the team.

20. Seminars / Conferences / Workshops organized and the source of funding (national and international) with details of outstanding participants, if any.

Sl. No	Name of the seminar /workshop	Date	Place
1.	Technical Presentation on Some Instances of Interesting Civil Engineering Structures	7th November, 2014	Heritage Institute of Technology
2.	A Workshop on "Occupational Health and Safety with Related Environmental Issues"	27th March 2014	Heritage Institute of Technology

## 21. Student profile course-wise:

Name of course	Percentage of Intake	Intake process
B.Tech in CE	80%	WBJEE rank wise
	10%	JEE main rank wise
	10%	Management Quota (State Govt. rule) for WBJEE rank holders

Name of the Course (refer question no. 2)	Applications received	Selected		Pass percentage	
		Male	Female	Male	Female
B.Tech (2015-19)	120	115	11	NA	NA
B.Tech (2014-18)	120	119	05	NA	NA
B.Tech (2013-17)	60	59	04	NA	NA
B.Tech (2012-16)	60	58	05	NA	NA
B.Tech (2011-15)	60	58	07	93	100

## 22. Diversity of students

Name of the Course (refer question no. 2)	No of students from the College	No of students from the State	No of students from other States	No of students from other countries
B.Tech 2015	00	50.80	49.20	00
B.Tech 2014	00	56.45	43.55	00
B.Tech 2013	00	80.95	19.05	00
B.Tech 2012	00	90.48	9.52	00

## 23. How many students have cleared Civil Service, Defense Services, NET, SLET, GATE and any other competitive examinations?

Nature of Examination	No. of Students cleared
Civil Services	Nil

Defense Services	Nil
NET	Nil
SLET	N.A.
GATE	08
Govt. Services	02
Other competitive examinations	02

## 24. Student progression

Student progression	Percentage against enrolled
UG to PG	3
PG to M.Phil.	NA
PG to Ph.D.	NA
Ph.D. to Post-Doctoral	NA
Employed	
➤ Campus selection	37
➤ Other than campus recruitment	NA
Entrepreneurs	1

## 25. Diversity of staff

Percentage of faculty who are graduates of the same parent university	
of the same parent university	45.5
from other universities within the State	45.5
from other universities from other States	9.0

26. Number of faculty who were awarded Ph.D., D.Sc., and D.Litt during the assessment period : Nil

## 27. Present details about infrastructural facilities

- Library: Yes
- Internet facilities for staff and students: LAN & Wi-fi
- Total number of class rooms: 6
- Class rooms with ICT facility: 3 Projectors and 2 Laptops.
- Students' laboratories: Yes. No of laboratories : 11
- Research Laboratories: Nil

## 28. Number of students of the department getting financial assistance from college:

Course	Course Year	No. of Students Aailed Financial Assistance from College		
		2014 - 15	2013 - 14	2012 - 13
B.Tech (CE)	1st Yr.	6	8	14
	2nd Yr.	16	14	5
	3rd Yr.	15	7	0
	4th Yr.	9	0	0

Course	Course Year	No. of Students Availed Financial Assistance from State Govt.		
		2014 - 15	2013 - 14	2012 - 13
B.Tech (CE)	1st Yr.	2	2	4
	2nd Yr.	3	5	6
	3rd Yr.	7	2	0
	4th Yr.	4	0	0

29. Was any need assessment exercise undertaken before the development of new program(s)? If so, give the methodology.

30. Does the department obtain feedback from

- faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize it?

Yes, Our Departmental academic council meetings and Board of studies meetings are organised time to time where faculty members are provide their feedback. The issues related to department are highlighted in departmental academic meetings. These are discussed in the meeting and necessary steps are taken as per the discussion. Faculty members are individually chosen to prepare syllabus and curriculum. Professors from reputed institution attend in BOS meetings where they give their valuable knowledge and experience. These feedbacks provide valuable insights to the course and help formulate the course syllabus.

- Students on staff, curriculum as well as teaching-learning-evaluation and what is the response of the department to the same?

Yes, Feedback obtained from students regarding teaching, syllabus covering and Evaluation systems are discussed in the staff council.

- Alumni and employers on the programmes and what is the response of the department to the same?

Yes. Changes the curriculum as per required feedback from Alumni and representatives of employees has been considered for curriculum design. Alumni knowledge and experience and also other Professors' experience from reputed universities are further used while framing the list of new elective subjects and their syllabus.

31. List the distinguished alumni of the department (maximum 10)

SL NO	STUDENT'S NAME	PRESENT JOB LOCATION
1	AUPAL MONDAL	IIT,BOMBAY
2	ABHISHEK CHAKRABORTY	NIT, ROURKELA
3	SOUMYADEEP ROY	STUP CONSULTANTS
4	TAMOJIT BOSE	CAPGEMINI
5	ISAN DEY	STUP CONSULTANTS



6	SOMASHREE CHANDA	TECHNO ELECTRIC
7	JOY GHOSH	PAHARPUR COOLING TOWERS
8	SOUMYA GARAI	WEST BENGAL GOVT. SERVICE
9	RAJDEEP GHOSH	IIT, GANDHINAGAR
10	SATYAM MISHRA	ENTREPRENEUR

32. Give details of student enrichment programmes (special lectures/ workshops/ seminar) with external experts.

Sl. No.	Name of the enrichment programme	Name of the Experts and details	Date of the programme
1.	Technical Presentation on Some Instances of Interesting Civil Engineering Structures	Sumantra Sengupta Principal Consultant, STUP Consultants PVT Ltd.	Nov 7, 2014 (Friday)

33. List the teaching methods adopted by the faculty for different programmes

Teaching methods by faculty:

- Lecture Method
- Tutorial
- PowerPoint presentation with overhead projectors.
- Group teaching
- Whiteboard and marker

34. How does the department ensure that programme objectives are constantly met and learning outcomes monitored? NA

### **Programme Educational Objective :**

The graduate students with the B.Tech. (Civil Engineering), degree from Heritage Institute of Technology, Kolkata are expected to attain the following after a few years of getting this degree:

- i) Establish their ability to apply their knowledge in the field of Civil Engineering and approach on the way to become successful professionals and entrepreneurs.
- ii) Prove their research orientation by their ability to handle problems in Civil Engineering and related fields by virtue of their knowledge acquired in course of the degree.
- iii) Demonstrate their sense of ethics, morality, professionalism, leadership, qualities of team work, independent thinking and self confidence.
- iv) Show their learning and teaching abilities and their communication efficiency in their work places and can effectively compete in the National / International level.

### **Programme Outcomes:**

- i. Apply the knowledge of mathematics, science, engineering practices, entrepreneurship and human factors to provide value adding solutions to engineering problems.
- ii. Identify, formulate, analyze and document Civil Engineering problems to arrive at viable solutions and substantiated conclusions.

- iii. Design Civil Engineering structures that meet specified requirements with appropriate consideration for public health and safety, cultural, societal, environmental and economical considerations.
- iv. Use research based knowledge to perform experiments, analyze and interpret data, and synthesis of the information to provide valid conclusions.
- v. Appreciate societal, health, safety, legal and cultural issues by the contextual knowledge relevant to the civil engineering practices.
- vi. Apply ethical principles and commit to professional ethics and responsibilities and norms of the Civil Engineering practice.
- vii. Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- viii. Recognize the need for, and have ability to engage in independent and life-long learning in the broadest context of technological change.
- ix. Communicate effectively on Civil Engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and deliver and receive clear instructions.
- x. Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage Civil Engineering projects.
- xi. Select, and apply appropriate techniques, resources, and modern engineering tools such as CAD, FEM and GIS including prediction and modeling to Civil Engineering activities with an understanding of the limitations.
- xii. Understand the impact of the professional Civil Engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

➤ Continuous assessment of the students using periodic class tests, giving assignment and taking viva in both theory and practical classes are conducted twice in a semester.

35. Highlights the participation of students and faculty in extension activities.

Sl No	Date	Programme	Participation of student & Faculty
1	14/10/15	Industrial visit at "Bharat Sevashram Hospital" (construction site under M/S Bridge and Roof Co(I)Ltd	Student - Civil 3rd Year Faculty - Prof. Sushovan Sarkar Prof. Rudra Prasad roychowdhury
2	18/03/15	Site visit at Fly Ash Brick Plant at Khardah, Patulia	Student - CIVIL 2nd Year Faculty - Prof. Sushovan Sarkar Prof. Ankush Majumder
3	11/02/15	Industrial visit at "Bharat Sevashram Hospital" (construction site under M/S Bridge and Roof Co(I)Ltd	Student - CIVIL 3rd Year Faculty - Prof. Sushovan Sarkar Prof. Prithwish Saha

Sl No	Date	Programme	Participation of student & Faculty
4	21/02/14	Site Visit at Railway Bridge Project, Belur, Being Constructed By Bridge and Roof Co(I)Ltd	Student - CIVIL 2nd Year Faculty - Prof. Sushovan Sarkar Prof. Puja Basu Chaudhury Prof. Sarmila Sahoo
5	27/09/13	Technical Exhibition on CIVIL and Structural Engg. on Long Span Bridges and Roof at Milan Mela ( Opposite of Science City)	Student - CIVIL 3rd Year Faculty - Prof. Sushovan Sarkar Prof. Puja Basu Chaudhury Prof. Sarmila Sahoo
6	30/08/13	Plant visit at ACC Ready Mix Concrete Plant	Student - CIVIL 3rd Year Faculty - Prof. Sushovan Sarkar Prof. Puja Basu Chaudhury
7	15/09/12	Site visit at Fly Ash Brick Plant at Khardah, Patulia	Student - CIVIL 2nd Year Faculty - Prof. Sushovan Sarkar

36. Give details of “beyond syllabus scholarly activities” of the department.

Students' are encouraged to participate in various activities beyond their syllabus. Our students have got opportunity to visit summer research programme at NJIT based on their marks and regularity. All students have done extremely good performance in their research work there. Also every year our students arrange some workshop/events where students from our college contend with other colleges. Some of the following events are given below:

Events held	Date, Venue
1. A two day events on “Pop-stick Bridge making Event”- Bridge-a-bridge.	3rd-4th April,2014 HIT campus
2. 1. A two day workshop on Seismic design of building organized by “Civil Simplified	18th March,2014 A-building seminar hall HIT campus
3. Summer research programme	24th June-1st August,2013 NJIT

37. State whether the programme/ department is accredited / graded by other agencies. Give details.

Our Department is new. So we will apply after two batches come out.

38. Detail any five Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department

▪ Strengths

- Average students are of good qualities as they are good rankers in Engineering Entrance Exams.
- Excellent faculty members with good academic background
- A good teamwork among the members of Faculties and Technical staffs.
- Imparting practical mode of teaching by arranging site visit and plant visit time to time due to good contact level with the industry..
- Well equipped laboratories.

▪ Weaknesses

- Limited number of faculty have industrial exposure
- Requirement of experienced senior faculty for the post of Associate Professors and Professors

▪ Opportunities

- Further strengthening our in house laboratories to go for advanced research and consultancy jobs in future.
- Years of industrial experience of few teachers provide the department opportunity to build up contacts in the industry and thus pave the way for the placement of students and consulting/research.
- With ex-students placed in reputed institutions and industries, our students have the scope to get valuable insights of these premier institutes through alumni interactions.
- The dept. encourages teachers to pursue research and Ph.D. and provides all possible adjustments to achieve it.
- Funds to buy useful software is generally provided by TEQIP that provides opportunity for both teachers and students to stay updated with latest technologies.

▪ Challenges

- The department being only 5 years old, there is scarcity of experienced senior faculty
- Planning on starting the Master's Degree courses in near future
- Participation of teachers in conferences held outside the city is limited. Though TEQIP provides financial help as and whenever possible but still the real requirement is much more.

39. Future plan of the department

- To start the Masters Degree courses as early as possible
- To open specialised research laboratories
- To develop e-classroom
- To develop interaction with institutes and industries for advanced research and consultancy work



1. Name of the Department & Its year of establishment : 

Department of Computer Science & Engineering
2001
2. Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., etc.) : UG : -B.Tech (Computer Science & Engineering)  
PG : -M.Tech (Computer Science & Engineering)
3. Interdisciplinary courses and departments involved:  
The curriculum for the programmes in this Department benefits from the expertise of the following departments

Courses	Department Involved
Physics	Department of Physics
Analog & Digital Electronics Communication Engg & Coding Theory Basic Electronics Engineering	Department of Electronics and Communication Engineering
Basic Environmental Engineering & Elementary Biology	Department of Chemical Engineering
Mathematics	Department of Mathematics
Values & Ethics in Profession Economics for Engineers Principles of Management	Department of Humanities
Engineering Mechanics Engineering Thermodynamics & Fluid Mechanics	Department of Mechanical Engineering
Basic Electrical Engineering	Department of Electrical Engineering
Chemistry	Department of Chemistry

4. Annual/ semester/choice based credit system :  
Semester System
5. Participation of the department in the courses offered by other departments
  - Department of Electronics & Communication Engineering,
  - Department of Applied Electronics & Instrumentation Engineering.
  - Department of Chemical Engineering.
  - Department of Biotechnology Engineering.
  - Department of Civil Engineering
  - Department of Mechanical Engineering.
  - Department of Electrical Engineering.
6. Number of teaching posts sanctioned and filled (Professors/Associate Professors/Asst. Professors)

	Sanctioned	Filled
Professors	3	2+1*=3
Associate Professors	6	4
Asst. Professors	21	22+3**=25
Total	30	32

\*Emeritus Professor

\*\* On lien

7. Faculty profile with name, qualification, designation, specialization  
(D.Sc./D.Litt./ Ph.D./M.Phil., etc.)

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. students guided in the last 4 years
Dr. Pranay Chaudhuri	Ph.D.	Professor & Principal	Algorithmic Design & Analysis, Parallel and Distributed Computing, Self-Stabilization, Grid Computing, Algorithm Graph Theory	31 years	Nil
Dr. Subhashis Majumder	Ph.D.	Professor and HOD	Algorithms, VLSI, Social Networking, Data Analysis	20 years Industry Experience – 6.5 years  Academic Experience – 13.5 years	2(Two) 1.One Ph. D student Mr. Partha Basuchowdhuri submitted his thesis in August 2015. 2.One Ph. D student Ms. Nilina Bera registered in J. U. on 2 <sup>nd</sup> February 2015.
Dr. Dinabandhu Bhandari	Ph. D.	Associate Professor	Pattern Recognition, Data Mining, Image Processing, Machine Intelligence	25 Yrs (includes 15 yrs industrial exp)	Nil
Dr. Aniruddha Dasgupta	Ph.D.	Associate Professor	Agent Based System, Services Science, Business Process Modeling, Web-based applications	21years	Nil
Kamal Poddar	M.Tech	Associate Professor	Software Engineering.	31 years	Nil
Kalarab Ray	M.E.	Associate Professor	Software Engineering, Cloud Computing, E-Commerce	29 Years (Industry) plus 3.5 Years (Teaching)	Nil
Dr. Poulami Das	Ph.D	Assistant Professor	Image Processing, Computer Network	12 years	2

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. students guided in the last 4 years
Somenath Sengupta	M.Tech.	Assistant Professor	Software Engineering.	22 years	Nil
Partha Basuchowdhuri	Ph.D (Thesis submitted)	Assistant Professor	Data Mining, Social Network Analysis, Machine Learning	Teaching (5 yrs) + Research (1 yr)	Nil
Sujay Saha	M.Tech	Assistant Professor	Artificial Intelligence, Soft Computing	10.5 Years	Nil
Mohuya Byabartta (Kar)	M.Tech	Assistant Professor	Information Technology	13years	Nil
Arindam Chatterjee	M.E.	Assistant Professor		16years	Nil
Mandakini Majumdar	M.Tech.	Assistant Professor	Data Mining	10 years	Nil
Pratyusa Dash	M.Tech.	Assistant Professor	Soft Computing, Sentiment Analysis	10 years	Nil
Sandip Samaddar	M.Tech.	Assistant Professor	Computational Biology, Temporal Data Analysis, Web Data Mining	8 years	Nil
Satabdi Barman	M.Tech	Assistant Professor	Bioinformatics	9 years	Nil
Sumana Barman	M.Tech	Assistant Professor	Soft Computing	9 years	Nil
Anindita Ghosh	M.Tech	Assistant Professor	Medical Application of Image Processing.	6 years	Nil
Shilpi Saha	M.E.	Assistant Professor	Data Analysis, Security	12 years	Nil
Nilina Bera	M.Tech	Asst. Professor	Algorithmic Microfluidics.	6.5 years	Nil
Sabyasachee Banerjee	M.E	Assistant Professor	VLSI Design, Algorithm, Data Structure	4.5years	Nil
Nilanjana G Basu	M.E.	Assistant Professor	Computational Geometry	2(Industry) + 5(Teaching)	Nil
Reshma Roychoudhuri	M.E.	Assistant Professor	Green Computing	6.5(industry)+3.5 years(Teaching)	Nil
Anindita Kundu	M.Tech	Assistant Professor	Mobile Computing	Research-3 Teaching – 3	Nil
Arpita Talukdar	M.Tech	Assistant Professor	Decision Support System, Scheduling Problem	4 years	Nil



Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. students guided in the last 4 years
Amitabha Acharya	M.E	Assistant Professor	Artificial Intelligence , Algorithms	6.5 years	Nil
Lopamudra Dey	M.Tech.	Assistant Professor	Data Mining, Bioinformatics.	4.5 years	Nil
Piyali Datta	M.Tech	Assistant Professor	Algorithms, Digital Micro- fluidic Biochip, Computational Geometry	5 months	Nil
Rumpa Hazra (On lien)	M.E	Assistant Professor	Real Time Software System, fault tolerance	11 years	Nil
Padmaja Bose (Shukla) (On lien)	M.Tech.	Assistant Professor	Mobile Communication, Pattern Recognition & Robot Vision.	7 years	Nil
Partha Mukherjee (On lien)	M.Tech	Assistant Professor	Cryptography	17 years	Nil
Dr. Prosenjit Gupta (On lien)	Ph.D	Professor	Computational Geometry, Algorithms, VLSI Design Automation, Web Intelligence, GIS	19 Years	Nil

## Adjunct Professor

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. students guided in the last 4 years
Dr. Amitava Bagchi	Ph. D	Professor	Decision Support System, Scheduling Problem	42 years	Nil

8. Percentage of classes taken by temporary faculty – programme-wise information : Nil

9. Programme-wise Student Teacher Ratio:

UG -B.Tech (Computer Science and Engg.): 14:1  
PG -M.Tech(Computer Science and Engg.): 10:1

10. Number of academic support staff (technical) and administrative staff: sanctioned and filled

	Sanctioned	Filled
Administrative staff	NIL	NIL
Support staff (technical)	12	12

11. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Mention names of funding agencies and grants received project-wise.

Name of the Project(National)	Investigator	Funding Agency	Amount	Date	Status
Post-Disaster Situation Analysis and Resource Management Using Delay-Tolerant Peer-to-Peer Wireless Networks (DiSARM )  Ref. No.: ITRA/15(58)/Mobile/DISARM/01	Dr. Pranay Chaudhuri	ITRA, Media Lab Asia, Department of Electronics & Information Technology, MCIT, Govt. of India	Rs. 43.55 lakh*	19-09-2013	Ongoing

\*Multi-institutional joint R&D Project with IIT KGP, IIM Calcutta, IEST Shibpur, NIT DGP, Kalyani Govt. Engg. College.  
Total Project Cost: 4.28 Crore

12. Departmental projects funded by DST-FIST; DBT, ICSSR, etc.: Project Lab: sponsored by MODROBS, AICTE

Name of the Project	Funding Agency	Amount (in Rs.)	Date
MODROBS Ref no. F.NO 9-241/R/fd/MODROB/POLICY-2/2013-14	AICTE	9.35 Lakhs	09-01-2014
Post-Disaster Situation Analysis and Resource Management Using Delay-Tolerant Peer-to-Peer Wireless Networks (DiSARM )  Ref. No.: ITRA/15(58)/Mobile/DISARM/01	ITRA, Media Lab Asia, Department of Electronics & Information Technology, MCIT, Govt. of India	43.55 lakh*	19-09-2013

\*Multi-institutional joint R&D Project with IIT KGP, IIM Calcutta, IEST Shibpur, NIT DGP, Kalyani Govt. Engg. College.  
Total Project Cost: 4.28 Crore

13. Research facility / centre with:

- State recognition Nil
- National recognition Nil
- International recognition Nil

14. Publications:

- Number of papers published in peer reviewed journals (national / international)

	2014-15	2013-14	2012-13	2011-12	2010-11
Journals (National & International)	18	05	05	14	10
Conferences (National & International)	35	25	13	24	18
Book Chapters	03	03	-	-	01
Patents	04	01	-	-	-

- Monographs: Nil
- Chapter(s) in Books:

Author	Chapter Title	Book Title	Publisher	Year
Dr. Subhashis Majumder	Scalable Hierarchical Collaborative Filtering Using BSP Trees	Computational Advancement in Communication Circuits and Systems. ISBN 978-81-322-2274-3 Pages 269-278	Springer	2015
Piyali Datta	An Algorithm to Solve 3D Guard Zone Computation	Applied Computation and Security systems.	Springer	2015

Author	Chapter Title	Book Title	Publisher	Year
		ISSN 2194-5357, Volume 2.		
Piyali Datta	Anomaly Detection and Three Anomalous Coins Problem	Applied Computation and Security systems. ISSN 2194-5357, Volume 2.	Springer	2015
Piyali Datta	A New Move towards Parallel Assay Operations in a Restricted Sized Chip in Digital Microfluidics	Advanced Computation and systems for security ISSN 978-81-322-1988-0, Volume Two, Part III, pp 157-182.	Springer	2014
Piyali Datta	A 2D Guard Zone Computation Algorithm for Reassignment of Subcircuits to Minimize the Overall Chip Area	Advanced Computation and systems for security ISSN 978-81-322-1988-0, Volume Two, Part III, pp 183-209.	Springer	2014
Partha Basuchowdhuri	Churn in Social Networks	Handbook of Social Network Technologies and Applications. ISBN 978-1-4419-7142-5, Pages 185-220	Springer	2014

▪ Editing Books :

Author	Book Title	Publisher	Year
Dr. Prosenjit Gupta	Applied Algorithms - First International Conference, ICAA 2014, Kolkata, India, January 13-15, 2014. Proceedings. Lecture Notes in Computer Science 8321, ISBN 978-3-319-04125-4	Springer	2014

- Books with ISBN numbers with details of publishers: Nil
- Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.) : Nil
- Citation Index-range/average: 0.296
- SNIP : 0-1.034
- SJR : 0-1.3
- Impact factor-range/average: 0- 4.96
- h-index : 0-8

15. Details of patents and income generated:

Patents filed by the department:

Title	Number with details	Inventors
Telnet/SSL/zModem based Secure File Transfer Process	Patent Booking No. (furnished by the Patent Office): 883/KOL/2013, filed on 24th July, 2013 in Kolkata.	Prof. Arindam Chatterjee & Prof.(Dr.)Subhashis Majumder
Improved Merge Sort Algorithm by Creating Better Partitions	Reference No. - E-2/1278/2014-KOL (Application No. - 813/KOL/2014), filed on 31st July, 2014 in Kolkata	Prof.(Dr.)Subhashis Majumder
An Optimum Microfluidic Sample Dilution Method using Weighted Mix-Split of Droplets	Reference No. - E-2/1420/2014-KOL (Application No. - 882/KOL/2014), filed on 27th August, 2014 in Kolkata	Prof.(Dr.)Subhashis Majumder, Prof. Nilina Bera
Optimization Technique using Evolutionary Algorithms	US Patent. Patent No. – 8700548 (Application No. – 13/265, 480).	Dr. Dinabandhu Bhandari.

Title	Number with details	Inventors
Scalable Recommendation Technique using Multiplicatively Weighted Voronoi Diagrams	Reference No. - E-2/1597/2014-KOL (Application No. - 966/KOL/2014), filed on 19th September, 2014 in Kolkata.	Prof.(Dr.)Subhashis Majumder

Income generated: Nil

16. Areas of consultancy and income generated:

Name of Project	Principal Investigator/ Co Principal Investigator	Funding Agency	Amount (in Rs.)
Supply and Order Management System(SOMS)	Dr. Aniruddha Dasgupta Kamal Poddar Mandakini Majumdar Poulami Das Satabdi Barman Sandip Samaddar Anindita Ghosh	Vikram Solar Pvt. Ltd	2,75,000/-

17. Faculty recharging strategies:

Faculties are permitted to attend Orientation and Refresher courses periodically. They are also allowed to participate in National and International level Conferences / Workshops / Seminars to update their knowledge in their respective areas of research.

■ Following are the various activities:

- Encouraging faculty to publish technical papers in conferences and journals and offering financial assistance for registration and travel.
- Conducting short-time seminars/ workshops by inviting industry experts and researchers.
- Encouraging faculty to attend workshops/ Faculty Development Programme in other colleges.
- Special Faculty Development Programmes are arranged for new joining faculties.
- The faculty members attend programmes organized by IITs, NITs, etc
- Lists of workshop/seminar/ faculty development programmes are listed below.

**2014-15**

Faculty Name	Workshop/seminar/conference/Faculty Development Programme	Date
Arpita Talukdar	Workshop on Pedagogy for Effective use of ICT in Engineering Education Under the National Mission on Education through ICT (MHRD, Govt. of India) Conducted by IIT Bombay	Remote centers 12 June - 14 June 14 and 24 July – 26 July 14, 1-week equiv of work completed online, 15 June-24 July and 27 July - 2 August 14
	Seminar on Optimizing Multiple Objectives for Clustering by INAE	February 18, 2015
Lopamudra Dey	Sensor/feature selection with controlled redundancy using neural networks	February 18, 2015
	Seminar on Optimizing Multiple Objectives for Clustering by INAE	February 18, 2015
	An interactive workshop on the topic "Can you teach a Zebra some algebra"	October 18, 2014
	International Conference on DSP and IMAGE PROCESSING organized by IEM COLLEGE, SALT LAKE, KOLKATA titled as IEMCON.	August 30, 2014
Mohuya Byabartta Kar	Seminar on Optimizing Multiple Objectives for Clustering by INAE	February 18, 2015
	International Symposium on Computational and Business Intelligence (ISCBI 2013), New Delhi, India, Organized By International Neural Network Society (INNS) India Regional Chapter	August 24-26

Faculty Name	Workshop/seminar/conference/Faculty Development Programme	Date
Dr.Poulami Das	Seminar on Optimizing Multiple Objectives for Clustering by INAE	February18,2015
Amitabha Acharya	Short Term Course OnFaculty development Programme for Effective Teaching Organized by IIT Kharagpur	Three Days (17-19 November 2014)
Sabyasachee Banerjee	Seminar on Optimizing Multiple Objectives for Clustering by INAE	February18,2015
Sujay Saha	Seminar on Optimizing Multiple Objectives for Clustering by INAE	February18,2015
Somenath Sengupta	Seminar on Optimizing Multiple Objectives for Clustering by INAE Short term course on faculty development program for effective Teaching organized by education Technology & continuing education center, IIT KGP.	February18,2015 24-26 <sup>th</sup> September, 2014
Anindita Kundu	Seminar on Optimizing Multiple Objectives for Clustering by INAE Annual IEEE India Conference (INDICON)	February18,2015 11 – 13 Dec 2014
Partha Basuchowdhuri	Seminar on Optimizing Multiple Objectives for Clustering by INAE	February18,2015
Pratyusa Dash	Cognitive Aspects in Education Technology, IIT KGP	March,2015
Satabdi Barman	Seminar on Optimizing Multiple Objectives for Clustering by INAE	February18,2015
Dr.Subhashis Majumder	Seminar on Optimizing Multiple Objectives for Clustering by INAE	February18,2015
Sumana Barman	International Conference on Applied Algorithms Workshop on Pedagogy for Effective use of ICT in Engineering Education Under the National Mission on Education through ICT (MHRD, Govt. of India) Conducted by IIT Bombay	Jan 13–15, 2014 Remote centers12 June - 14 June14 and 24 July – 26 July14,1-week equiv of work completed online, 15 June-24July and 27 July - 2 August 14
Nilanjana G Basu	Seminar on Optimizing Multiple Objectives for Clustering by INAE	February18,2015
Anindita Ghosh	Workshop on Pedagogy for Effective use of ICT in Engineering Education Under the National Mission on Education through ICT (MHRD, Govt. of India) Conducted by IIT Bombay	Remote centers12 June - 14 June14 and 24 July – 26 July14,1-week equiv of work completed online, 15 June-24July and 27 July - 2 August 14
Sandip Samaddar	Seminar on Optimizing Multiple Objectives for Clustering by INAE	February18,2015
Shilpi Saha	Presented paper in International conference on Contemporary Computing & Informatics (IC3I). Seminar on Optimizing Multiple Objectives for Clustering by INAE	Nov 27-29, 2014 February18,2015
Reshma Roychoudhuri	Big Data workshop at ISI, Kolkata	March,2015

**2013-14**

Faculty Name	Workshop/seminar/conference/Faculty Development Programme	Date
Arindam Chatterjee	International Conference on Applied Algorithms FDP on Algorithms Cleared 3 course works as part of Ph.D. registration requirement at ISI, Kolkata	13 – 15 Jan, 2014 22 – 26 July, 2013 Aug '13 – Apr '14 timeframe
Anindita Ghosh	Continuing Education Program On "Machine Intelligence" Refresher Course On "Algorithms" Workshop on "Mobile Computing & Wireless Sensor Networks" Workshop on Application Development in Android Platform "VLSI Design and Technology" International Conference on Applied Algorithms ICAA 2014	July 15-19,2013 July22-July26,2013 October 24-25,2013 October 30-Nov 1,2013 Nov 12-13,2013 January13-15,2014
Anindita Kundu	FDP on Algorithms Workshop on Mobile Computing Workshop on Sensor Networks	22 – 26 July 2013 24-25 Oct, 2013 24-25 Oct, 2013
Arpita Talukdar	International Conference on Applied Algorithms Workshop on VLSI Design and Technology Workshop on Mobile Computing and Wireless Sensor Networks Computational Biology and Protein Structure Prediction Refresher Course On Algorithms Workshop on Machine Intelligence Refresher Course On Algorithms	Jan 13-15, 2014 Nov 12-13,2013 Oct 24-25,2013 Sep 23-27,2013 July 22-28,2013 July 15-19,2013 July 22-28,2013
Kalarab Ray	"International Conference on Applied Algorithms" (ICAA-2014) (Sponsored by TEQIP-II) at Heritage Institute of Technology, Kolkata	Jan-2014
Mohuya Byabartta (Kar)	"Machine Intelligence" under Technical Education Quality Improvement Program (TEQIP – II) Organized By Department of Information Technology "Algorithms" under Technical Education Quality Improvement Program (TEQIP – II) From Organized By Department of Computer	July 15-19, 2013 July 22, 2013 to July 26, 2013

Faculty Name	Workshop/seminar/conference/Faculty Development Programme	Date
	Science & engineering	
Nilina Bera	Machine Intelligence	15th-19th July, 2013
	FDP on Algorithms	22nd-26th July, 2013
	Mobile Computing & WSN	24th - 25th Oct'13
	International Conference on Applied Algorithms	Jan 13--15, 2014
Nilanjana G Basu	International Conference on Applied Algorithms	13-15 Jan, 2014
Partha Basuchowdhuri	Continuing Education Program On "Machine Intelligence", organized by IT dept of HIT-K (Sponsored by TEQIP – II)	July 15 – 19, 2013
	Refresher Course on "Algorithms" organized by CSE dept. of HITK (funded by TEQIP-II)	July 22 – 26, 2013
	Workshop on "Computational Biology and Protein Structure Prediction" organized by dept. of Biotechnology of HITK (funded by TEQIP-II)	September 23 – 27, 2013
	Workshop on "Mobile Computing & Wireless Sensor Networks", organized by CSE dept. of HITK (funded by TEQIP-II)	October 24 – 25, 2013
	International Conference on Applied Algorithms, jointly organized by CSE & IT Dept. of HITK (funded by TEQIP-II)	January, 2014
Dr. Prosenjit Gupta	Intl. Conf. on Applied Algorithms, Kolkata	Jan 13—15, 2014
	Intl. Conf. on Computational Intelligence and Information Technology, Mumbai	Oct 18—19, 2013
	Workshop on Mobile Computing and Wireless Sensor Networks, Kolkata	Oct 24-25, 2013
	VLSI Design and Technology, Kolkata	Nov 12-13, 2013
	Workshop on Algorithms, Kolkata	Jul 22-26, 2013
Dr. Poulami Das	Machine Intelligence	15th-19th July, 2013
	FDP on Algorithms	22nd-26th July, 2013
	Mobile Computing & WSN	24th - 25th Oct'13
	International Conference on Applied Algorithms	Jan 13--15, 2014
Pratyusa Dash	State of Art perspectives in CSE	12-13 July 2013
	FDP(Refreshers course) on Algorithms organized by Dept of CSE. HITK	22-July-2013 to 26-July-2013
	Machine Intelligence organized by Dept of I.T. HITK	15-19th July 2013
	VLSI Design and Technology	Nov 12-13, 2013
	Workshop on Mobile Computing and wireless and Sensor Networks	October 24-25, 2013
Rumpa Hazra	International Conference on Applied Algorithms	13-15th Jan 2014
	Continuing Education Program On "Machine Intelligence"	July 15-19, 2013
	Refresher Course On "Algorithms"	July 22-July 26, 2013
	"VLSI Design and Technology"	Nov 12-13, 2013
	Participated and presented a paper in Conference "IEEE TENCON, 2013" at Xian, China	Oct 22-25, 2013
Reshma Roychoudhuri	International Conference on Applied Algorithms ICAA 2014	January 13-15, 2014
	State of the art perspectives in CSE	12-13 July, 2012
	FDP on Algorithms	22th –26th Jul, 2013
	Mobile Computing & WSN	24th - 25th Oct'13
Sandip Samaddar	International Conference on Applied Algorithms	January 13--15, 2014
	Two days workshop on Mobile computing & Wireless Sensor Networks under TEQIP-II	24-25th Oct, 2013
	One week continuing education program on Algorithm under TEQIP-II	15-19th July, 2013
Sabyasachee Banerjee	One week continuing education program on Machine Intelligence under TEQIP-II	22nd -226th July, 2013
	International Conference on Applied Algorithms	13 – 15 Jan, 2014
	FDP on Algorithms	22 – 26 July, 2013
Dr. Subhashis Majumder	FDP on Algorithms	22-26 July, 2013
	16th Japan Conference on Discrete & Computational Geometry and Graphs (JCDCG2 2013)	17-19 Sept, 2013
	Mobile Computing & Wireless Sensor Network	24-25 Oct, 2013
	International Conference on Applied Algorithms	13-15 Jan, 2014
Sumana Barman	Two days workshop on Mobile computing & Wireless Sensor Networks under TEQIP-II	24-25th Oct, 2013
	One week continuing education program on Algorithm under TEQIP-II	15-19th July, 2013
	One week continuing education program on Machine Intelligence under TEQIP-II	22nd -226th July, 2013
Shilpi Saha	Machine Intelligence	15th-19th July, 2013
	FDP on Algorithms	22th –26th Jul, 2013
	Mobile Computing & WSN	24th - 25th Oct'13
	International Conference on Applied Algorithms	Jan 13--15, 2014
Somenath Sengupta	STTP on MATLAB conducted by NITTTR, KOLKATA	23-12-13 to 03-01-2014

Faculty Name	Workshop/seminar/conference/Faculty Development Programme	Date
Sujoy Saha	Continuing Education Program On "Machine Intelligence", organized by IT dept of HIT-K (Sponsored by TEQIP – II)	July 15 – 19, 2013
	Refresher Course on "Algorithms" organized by CSE dept. of HITK (funded by TEQIP-II)	July 22 – 26, 2013
	Workshop on "Computational Biology and Protein Structure Prediction" organized by dept. of Biotechnology of HITK (funded by TEQIP-II)	September 23 – 27, 2013
	Workshop on "Mobile Computing & Wireless Sensor Networks", organized by CSE dept. of HITK (funded by TEQIP-II)	October 24 – 25, 2013
	International Conference on Applied Algorithms, jointly organized by CSE & IT Dept. of HITK (funded by TEQIP-II)	January, 2014
Satabdi Barman	State of Art perspectives in CSE	12-13 July 2013
	FDP(Refreshers course) on Algorithms organized by Dept of CSE. HITK	22-July-2013 to 26-July-2013
	Machine Intelligence organized by Dept of I.T. HITK	15-19th July 2013
	Workshop on Mobile Computing and wireless and Sensor Networks	October 24-25, 2013
	International Conference on Applied Algorithms	13-15th Jan 2014

**2012-13**

Faculty Name	Workshop/seminar/conference/Faculty Development Programme	Date
Dr. Subhashis Majumder	Workshop on Introduction to Graph and Geometric Algorithm (BESU, Shibpur)	14-16.3.2013
	Workshop on "Complex and Social Networks (HITK)	24.1.2013-25.1.2013
	Privacy Preservation Mechanism in Internet-of-Things (TCS)	21.8.2012
	Cloud Computing (TCS)	10.8.2012
Anindita Kundu	Complex and Social Networks	Jan 24-25, 2013
	Emerging Trends on Communication Systems (ETCOMS)	Feb 2, 2013
Arindam Chatterjee	Complex and Social Networks	Jan 24-25, 2013
	Emerging Trends on Communication Systems (ETCOMS)	Feb 2, 2013
	Faculty Development Programme on "Cloud Computing" (by TCS)	10th August, 2012
	"Selected topics in Computer Science"	12 & 13 Jul '12
Sabyasachee Banerjee	Complex and Social Networks	Jan 24-25, 2013
	International conf. BICTA 2012	Dec 14-16, 2012
Shilpi Saha	Real time and Embedded System	September, 2012
	Workshop on Selected Research Topics in Computer Science State-of-the-Art Perspectives Sponsored by TEQIP-II.	12-13 Jul. 2012
	Wireless Networking, Sponsored by TEQIP-II	17th, 18th & 19th July 2012
	Complex and Social Network, Sponsored by TEQIP-II	24-25 Jan, 2013
Anindita Ghosh	Workshop on "Complex and Social Networks"	24.1.2013-25.1.2013
	Selected Topics in Computer Science: State of the Art Perspectives	12-13.7.2012
	Emerging Trends in Algorithms	27.&29.2.2012
Kalarab Ray	Workshop on "Selected Research Topics in Computer Science: State-of-the-Art Perspectives" (Sponsored by TEQIP-II) at Heritage Institute of Technology, Kolkata	Jul-2012
	Workshop on "Complex & Social Networks" (Sponsored by TEQIP-II) at Heritage Institute of Technology, Kolkata	Jan-2013
Sandip Samaddar	Workshop on "Selected Research Topics in Computer Science: State-of-the-Art Perspectives" (Sponsored by TEQIP-II) at Heritage Institute of Technology, Kolkata	Jul-2012
	Workshop on "Complex & Social Networks" (Sponsored by TEQIP-II) at Heritage Institute of Technology, Kolkata	Jan-2013
Nilanjana G Basu	Graph & Geometric Algorithm	11-13 Feb, 2013
	Complex and social n/ws	24-25 Jan, 2013
	State of the art perspectives in CSE	12-13 July, 2012
	Distributed Systems & n/ws	22.3.12
Partha Basuchowdhuri	Selected Topics in Computer Science: State-of-the-art Perspective (in-house)	July, 2012
	Workshop on Complex and Social Networks (in-house)	Jan, 2013
Reshma Roychowdhuri	Graph & Geometric Algorithm	11-13 Feb, 2013
	Complex and social n/ws	24-25 Jan, 2013
	State of the art perspectives in CSE	12-13 July, 2012

Faculty Name	Workshop/seminar/conference/Faculty Development Programme	Date
Mohuya Byabartta (Kar)	On Selected Research Topics in Computer Science: State-of-the-Art Perspectives	July 12-13, 2012
	Faculty Development Program On "Wireless Networking" Under Technical Education Quality improvement Program (TEQIP – II) Organized By: Department of Information Technology, Heritage Institute of Technology, Kolkata- 700107 (India).	July 17-19, 2012
	Workshop on "Complex and social network"	24-25 Jan. 2013
Rumpa Hazra	Complex and Social Networks	24-25th Jan, 2013
	Privacy Preservation Mechanism in Internet-of-Things	21st Aug, 2012
	Cloud Computing	10th Aug, 2012
Satabdi Barman	Complex and Social Networks	24-25th Jan, 2013
	State of art perspectives in CSE	12-13 July, 2013
	Workshop on Introduction to Graph and Geometric algorithms	14th – 16th Mar, 2013
Somenath Sengupta	Workshop on Complex and Social Network	24-01-2013
Nilina Bera	Workshop on 'Selected Research Topics in Computer Science: A State of the art perspectives'	12th July and 13th July 2012
	Faculty Development Program on "Wireless Networking" organized by Department of I.T., Heritage Institute of Technology.	17th, 18th, and 19th July, 2012.
	Training program titled "Changing role of the teachers" for faculty members of HIT.	21st July, 2012
	Industry - Institute- Interaction Programs conducted by TCS on Cloud Computing and Privacy on Internet of Things.	10th and 21st August, 2012
	Seminar on "Applications of Soft Computing organized by Computer Application Centre, Heritage Institute of Technology.	August 23 and August 24, 2012
	Industry - Institute- Interaction Programs conducted by TCS on Big Data by Mr. Kushal Banerjee and his team.	September 27, 2012
	One day workshop on "HPC & Cloud Awareness" Organized by IBM and RCCIIT sponsored by TEQIP on.	5 October, 2012
	Workshop of Nano-electronics and Biochips on organized by Indian Statistical Institute, Kolkata.	22th December 2012
	Workshop on Complex and Social Networks organized by Department of Computer Science & Engineering, Heritage Institute of Technology.	24th and 25th January 2013
Pratyusa Dash	Complex and Social Networks	24-25th Jan 2013
	State of Art perspectives in CSE	12-13 July 2013

## 18. Student projects

- percentage of students who have done in-house projects including inter-departmental:  
UG: 100%, PG: 90%
- percentage of students doing project in collaboration with industries / institutes:  
UG: Nil, PG: 10%

## 19. Awards / recognition received at national and international level by

- Faculty
  - Prof.(Dr.) Subhashis Majumder has received "Best Poster of Big DataScience, 2014" by Academy of Science & Engineering.
  - Reshma Roychoudhuri has received "Excellent Paper Award" in International Conference on Solid waste management ICONSwm, 2015 jointly organized by Iisc Bangalore and Jadavpur University.
  - Mohuya Byabartta (Kar) has received "Best Paper Award" in International Symposium on Computational and Business Intelligence (ISCBI, 2013).
- Doctoral / Post doctoral fellows: Nil
- Students
  - Rohit Sharma, Nitesh Agarwal, Adnaan Ahmed secured Runners up position by developing an android application Wildfire Organized by TopCoder in 2015.. Wildfire is designed to help a victim, his family members or a volunteer in case of an disaster like situation. Through Wildfire, a victim can spread awareness about the situation; a family member can reach him or a volunteer can assist the victims in that area.



- Mr. Aman Khan and Ms. Sonia Daga, from 2014 batch got Summer Internship offer in Microsoft (India). They will get a stipend of Rs. 25K p.m.
- Aman Khan of 3rd year CSE had received a consolation prize from IBM on January 15th 2013. He is the only student from HIT to clear Part III of the 'IBM Master Mainframe' contest.

20. Seminars / Conferences / Workshops organized and the source of funding (national and international) with details of outstanding participants, if any.

Title	Convener	Date	Source of Funding
The International Conference on Applied Algorithms ICAA 2014	Dr. Subhashis Majumder, Kalarab Roy, Dr. Prosenjit Gupta	13 <sup>th</sup> -15 <sup>th</sup> January, 2014.	Sponsored by TEQIP II
Seminar on Sensor/feature selection with controlled redundancy using neural networks and Optimizing Multiple Objectives for Clustering	Dr. Subhashis Majumder Dr. Dinabandhu Bhandari	18 <sup>th</sup> February, 2015	Sponsored by INAE
Seminar on "Design Automation of Embedded System"	Dr. Subhashis Majumder	14 <sup>th</sup> August, 2015	
Workshop on "IBM Bluemix"	Dr. Subhashis Majumder	17 <sup>th</sup> August, 2015	Sponsored by IBM
Special Lecture on "Finding influencers in the world wide web: PageRank and HITS"	Dr. Dinabandhu Bhandari	06 <sup>th</sup> October, 2015	Sponsored by ACM Student Chapter.
Special Lecture on "Basic Introduction to Quantum Computation"	Dr. Dinabandhu Bhandari	24 <sup>th</sup> September, 2015	Sponsored by ACM Student Chapter.
A Seminar on "How many is too many?" The quest for the sweet spot in collaboration in software development and research	Partha Basu Chowdhury	01 <sup>st</sup> September, 2014	Sponsored by TEQIP II.
Special Lecture on "Generating Top-k Combinations Using a Directed Acyclic Graph"	Dr. Subhashis Majumder	2 <sup>nd</sup> May, 2014	Sponsored by ACM Student Chapter.
Workshop on Android Application Development	Sujay Saha	April 16, 17, 19 and May 03, 2014	Sponsored by TEQIP II
Refresher Course on Algorithms	Somenath Sengupta	22 <sup>nd</sup> July-26 <sup>th</sup> July, 2013	Sponsored by TEQIP II
Workshop on Mobile Computing & Wireless Sensor Networks	Sujay Saha Anindita Kundu	24 <sup>th</sup> -25 <sup>th</sup> October, 2013	Sponsored by TEQIP II
Workshop on "Complex and Social Networks"	Mandakini Majumdar, Partha Basu Chowdhury	24 <sup>th</sup> and 25 <sup>th</sup> January, 2013	Sponsored by TEQIP II
Workshop on "Emerging Trends in Algorithms"	Partha Basu Chowdhury	27 <sup>th</sup> and 29 <sup>th</sup> February, 2012	By way of Registration fee
Workshop on "Selected Research Topics in Computer Science: State-of-the-Art Perspectives"	Mandakini Majumdar, Partha Basu Chowdhury	12 <sup>th</sup> and 13 <sup>th</sup> July, 2012	Sponsored by TEQIP II

## 21. Student profile course-wise:

## ▪ Admission process

Name of the Course	Percentage of Intake	Intake Process
B.Tech in CSE	80%	WBJEE rank wise
	10%	JEE Main rank wise
	10%	Management Quota (State Govt. rule) for WBJEE/JEE main rank holders
	5%	Tuition fee waiver(TFW)
	20%	Lateral entry
M.Tech in CSE	100%	Post-Graduate Entrance Test( PGET) Counseling (Conducted By Maulana Abdul Kalam University of Technology (MAKAUT))

Name of the Course (refer question no. 2)	Applications received	Year	Selected		Pass Percentage	
			Male	Female	Male	Female
B.Tech in CSE	WBJEE/JEE Main/ MQ/ TFW and Lateral entry	2015-16	147	39	Pursuing	Pursuing
		2014-15	104	22	Pursuing	Pursuing
		2013-14	106	20	Pursuing	Pursuing
		2012-13	96	30	Pursuing	Pursuing
M.Tech in CSE	PGET Counseling	2015-16	4	13	Pursuing	Pursuing
		2014-15	18	18	Pursuing	Pursuing
		2013-14	18	15	100%	93.75%
		2012-13	23	12	95.45%	100%

## 22. Diversity of students

Name of the Course (refer question no. 2)	Year	% of students from the College	% of students from the State	% of students from other States	% of students from other countries
B.Tech in CSE	2015-16	NA	59.68	40.32	Nil
	2014-15	NA	67.46	32.54	Nil
	2013-14	NA	79.37	20.63	Nil
	2012-13	NA	88.89	11.11	Nil
	2011-12	NA	89.47	10.43	Nil
M.Tech in CSE	2015-16	Nil	81.25%	18.75%	Nil
	2014-15	Nil	100%	0%	Nil
	2013-14	Nil	94.44%	5.56%	Nil
	2012-13	Nil	94.28%	5.72%	Nil
	2011-12	Nil	94.29%	5.71%	Nil

## 23. How many students have cleared Civil Service, Defense Services, NET, SLET, GATE and any other competitive examinations?

The CSE students have been performing consistently well in the competitive examinations like GATE, CAT and GRE etc. in every year.

Year	GATE	CAT	GRE
2014-2015	8	8	1
2013-2014	5	7	3
2012-2013	8	4	3
2011-2012	4	2	3

A detail of some of our Top performers names are given in the table.

GATE: Top GATE Performers last 4 years

Name	Gate Rank	Year
Sutitha Das	38	2015
Shristy Thakkar	42	2015
Vivek Ghosh	117	2015
Akash Paul	307	2015
Nikki Kumari	190	2014
Soumik Sinha	449	2014
Oindrilla Mondal	708	2014
Arkoprobho Chakraborty	133	2013
Riddhiman Das Gupta	273	2013
Anirban Ghose	320	2013
Sourav Dutta	528	2013
Ayushi Dalmia	553	2013
Satarupa Guha	720	2013
Anirban Chakraborty	486	2012
Soumabho Banerjee	642	2012
Soumen Ghosh	1271	2012
Diptarka Gupta	1543	2012

CAT: Top CAT Performers last 4 years

Name	CAT Percentile	Year
Rahul Kasera	99.33	2015
Anuraag Biswas	99.48	2015
Sweta Mukherjee	97.7	2015
Deep Sankar Saha	92.96	2015
Sayan Ghosh	99.61	2014
Ashish Behati	99.40	2014
Monica Rekhan	98.74	2014
Arnab Roy	98.94	2013

#### Higher studies: (International & National)

Name	University	Program	Pass-out Batch
Sreerupa Nandi	Univ. of New York	MS	2014
Namrata Chowdhury	Univ. Of Florida	MS	2014
Arindom Nandy	Univ. of New York	MS	2014
Subhashis Das	Arizona State Univ.	MS	2013
Debarshi Dutta	Univ. of Southampton, UK	M.Sc.	2012
Alvin Mao	University of Illinois, Chicago	MS, Ph. D	2012
Subharup G. Roy	North Carolina State University, USA	MS, Ph. D	2012
Tania Roy	Clemson University, South Carolina	MS, Ph. D	2011
Manisha Mukherjee	Penn State Univ., Pennsylvania, USA	MS, Ph. D	2011
Abhishek Banerjee	University of Florida	MS, Ph. D	2011
Ayan Dutta	University of Nebraska at Omaha	MS, Ph. D	2011
Suparno Datta	RWTH Aachen	Masters	2011
Moitrey Chatterjee	University of South California	MS, Ph.D.	2011

Name	University	Program	Pass-out Batch
Sutirtha Das	IIT Bombay	M. Tech.	2015
Shristy Thakkar	IIT Bombay	M. Tech	2015
Akash Paul	IIT Kanpur	M. Tech	2015
Soumik Sinha	IIT Kanpur	M. Tech	2014
Shiladitya Pande	IIT Madras	M. S.	2014
Monica Rehan	IIM, Kozhikode	MBA	2014
Oindrila Mondal	IIM, Ranchi	MBA	2014
Arpita Das	IIIT, Hyderabad	M.Tech	2014
Ayushi Dalmia	IIIT, Hyderabad	M.Tech	2013
Diptarka Gupta, Amrita Pal	IIIT Bangalore	M. Tech.	2012
Diptarka Chakraborty	IIT Kanpur	M. Tech.	2011

## 24. Student progression

Student progression	Percentage against enrolled				
	2014-15	2013-14	2012-13	2011-12	2010-11
UG to PG	11%	11%	12%	10%	9%
PG to M.Phil.	--	--	--	--	--
PG to Ph.D.	--	--	--	--	--
Ph.D. to Post-Doctoral	--	--	--	--	--
Employed Campus	89%	85%	67%	89%	89%
selection Other than campus recruitment	--	--	--	--	--
Entrepreneurs					--

## 25. Diversity of staff

Percentage of faculty who are graduates	
of the same parent university	27.27%
from other universities within the State	60.60%
from other universities from other States	12.12%

## 26. Number of faculty who were awarded Ph.D., D.Sc., and D.Litt during the assessment period : 3

Name	Degree Awarded	Year
Dr. Poulami Das	Ph.D	2013
Dr. Aniruddha Dasgupta	Ph.D	2012
Dr. Dinabandhu Bhandari	Ph.D	2012

## 27. Present details about infrastructural facilities

- Library: Yes. Number of Books: 270 & Number of Journals: 4
- Internet facilities for staff and students: Yes
- Total number of class rooms: 13
- Class rooms withy ICT facility: 02 (fixed) + 04 (mobile LCD projectors)
- Students' laboratories: Yes (10)
- Research laboratories: Yes (02)

28. Number of students of the department getting financial assistance from college:

**B.Tech (Govt. Scholarships)**

	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	4 <sup>th</sup> Year
2014-15	6	1	6	4
2013-14	3	8	0	5
2012-13	2	5	3	1
2011-12	8	4	3	3
2010-11	11	3	8	8

**M.Tech (Govt. Scholarships)**

	1 <sup>st</sup> Year	2 <sup>nd</sup> Year
2014-15	2	0
2013-14	1	2
2012-13	2	3
2011-12	3	0

**M.Tech (Teaching Assistantship from TEQIP)**

	1 <sup>st</sup> Year	2 <sup>nd</sup> Year
2014-15	2	9
2013-14	9	7
2012-13	6	6
2011-12	0	6

29. Was any need assessment exercise undertaken before the development of new program(s)? If so, give the methodology.  
NA
30. Does the department obtain feedback from
- faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize it?  
Yes, The Departmental Academic Committee (DAC) meetings and the Board of Studies meetings are forums where faculty members provide their feedback. The issues and policies related to the day to day running of the department are highlighted in the DAC meetings. These are discussed in the meeting itself and necessary steps are taken as per the discussion. Faculty members provide their feedback on the syllabus and curriculum in BOS meetings. These feedbacks provide valuable insights to the course and help formulate the course syllabus.
  - students on staff, curriculum as well as teaching-learning-evaluation and what is the response of the department to the same?  
Yes, Feedback obtained from students regarding the Teaching, Syllabus covering, and Evaluation systems are discussed in the Departmental Academic Committee (DAC) meetings.
  - Alumni and employers on the programmes and what is the response of the department to the same?  
Yes, Changes the curriculum time to time, feedback from alumni and representatives of employers have been considered for curriculum design, Alumni knowledge and experience are further used while framing the list of new elective subjects and their syllabi.
31. List the distinguished alumni of the department (maximum 10)

Name	Designation
Devopriya Banerjee	Software Engineer, Dell
Ritubrata Chatterjee	Application Developer, IBM.
Diptarka Gupta	Software Developer Engineer, Meridium.
Ammad Haider	System Engineer, Infosys
Sourav Kundu	Scientific Officer, NPCL

Sumon Roy	Software Engineer, Infosys.
Priya Ray	System Engineer, Infosys.
Sreerupa Nandi	MS program, Univ. of New York
Namrata Chowdhury	MS program, Univ. Of Florida
Sutirtha Das	M.Tech, IIT Bombay.

32. Give details of student enrichment programmes (special lectures/ workshops/ seminar) with external experts.

Student enrichment programmes	External experts	Date
Special Lecture on "Supply Chain Management"	Prof. Preetam Basu, Operations Management Group, Indian Institute of Management Calcutta	14th January, 2016
Special lectures on "Higher Studies"	Dr. Ajoy K. Datta, Professor, Computer Science & Engineering Department from University of Nevada, Las Vegas	8th January, 2015
Seminar On "Design Automation of Embedded System"	Dr. Prabhat Mishra, Associate Professor, Computer and Information Science and Engineering Department from University of Florida	14th August, 2015
Seminar on "Sensor/feature selection with controlled redundancy using neural networks"	Dr. Nikhil R. Pal, Professor, ECSU, ISI, Kolkata	18th February, 2015
Seminar on "Optimizing Multiple Objectives for Clustering"	Dr. Sanghamitra Bandyopadhyay, Professor, MIU, ISI, Kolkata	18th February, 2015
Special Lecture on "Basic Introduction to Quantum Computation"	Prof. Guruprasad Kar, Physics and Applied Mathematics Unit, Indian Statistical Institute, Kolkata	24th September, 2015
Seminar on "How many is too many? The quest for the sweet spot in collaboration in software development and research"	Dr. Subhajit Datta, Singapore University of Technology and Design	01st September, 2014

33. List the teaching methods adopted by the faculty for different programmes

- Lecture Method
- Tutorial
- Seminar
- Group Discussions
- Brain Storming
- Team Teaching
- Project Demonstration.

34. How does the department ensure that programme objectives are constantly met and learning outcomes monitored?

#### **Programme Educational Objectives : B.Tech(CSE)**

Graduates of the B.Tech programme in Computer Science and Engineering at Heritage Institute of Technology are expected to achieve the following objectives after 4 years of graduation:

- Established themselves as practicing professionals in industries/R & D laboratories/academic

sectors, or have achieved higher educational qualification.

- Adapted themselves with latest developments in the discipline, including application of modern technologies.
- Demonstrated their ability to work as leaders and team members at workplace.

### **Programme Educational Objectives : M.Tech(CSE)**

The Programme Educational Objectives (PEO) formulated by the Department of Computer Science and Engineering for the M.Tech Curriculum is to train post - graduate students

- to meet the ongoing industry needs of practicing professionals within India and abroad.
- to pursue relevant research work in specialized areas.
- to fulfill the growing needs of various technical institutes in India for competent faculties in related subjects.
- to inculcate amongst the graduates the ability to learn on-the-job so that they can cope with the evolving nature of this subject and the dynamic character of the IT industry.

### **Programme Outcomes: B.Tech (CSE)**

Graduates of the B.Tech in Computer Science Engineering programme at Heritage Institute of Technology should attain the following outcomes:

- an ability to apply knowledge of mathematics, science, and engineering,
- an ability to design and conduct experiments, as well as to analyze and interpret data,
- an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability,
- an ability to function on multidisciplinary teams,
- an ability to identify, formulate, and solve engineering problems,
- an understanding of professional and ethical responsibility,
- an ability to communicate effectively,
- the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context,
- a recognition of the need for, and an ability to engage in life-long learning,
- a knowledge of contemporary issues, and
- an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.
- an ability to determine whether a given engineering problem can be solved
- in a more efficient and effective way by the use of computers,
- an ability to apply abstract mathematical concepts in analysis, modeling and design of computer related problems.

### **Programme Outcomes: M.Tech (CSE)**

Post-Graduates of the M.Tech in Computer Science Engineering programme at Heritage Institute of Technology should attain the following outcomes:

- To acquire in-depth knowledge of a specific professional area related to Computer Science and Engineering – Project induces in-depth knowledge assimilation from present state-of-the-art

literature for enabling students to think in an innovative way.

- To analyze / synthesize both existing and new knowledge pertaining to a wide range of computational problems – Once in-depth knowledge is acquired analysis and synthesis is needed to critically appreciate the state-of-the-art methods and thereby leading to an improvement over the present state-of-the-art.
- To analyze complex engineering problems related to applications of computing methods and technologies – Practical implementations lead to engineering problem and thereby solving them the students get to achieve this programme outcome.
- To apply independent judgment for assimilating information based on data analysis and statistical techniques – Project work requires analysis using sophisticated methods and analysis helps in better understanding the problem, or the proposed solution(s).
- To think laterally for conceptualization and solution of engineering problems through appropriate application of computing algorithms – Innovative thinking is needed for solving problems related to project work.
- To arrive at feasible, optimal / feasible solutions after factoring in a diverse range of conflicting factors such as time and/or space complexity of algorithms – Mathematical background and the theoretical knowledge needed to analyze different aspects of an algorithm, is taught in the curriculum. Using that knowledge, students may achieve this program outcome.
- To extract information pertinent to unfamiliar problems through literature survey and computing experiments – This can be derived from knowledge disseminated through classes and lab sessions.
- To apply appropriate methodologies, computational techniques and software tools for designing and conducting experiments - This can be derived from knowledge disseminated through classes and lab sessions.
- To analyze and interpret data obtained through such surveys and experiments using suitable data mining paradigms - This can be derived from knowledge disseminated through appropriate classes and lab sessions.
- To apply appropriate software tools for analysis / modeling of complex engineering activities - This can be derived from knowledge disseminated through classes and lab sessions.
- To contribute effectively in cross-domain groups working on multi-disciplinary projects - This can be derived from knowledge disseminated through classes and lab sessions.
- To adopt management principles / practices for handling projects under various business constraints – Overall monitoring and evaluation of projects, two internal and one external evaluation every semester ensures this programme outcome.
- To communicate effectively with a diverse range of audience in discussions / meetings / presentations – Evaluation of projects involve report writing and presentations, which ensure communication with a diverse range of audience. Publishing conference/ journal papers add to it.
- To compile useful reports / documentations as per applicable standards / guidelines – We encourage students to compile project reports using internationally recognized report writing tools like LaTeX. Standard international thesis templates are used to document project write-ups.
- To adhere to code of conduct and ethical integrity in line with the profession - This can be derived from knowledge disseminated through knowledge acquired from humanities department classes on ethics in profession.
- To adapt to situations demanding self-driven continuous learning – Motivational speeches are arranged and personal counseling is provided by mentors ensure this program outcome.



Continuous assessment of the students using periodic class tests, seminar and internal assessment tests both in practical and theories are conducted twice in a semester.

Students and Alumni feedback	Regarding improvements in syllabi, teaching and learning process, industry oriented programmes, seminars and workshops, Computer Facilities, Internet & Wi-Fi, Sports and Cultural facilities, Classrooms etc.
Rubrics Analysis and Internal Exams	This exercise has been done for each of the courses taught to track progress of the students.
Result analysis	Result analysis is performed for each semester to evaluate in which topic students need improvement.

35. Highlights the participation of students and faculty in extension activities.

- Hands on training programmes are conducted for the students to enhance their skills which can be of use to them when they join the industry.
- Students also participate in the various group activities arranged by the ACM students' chapter of the institute, which is primarily hosted by the CSE department faculties.
- The Grooming and Personality Development programmes are organized with Training & Placement cell which is beneficial for students for placements.
- Students are active member of Rotaract Club, under the parent body Rotary Club of Mahanagar, which conducts programs like blood donation camps, tree plantation, relief and rehabilitation to disaster struck areas etc.

36. Give details of "beyond syllabus scholarly activities" of the department.

1. Students are encouraged to register in HIT-K ACM Student Chapter which is second student chapter of ACM in the state, after ISI.
2. A detailed list of ACM student chapter activities is given below.

Lecture/Seminar/Workshop	Speaker	Date
A four day introductory Workshop on Web Crawling with Python	Sourav Kumar Bose, Riya Roy and Pratik Banerjee (CSE,3 <sup>rd</sup> Year) HITK,ACM Student Chapter	24 <sup>th</sup> –27 <sup>th</sup> Sep,2013
Lecture on Decision trees	Ashmi Banerjee and Suman Datta (CSE,3 <sup>rd</sup> Year) HITK,ACM Student Chapter	25 <sup>th</sup> July 2014
Workshop on R programming.	Sohom Ghosh(CSE,3 <sup>rd</sup> Year), Heritage Institute of Technology and Angan Mitra(CSE,3 <sup>rd</sup> Year), Jadavpur University.HITK,ACM Student Chapter	1 <sup>st</sup> August 2014
Lecture on Hidden Markov Model	Jayant Jaiswal, Shoaib Khan and Rohan Aggarwal (CSE,3 <sup>rd</sup> Year) of Heritage Institute of Technology HITK,ACM Student Chapter	8 <sup>th</sup> August,2014
Lecture on Bayessian Classifiers	Subhojit Basak , Girish Venkatraman, Raina Sengupta (CSE 2nd Year) as a part of SIGKDD. HITK,ACM Student Chapter	
Lecture on Hierarchical Clustering	Prof. Partha Basuchowdhuri and Ashmi Banerjee( CSE 3 <sup>rd</sup> Year) as a part of the SIGKDD	11 <sup>th</sup> Sep, 2014
Hands on Workshop on Python	Satyaki Sikdar (CSE, 3 <sup>rd</sup> Year) , HITK,ACM Student Chapter	28 <sup>th</sup> March,2015

37. State whether the programme/ department is accredited / graded by other agencies. Give details.
1. Department is accredited by AICTE.
  2. CSE B. Tech program accredited by the NBA for 5 years from February 2014.
  3. TCS Grade A+
38. Detail any five Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department
- Strengths
    - Qualified and Experienced faculty as well as Teaching Assistants
    - Very good infrastructure with well-equipped and modern laboratories.
    - Excellent teaching learning environment.
    - Department organizes Soft Skill & Technical Skill development programs for students in coordination with T&P Department.
    - Department regularly organizes Conferences, workshops and seminars for knowledge uplift of faculties and students.
  - Weaknesses
    - A few faculties have Industry exposure.
    - Limited grants from National or International bodies.
    - Limited number of projects and consultancy work.
  - Opportunities
    - The present ranking of the department in the state comes only after IITKGP, J. U. and BESU. Since the department has a good reputation, chances that well-ranked students will take admission here is high. This increases the number of good students and results in more opportunities for good research work and publications.
    - The department has some teachers with 20+ years in Industry. This provides the Dept. the opportunity to build up contacts in the industry and thus pave the way for more consulting opportunities.
    - With ex-students placed in reputed institutions and industry, CSE Dept. students have the scope to get valuable insights of these premier institutes through alumni interaction.
    - The department encourages teachers to pursue research and PhD and provides all possible adjustments to achieve it. Hence, it is a huge opportunity of teachers in this department for self-growth.
    - Funds to buy useful software is generally provided by TEQIP. That provides opportunity for both teachers and students to stay abreast with the latest technologies.
  - Challenges
    - Participation of teachers in conferences held outside the city is limited since budget becomes a constraint. Though TEQIP provides financial help as and whenever possible, but still the real requirement is much more.
    - Because of the active involvement of most of the faculties with classes and laboratories, they get less time to pursue their own research interests. The department should be allowed to recruit on a regular basis to cope with the increasing number of students.

- More teachers are moving to slides as a teaching medium instead of chalk and board. Though the Dept. has 2 fixed LCD projectors and additionally 4 portable projectors and several laptops, it is better to have LCD projectors fixed in every class room.
- Membership to online journals is expensive and could not be provided to all teachers and students. Hence this becomes a roadblock when teachers and students want to download papers relevant to their work.
- Though the Dept. has 2 fixed LCD projectors and additionally 4 portable projectors and several laptops, it is better to have LCD projectors fixed in every class room.
- Some students and teachers wish to overstay after college hours to pursue their work. But location of college and lack of transport from the nearest junction (ruby) does not allow them to do so. The public transport used by students from Ruby to college is also not adequate. Not only CSE Dept., but every other Dept. faces this challenge.
- Membership to online journals is expensive and could not be provided to all teachers and students. Hence this becomes a roadblock when teachers and students want to download papers relevant to their work.

39. Future plan of the department

- To develop E-classroom.
- All faculties to join active research and complete their Ph. D.
- More students to join higher studies in international institutes of repute directly after finishing the program
- To become center of excellence in research in the following focused areas – Data Analysis, Algorithms etc.
- To develop interaction with different institute and industries for research and consultancy.



1. Name of the Department & Its year of establishment : Department of Electronics and Communication Engineering  
2001
2. Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., etc.) : UG:-B.Tech (Electronics and Communication Engineering)  
PG : -M.Tech (Communications)  
M.Tech (Microelectronics & VLSI Design)
3. Interdisciplinary courses and departments involved:  
The list of interdisciplinary courses and departments involved for imparting theoretical as well as lab classes to the B. Tech and M. Tech students of ECE is as follows:

Interdisciplinary Courses	Departments Involved
Business English, Human Values and Professional Ethics, Economics for Engineers, Indian Culture & Heritage, Principles of Management, Organisational Behaviour	Humanities
Chemistry, Basic Environmental Engineering and Ecology	Chemical Engineering
Mathematics, Numerical Methods	Mathematics
Basic Electrical Engineering, Circuit Theory	Electrical Engineering
Engineering Mechanics, Engineering Thermodynamics and Fluid Mechanics	Mechanical Engineering
Computer Architecture, Data Structure & C, DBMS, OOP	Informational Technology
Introduction to Computing, Programming Language	Computer Science and Engineering
Advanced Mathematics	Mathematics

4. Annual/ semester/choice based credit system :

All the programmes in this Department are designed using Semester Based Credit System.

5. Participation of the department in the courses offered by other departments

The faculty members of this department handle the related courses offered by other Departments – Department of Mechanical Engineering, Civil Engineering, Electrical Engineering, Applied Electronics and Instrumentation Engineering, Information Technology, Computer Science and Engineering, Chemical Engineering and Biotechnology.

Courses Offered	Name of the Department
Basic Electronics Engineering Digital Logic and Computer Organization VLSI Design Automation (Free Elective) Control Systems & Engineering(Free Elective) Principles of Communication systems (Free Elective) Cellular and Satellite Communications (Free Elective) VLSI Design (Free Elective) VLSI Testing & Verification (Free Elective)	CSE
Basic Electronics Engineering Control Systems and Engineering (Free Elective) Cellular and Satellite Communications(Free Elective) VLSI Design (Free Elective)	IT
Basic Electronics Engineering	AEIE
Basic Electronics Engineering	CE
Basic Electronics Engineering	ME
Basic Electronics Engineering	EE
Basic Electronics Engineering	CHE
Basic Electronics Engineering	BT

## 6. Number of teaching posts sanctioned and filled (Professors/Associate Professors/Asst. Professors)

	Sanctioned	Filled
Professor	6	3
Associate Professors	10	3
Asst. Professors	26	35
Total	42	41

## 7. Faculty profile with name, qualification, designation, specialization (D.Sc./D.Litt./ Ph.D./M.Phil., etc.)

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. students guided in the last 4 years
Dr. P. Banerjee	Ph. D.	Prof. & HOD, Dean (Student Affairs)	Electronics & Telecomm. Engg.	33	1 Mr. Sabyasachi Chatterjee
Dr. S. Biswas	Ph. D., P.R.S.	Dy. Director & Prof.	RadioPhysics & Electronics	41	Nil
Dr. P. K. Ray	Ph. D.	Prof.	RadioPhysics & Electronics	42	Nil
Mr. S. Sen	M. E.	Assoc. Prof.	Electronics & Telecomm. Engg.	38	Nil
Dr. A. Sen	Ph. D.	Assoc. Prof.	Electronics & Telecomm. Engg.	32	Nil
Mr. K. Datta	M. Tech	Assoc. Prof.	Electronics & Elec. Engg.	19	Nil
Ms. S. Bhattacharya	M. Tech	Asst. Prof.	Radiophysics & Electronics	18	Nil
Ms. S. Datta	M. Tech	Asst. Prof.	Electronics & Telecomm. Engg.	20	Nil
Mr. A. Ray	M. Tech	Asst. Prof.	Radiophysics & Electronics	19	Nil
Mr. D. Mondal	M. E.	Asst. Prof.	Electronics & Telecomm. Engg.	12	Nil
Mr. A. Kundu	M. Tech	Asst. Prof. & DC	VLSI design & Microelec. Tech.	9	Nil
Ms. A. Adak	M. Tech	Asst. Prof.	Nanoscience & Tech.	8	Nil
Dr. M. Kar	Ph. D	Asst. Prof.	Control System Engg.	10	Nil
Mr. S. Chatterjee,	M. Tech	Asst. Prof.	VLSI design & Microelec. Tech.	9	Nil
Mr. S. Chakraborty	M. Tech	Asst. Prof.	VLSI design & Microelec. Tech.	7	Nil
Mr. S. S. Bhowmick	M. Tech	Asst. Prof.	VLSI design & Microelec. Tech.	5	Nil
Mr. R. R. Pal	M. Tech	Asst. Prof.	RadioPhysics & Electronics	8	Nil

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. students guided in the last 4 years
Mr. S. Mondal	M. Tech	Asst. Prof.	Technology in Telecomm. Engg	6	Nil
Mr. M. Shah Nawaz,	M. E	Asst. Prof.	Electronics & Telecomm. Engg.	5	Nil
Ms. M. Mukherjee	M. Tech	Asst. Prof.	VLSI design & Microelec. Tech.	8	Nil
Mr. A. Das	M. Tech	Asst. Prof.	Electronics & Comm. Engg.	4.9	Nil
Mr. T. Chakraborty	M. Tech	Asst. Prof.	Electronics & Comm. Engg.	27.5	Nil
Ms. C. Roy	M. E	Asst. Prof.	Control system Engg.	4	Nil
Mr. S. Chatterjee	M. Tech	Asst. Prof.	Electronics & Comm. Engg.	2.5	Nil
Ms. P. Agarwalla	M. Tech	Asst. Prof.	RadioPhysics & Electronics	3.5	Nil
Mr. D. P. Samajdar	M. Tech	Asst. Prof.	RadioPhysics & Electronics	4	Nil
Ms. P. Mostafa	M. Tech	Asst. Prof.	VLSI design & Microelec. Tech.	5	Nil
Ms. D. Sadhu	M. Tech	Asst. Prof.	Electronics & Communication Engg.	3.5	Nil
Mr. O. Biswas	M. Tech	Asst. Prof.	VLSI design & Microelec. Tech.	9	Nil
Dr. S. Pandit	Ph. D	Asst. Prof.	RadioPhysics & Electronics	11	Nil
Mr. S. K. Raj	M. E	Asst. Prof.	Electronics & Telecomm. Engg.	11	Nil
Ms. K. Mukherjee	M. Tech	Asst. Prof.	RadioPhysics & Electronics	7	Nil
Dr. S. Dhar	Ph. D	Asst. Prof.	Electronics & Telecomm. Engg.	6	Nil
Ms. A. Banerjee	M. Tech	Asst. Prof.	RadioPhysics & Electronics	2.5	Nil
Ms. T. Das	M. Tech	Asst. Prof.	RadioPhysics & Electronics	2.5	Nil
Dr. S. Dasgupta	Ph. D	Asst. Prof.	RadioPhysics & Electronics	17	Nil
Dr. A. Maity	Ph. D	Asst. Prof.	Electronics & Comm. Engg.	6	Nil



**Adjunct Faculty**

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. students guided in the last 4 years
Mr. Rupesh Chakraborty	M.Tech	Adjunct Asst. Prof.	Electronics & Comm. Engg.	1	Nil
Ms. Annapurna Mondal	M.Tech	Adjunct Asst. Prof.	VLSI design & Microelec. Tech.	1	Nil
Mr. Sumit Ghosh	M.Tech	Adjunct Asst. Prof.	Electronics & Comm. Engg.	26	Nil
Mr. Sutanay Sant	M.Tech	Adjunct Asst. Prof.	Electronics & Comm. Engg.	1	Nil

8. Percentage of classes taken by temporary faculty – programme-wise information : Nil

9. Programme-wise Student Teacher Ratio:

Name of the Programme	Student-Teacher Ratio
B. Tech (ECE)	16.88:1
M.Tech (Communications)	12:1
M.Tech (Microelectronics & VLSI Design)	12:1

10. Number of academic support staff (technical) and administrative staff: sanctioned and filled

Number of	Actual
Academic support staff (Technical)	14
Administrative Staff	-

11. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Mention names of funding agencies and grants received project-wise. : Nil

12. Departmental projects funded by DST-FIST; DBT, ICSSR, etc.: Project Lab: sponsored by MODROBS, AICTE

Name of the Project	Funding Agency	Amount (in Rs.)	Principal Investigator	Status
MODROBS Ref no.: F.NO 8024/RID/BOR/MOD/882/9/10 dated 12/21/2009	AICTE	15 lakhs	Mr. Siladitya Sen	Completed
RPS Ref No.: 8023/RID/RPS-24/Pvt (IIPolicy)/2011-12	AICTE	9 lakhs	Mr. Siladitya Sen	Completed
IIPC Ref. No.: RIFD/IIPC/30/2010-11 dated 15.05.2013	AICTE and TEQIP	7 lakhs	Dr. Prabir Banerjee	Completed



## 13. Research facility / centre with:

- State recognition Nil
- National recognition Nil
- International recognition Nil

## 14. Publications:

- Number of papers published in peer reviewed journals (national / international): 69

	2014-15	2013-14	2012-13	2011-12	2010-11
<b>Journals (National &amp; International)</b>	27	15	17	10	10
<b>Book Chapters</b>	4	6	2	2	1
<b>Patents</b>	Nil	Nil	Nil	Nil	Nil

- Monographs: Nil
- Chapter(s) in Books: 15

Author	Chapter Title	Book Title	Publisher	Year
Dip Prakash Samajdar	Calculation of Valence Band Structure of $\text{GaSb}_{1-x}\text{Bi}_x$ using Valence Band Anticrossing Model in the dilute Bi regime	Recent Trends in Materials and Devices ISBN 978-3-319-29096-6	Springer International Publishing	2015
Dip Prakash Samajdar	Effect of bismuth incorporation on the Growth Kinetics and Valence Band Structure for $\text{InP}_{1-x}\text{Bi}_x$ grown using Liquid Phase Epitaxy	Recent Trends in Materials and Devices ISBN 978-3-319-29096-6	Springer International Publishing	2015
Dip Prakash Samajdar	Valence Band Anticrossing Model for $\text{InAs}_{1-x}\text{Bi}_x$ by k-p method	Foundations and Frontiers in Computer, Communication and Electrical Engineering ISBN 9781138028777 - CAT# K27289	CRC Press, USA, Taylor & Francis Group	2015
Anisha Halder	Computing with Word Model for Emotion recognition Using Interval Type-2 Fuzzy Sets	Synthesizing Human Emotion in Intelligent Systems and Robotics ISBN: 13: 9781466672789	IGI Global	2015
Anisha Halder	Emotion Recognition from Facial Expressions Using Type-2 Fuzzy Sets	Advances in Emotion Recognition ISBN: 978-1-118-13066-7	Wiley-Blackwell	2014
Anisha Halder	A Review of Pattern Recognition Techniques	Advances in Emotion Recognition ISBN: 978-1-118-13066-7	Wiley-Blackwell	2014
Prativa Agarwalla	Effect of Packing Density on Crosstalk in On-chip Optical Interconnects	Physics of Semiconductor Devices ISBN: 978-3-319-03002-9, pp 823-825	Springer International Publishing	2014
Soumyo Chatterjee	Side Lobe Reduction and Beamwidth Control of Amplitude Taper Beam Steered Linear Array Using Tschebyscheff Polynomial and Particle Swarm Optimization	Advanced Computing, Networking and Informatics, ISBN:978-3-319-07353-8, Vol. 1, pp. 661-668	Springer International Publishing	2014

Author	Chapter Title	Book Title	Publisher	Year
Dip Prakash Samajdar	Calculation of Direct $E_0$ Energy Gaps for III–V–Bi Alloys Using Quantum Dielectric Theory	Physics of Semiconductor Devices, Environmental Science and Engineering 2014, ISBN: 978-3-319-03002-9, pp. 779-781	Springer International Publishing	2014
Dip Prakash Samajdar	Transport of Nitrogen Atoms During the Liquid Phase Epitaxial Growth of InGaAsN	Physics of Semiconductor Devices, Environmental Science and Engineering 2014, ISBN: 978-3-319-03002-9, pp. 783-785	Springer International Publishing	2014
Anisha Halder	A Fuzzy Condition Sensitive Hierarchical Algorithm for Approximate Template Matching in Dynamic Image Sequence	Modern Image Processing Algorithms Employing Computational Intelligence Techniques ISBN: 978-3-642-30620-4, pp. 155-172	Springer	2013
Anisha Halder	A Computational Intelligence Approach to Emotion Recognition from the Lip Profile of a Subject	Modern Image Processing Algorithms Employing Computational Intelligence Techniques ISBN: 978-3-642-30620-4, pp. 281-298	Springer International Publishing	2013
Srabanti Pandit	Study of Deep Sub-Micron VLSI MOSFETs through TCAD	Technology Computer Aided Design: Simulation for VLSI MOSFET, ISBN: 978-1-4665-1265-8, pp. 237-266	CRC Press, USA, Taylor & Francis Group	2013
Atanu Kundu	Process Simulation of a MOSFET using TSUPREM-4 and MEDICI	Technology Computer Aided Design: Simulation for VLSI MOSFET, ISBN: 978-1-4665-1265-8, pp.363	CRC Press, USA, Taylor & Francis Group	2013
Anisha Halder	Emotion Recognition from Facial Expression and Electroencephalogram Signals	Cross-Disciplinary Applications of Artificial Intelligence and Pattern Recognition: Advancing Technologies ISBN: 9781613504291, pp. 310-337	IGI Global	2010

- Editing Books : Nil
- Books with ISBN numbers with details of publishers:

Author	Book Title	Publisher	Year
Sabyasachi Chatterjee and Siladitya Sen	Reduction of Shadowing Effects in Dense Urban Wireless Modelling ISBN: 978-3-659-31107-9	LAMBERT Academic Publishing	2013

- Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.) : N/A
- Citation Index-range/average: 1-58
- SNIP :
- SJR :

- Impact factor-range/average: 0.245-4.437
- h-index :

15. Details of patents and income generated: Nil

16. Areas of consultancy and income generated: Nil

17. Faculty recharging strategies:

The faculty members of ECE Department are required to attend conference, workshops, faculty development programmes, winter and summer schools and pedagogy trainings not only to enhance their teaching and research skills but also to keep pace with the technological advancements taking place worldwide. Such programmes are organized by ECE as well as other departments for the career advancement of the faculty members. The faculty members also attend such programmes organized by institutes of national repute such as the IITs, NITs, etc.

- The various activities under this scheme are as follows:
  - Faculty members are encouraged to publish technical papers in National and International conferences. The cost of travel, registration and publication are offered by the Institute.
  - Seminars/ Workshops and FDPs are conducted by the faculty members by inviting industry experts, researchers and academicians.
  - Faculty members also participate in the FDPs organized by other Institutes.
  - Various Orientation programmes and Pedagogy Trainings are also organized for the faculty members.

Faculty Name	Workshop/Seminar/Conference/FDP	Date
Ms. Prativa Agarwalla, Assistant Prof.	International Conference on Computers and Devices for Communication (CODEC 2015) International Conference on Microwave and Photonics 17th International Workshop on the Physics of semiconductor Devices (IWPSD 2013)	16th –18th December, 2015 12th – 13th December, 2015 10 <sup>th</sup> -13 <sup>th</sup> December, 2013
Mr. Dip Prakash Samajdar, Assistant Prof.	3rd International Conference on foundation and frontiers in computers, Communication and Electrical Engineering (C2E2-2016) 17th International Workshop on the Physics of semiconductor Devices (IWPSD 2013)	15th -16th January, 2016 10 <sup>th</sup> -13 <sup>th</sup> December, 2013
Mr. Orijit Biswas Assistant Prof.	3rd International Conference on foundation and frontiers in computers, Communication and Electrical Engineering (C2E2-2016)	15th -16th January, 2016
Mr. Abhishek Das, Assistant Prof.	Short term course on Advance in VLSI Signal Processing	23rd -27th December, 2015
Mr. Shib Sankar Bhowmick, Assistant Prof.	6th Joint International Conference on Swarm, Evolutionary and Memetic Computing (SEMCCO 2015)	19th – 20th December, 2015
Mr. Soumyo Chatterjee, Assistant Prof.	IEEE Applied Electromagnetic Conference- 2015 Short term course on 'Faculty Development Programme for effective Teaching' IIT KGP IEEE Applied Electronics Conference (AEMC)-2013 IEEE Indian Antenna Week, 2013 International Conference on Communication Circuits & Systems (IC's-2012) 2 <sup>nd</sup> National conference on Electronics Communication & Signal process	18th – 21st December, 2015 17 <sup>th</sup> -19 <sup>th</sup> November, 2014  18 <sup>th</sup> -20 <sup>th</sup> December, 2013 3 <sup>rd</sup> -7 <sup>th</sup> June, 2013 5 <sup>th</sup> – 7 <sup>th</sup> October 2012 18 <sup>th</sup> – 23 <sup>rd</sup> September 2012
Mr. Tapas Chakraborti Assistant Prof.	International Conference on power and advance control Engineering (IEPACE-2015) International conference on Advance Materials and Energy Technology (ICAMET 2014) International Conference on Industrial Engineering Science and Application 2014 (IESA-14)	13 <sup>th</sup> - 14 <sup>th</sup> August, 2015 17 <sup>th</sup> -19 <sup>th</sup> December, 2014 1 <sup>st</sup> – 5 <sup>th</sup> April, 2014
Mr. Sabyasachi Chatterjee, Assistant Prof.	International Conference on Computational Intelligence & Networks, 2015	12 <sup>th</sup> - 13 <sup>th</sup> January, 2015
Dr. S. Biswas Dy. Director	International Conference on Computing, Communication and Manufacturing (ICCCM 2014) 2012 International Conference on Communications, Devices & Intelligent Systems (CODIS)	22 <sup>nd</sup> -23 <sup>rd</sup> December, 2014 28 <sup>th</sup> – 29 <sup>th</sup> December 2012

Faculty Name	Workshop/Seminar/Conference/FDP	Date
Dr. Anindya Sen, Associate Prof.	Short term course on 'Faculty Development Programme for effective Teaching' IIT KGP	17 <sup>th</sup> -19 <sup>th</sup> November, 2014
Mr. Soumya Kanti Raj, Assistant Prof.	Short term course on 'Faculty Development Programme for effective Teaching' IIT KGP	24 <sup>th</sup> -26 <sup>th</sup> September, 2014
Mr. Siladitya Sen, Associate Prof.	International Conference on Advances in Computer Science, Engineering & Technology (ICACSET 2014)	12 <sup>th</sup> -15 <sup>th</sup> January 2014
Ms. Sayantani Datta, Assistant Prof.	Quality based Evaluation in the process of Accreditation for technical & Management Institutions	16 <sup>th</sup> September, 2013
Ms. Chandrima Roy, Assistant Prof.	2nd International Conference on computing, Communication and Sensor Network [CCSN] International Conference on Advances in Computer, Electronics and Electrical Engineering (CEEE) International Conference on Communication Circuits & Systems (IC's-2012)	22 <sup>nd</sup> -24 <sup>th</sup> November, 2013 27 <sup>th</sup> – 28 <sup>th</sup> April, 2013 5 <sup>th</sup> – 7 <sup>th</sup> October 2012
Ms. Mousiki Kar, Assistant Prof.	Texas Instruments India Educator's Conference (THEC) 2013	4 <sup>th</sup> -7 <sup>th</sup> April, 2013

#### 18. Student projects

- percentage of students who have done in-house projects including inter-departmental:  
UG: 100%,
- percentage of students doing project in collaboration with industries / institutes:
  - A very few number of students are involved in projects in collaboration with industries/institutes
  - Association of External Institutions for student project work:
    1. ECE, M. Tech. (Communications) had worked with CDAC, Kolkata in 2010 for PG projects.
    2. B.Tech. students (two) had worked at JU for part of their projects in 2014-15.
    3. B.Tech. students (two) had worked at JU in for part project in 2014-15.
    4. B.Tech. students (two) are working at SAMEER, Kolkata in 2015-16.
  - Faculty members who have facilitated the interactions with the external institutions (in the same order) are as follows:
    1. Prof. Sayantani Datta
    2. Prof. Sayantan Dhar
    3. Prof. Anisha Halder Roy
    4. Prof. Soumyo Chatterjee
  - They had interfaced with the institutions and guided the students to use the external institutes' facilities.

#### 19. Awards / recognition received at national and international level by

- Faculty
  - Mr. Shibshankar Bhowmick, Assistant Professor, Dept. of ECE was awarded the Erasmus Mundus Mobility with Asia (EMMA) West grant/scholarship in 2012, for a period of eighteen months from December, 2012 to May, 2014 in the frame work of European Union Program to carry out research work at the University of Evora, Portugal.
  - Mr. Atanu Kundu, Assistant Professor, Dept. of ECE, received 'All Round Excellent Performance in Teaching and Research' Award at Heritage Institute of Technology
  - Dr. Sayantan Dhar, Assistant Professor, Dept. of ECE, was invited to deliver technical lecture entitled "Dielectric Resonator Antennas: Some New Insights in Wideband and Multiband Antenna Design Paradigm." under the auspices of a joint project between the Department of Science and Technology, Republic of India and Ministry of Higher Education & Scientific Research, Republic of Tunisia at University of Tunis, El Manar during

December, 2014.

➤ Mr. Atanu Kundu has been elected as the Chairman of IEEE EDS, Calcutta Chapter in 2015.

▪ **Doctoral / Post doctoral fellows:**

Prof. Sabyasachi Chatterjee, an Assistant Professor in the ECE department, is pursuing his research work under the joint supervision of :

1. Dr. Prabir Banerjee, Professor and Head, ECE Department, Heritage Institute of Technology

2. Dr. Mita Nasipuri, Professor, CSE Department, Jadavpur University.

The dissertation topic is Cognitive Radios and better spectrum utilization. Major part of the research work is taking place in the ECE department of Heritage Institute and Qual-net software is one of the key simulation package which is helping the work a lot. This simulation software was purchased by MODROBS fund.

▪ **Students**

➤ Ajay Kumar Singh and Snehasis Pal won the second prize in the event Man vs Nature at the Techno-Management Fest KRTANSH-2011 at KIIT Bhubaneswar

➤ Arka De and Jyotirmoy Guha participated in Texas Instruments sponsored Analog Design Contest for Engineering Colleges and were one of the Winners in Phase I in 2013

➤ B.Tech first year student of ECE department, Mayurakshi Mukherjee has won silver medal in the 36th Junior National Rowing Championship organized by Rowing Federation of India in 2015

20. Seminars / Conferences / Workshops organized and the source of funding (national and international) with details of outstanding participants, if any.

Seminars/ Conferences/ Workshops	Date	Title	Sponsors	Name of the Speaker
Seminars	17 <sup>th</sup> April, 2015	Importance of Calibration in Quality Assurance	IEEE EDS Chapter Kolkata & ECE Dept, Heritage Inst. of Technology, Kolkata	Dr. Sivaji Chakravorti, JU
	17 <sup>th</sup> April, 2015	Design Challenges for Low power VLSI Circuits	IEEE EDS Chapter Kolkata & ECE Dept, Heritage Inst. of Technology, Kolkata	Dr. Subir Kr. Sarkar, JU
	23 <sup>rd</sup> April, 2014	NANOELECTRONICS: A Bottom-up Approach	IEEE EDS Chapter Kolkata & ECE Dept, Heritage Inst. of Technology, Kolkata	Kaushik Roy, Purdue University, USA
	9 <sup>th</sup> April, 2014	Approximate Computing for Energy-efficient Error-resilient Multimedia Systems	IEEE EDS Chapter Kolkata & ECE Dept, Heritage Inst. of Technology, Kolkata	Kaushik Roy, Purdue University, USA
	8 <sup>th</sup> April, 2014	Beyond Charge-Based Computing	IEEE EDS Chapter Kolkata & ECE Dept, Heritage Inst. of Technology, Kolkata	Kaushik Roy, Purdue University, USA
	18 <sup>th</sup> December, 2013	Resistance Random Access Memory (RRAM)-Devices (Memory and Selection Device) to Cross Point Array Based Circuits.	IEEE EDS Chapter Kolkata & ECE Dept, Heritage Inst. of Technology, Kolkata	Prof. Udayan Ganguly, IIT, Bombay.
	4 <sup>th</sup> September, 2013	Next Generation 2D Channel Material based MOSFETs: Overview and Simulation Tools	IEEE EDS Chapter Kolkata & ECE Dept, Heritage Inst. of Technology, Kolkata	Dr. Amretashis Sengupta, IISC, Bangalore
	11 <sup>th</sup> . March, 2013	Short channel effects in MOSFETs	IEEE EDS Chapter Kolkata & ECE Dept, Heritage Inst. of Technology, Kolkata	Prof. Swapnadip De, MSIT, Kolkata
	11 <sup>th</sup> . March, 2013	Challenges of VLSI Interconnects	IEEE EDS Chapter Kolkata & ECE Dept, Heritage Inst. of	Prof. Debaprasad Das, MSIT, Kolkata

Seminars/ Conferences/ Workshops	Date	Title	Sponsors	Name of the Speaker
	16 <sup>th</sup> . October, 2012	MOSFET and Interconnect Inductor Modeling for CMOS VLSI Design"	Technology, Kolkata IEEE EDS Chapter Kolkata & ECE Dept, Heritage Inst. of Technology, Kolkata	Prof. A. B. Bhattacharya
	18th-19th. April, 2012.	Two day workshop on Sixth Sense Botz"— Vision and Gesture Control Robotics Workshop,	ARK Technosolutions, IEEE EDS Chapter, Kolkata Section, IEEE EDS HIT Student Chapter	Prof. R. Jindal, University of Louisiana, USA Dr. M. K. Radhakrishnan, NanoRel Corporation
Workshops	2-4 <sup>th</sup> April 2014	Dakshh 2014, the TECHNO-MANAGEMENT FEST	IEEE EDS HIT Student Chapter & Heritage Inst. of Technology, Kolkata	
	3rd. March, 2012	Tech Fest- Symphony	IEEE EDS HIT Student Chapter & Heritage Inst. of Technology, Kolkata	
FDP	November 12-13, 2013	Faculty development program on VLSI Design and Technology	TEQIP-II and ECE Dept, Heritage Inst. of Technology, Kolkata	i) Dr. Madhab Desai, IIT Bombay, ii) Dr. Susanta Sen, CU iii) Dr. S. Kolay, ISI Kolkata iv) Dr. C.K. Sarkar, JU
	August 21-22, 2012	Faculty development program on Reliable Microwave Communication	TEQIP-II and ECE Dept, Heritage Inst. of Technology, Kolkata	i) Prof. K. S. Dasgupta, IIST, T'puram ii) Dr. Rajeswari Chattopadhyay, Director, NTA iii) Mr. Alak Chattopadhyay, Director, NTA, Bangalore
Conferences	16-17 <sup>th</sup> Jan, 2014	International Conference on Electronics Communication and Instrumentation, (ICECI -2014)	TEQIP-II & ECE Dept, Heritage Inst. of Technology, IEEE EDS Chapter Kolkata	i) Dr. Alex Mason, UK ii) Dr. Samar K. Saha, Director, Compact Modeling Inc, USA iii) Dr. Sikharesh Majumder, University of Saskatchewan, Canada
	18 <sup>th</sup> April, 2011	IEEE EDS Student Paper Conference (IESPC-2011)	IEEE EDS Chapter, Kolkata & ECE Dept, Heritage Inst. of Technology, Kolkata	Dr. C. K. Sarkar, JU

## 21. Student profile course-wise:

## ▪ Admission process

Name of the Course	Percentage of Intake	Intake Process
B. Tech in ECE	80%	WBJEE Merit list
	10%	JEE (Main) Merit list
	10%	Management Quota for WBJEE/JEE (Main)
	5% TFW	WBJEE Rank holders
	20% (Lateral Entry in 2nd year) supernumerary	JELET Merit list
M. Tech in Communication	100%	PGET Counselling (Conducted By MAKAUT)
M. Tech in Microelectronics & VLSI Design	100%	PGET Counselling (Conducted By MAKAUT)

Name of the Course (refer question no. 2)	Applications received	Year	Selected		Pass Percentage	
			Male	Female	Male	Female
B.Tech (ECE)	WBJEE/JEE Main/MQ/TFW	2015-16	154	34	Pursuing	
		2014-15	154	41	Pursuing	
		2013-14	148	32	Pursuing	
		2012-13	159	36	Pursuing	
M.Tech (Communication)	PGET	2015-16	9	9	Pursuing	
		2014-15	8	10	Pursuing	
		2013-14	9	7	Pursuing	
		2012-13	7	10	Pursuing	
M. Tech (Microelectronics and VLSI Design)	PGET	2015-16	7	4	Pursuing	
		2014-15	11	7	Pursuing	
		2013-14	7	6	100	100
		2012-13	12	5	100	100

## 22. Diversity of students

Name of the Course (refer question no. 2)	Year	% of students from the College	% of students from the State	% of students from other States	% of students from other countries
B.Tech in ECE	2015-16	-	57.97	42.03	-
	2014-15	-	70.37	29.63	-
	2013-14	-	85.11	14.89	-
	2012-13	-	92.02	7.98	-
	2011-12	-	85.72	14.28	-
M.Tech in Communications	2015-16	-	94.45	5.55	-
	2014-15	-	94.45	5.55	-
	2013-14	-	100	0	-
	2012-13	-	88.24	11.76	-
	2011-12	-	100	0	-
M.Tech in Microelectronics and VLSI Design	2015-16	-	90.91	9.09	-
	2014-15	-	88.89	11.11	-
	2013-14	-	100	0	-
	2012-13	-	100	0	-
	2011-12	-	94.12	5.88	-

## 23. How many students have cleared Civil Service, Defense Services, NET, SLET, GATE and any other competitive examinations?

The Students of ECE have consistently shown outstanding performance in competitive exams such as GATE, CAT and GRE for the last four years.

Year	GATE	CAT	GRE	TOEFL	Total	% appeared	% qualified	Batch Size
2011	3	7	5	5	20	39.66	17.24	116
2012	6	5	4	4	19	36.84	16.66	114
2013	8	6	5	5	24	40.52	20.69	116
2014	7	4	4	4	19	26.95	13.48	141
2015	5	5	4	4	18	13.76	8.25	218

## List of Top Performers in the Competitive Exams

Name of the Student	Competitive Exam	Rank/Score	Year
Shri Rochisman Datta	CAT	99.63 percentile	2015
Shri Arnab Kumar Banerjee	CAT	97.65 percentile	2015
Shri Suraj Ranjan	GATE	AIR 52	2013
Shri Saroj Kr. Jha	GATE	AIR 659	2013
Shri Arijit Mukhopadhyay	GATE	AIR 1124	2013
Ms. Sabarni Sen	CAT	99.78 percentile	2013
Shri Soumyo Konar	CAT	97.60 percentile	2013
Ms. Niyati Jhunhunwala	CAT	98.53 percentile	2012
Ms. Amrita Das	CAT	94 percentile	2012
Shri Sourav Chatterjee	GATE	AIR 67	2012
Ms Adrish Chakravarty	GATE	AIR 314	2012
Shri Ankit Ganguly	GATE	AIR 317	2012
Shri Satadri Chanda	GATE	AIR 1200	2012
Shri Akhil KAmath	GRE	324/340	2012
Shri Sayan Lahiri	GRE	320/340	2012
Shri Ankit Ganguly	GRE	317/340	2012
Ms. Adrish Chakravarty	GRE	314/340	2012
Shri Satadri Chanda	GRE	1200/1600	2012
Ms. Ipsa Kalra	CAT	99.12 percentile	2012

## 24. Student progression

Student progression	Percentage against enrolled				
	2014-15	2013-14	2012-13	2011-12	2010-11
UG to PG	8%	9%	8%	6%	12%
PG to M.Phil.	--	--	--	--	--
PG to Ph.D.	--	--	--	--	--
Ph.D. to Post-Doctoral	--	--	--	--	--
Employed	84%	71%	58%	92%	75%
Campus selection	--	--	--	--	--
Other than campus recruitment	--	--	--	--	--
Entrepreneurs	--	--	--	--	--

## 25. Diversity of staff

Percentage of faculty who are graduates	
of the same parent university	34.21%
from other universities within the State	52.63%
from other universities from other States	12.12%

## 26. Number of faculty who were awarded Ph.D., D.Sc., and D.Litt during the assessment period : 7

Sl. No.	Faculty name	Degree Awarded	Year
1	Dr. Mousiki Kar	Ph. D	2015
2	Dr. Sayantan Dhar	Ph. D	2015
3	Dr. Annesha Maity	Ph. D	2015
4	Dr. Srabanti Pandit	Ph. D	2014
5	Dr. Shounak Dasgupta	Ph. D	2014
6	Dr. Anisha Halder Roy	Ph. D	2013
7	Dr. Prabir Banerjee	Ph. D	2012



## 27. Present details about infrastructural facilities

- Library: The Departmental library has a stock of 346 books and Project Reports amounting to 50 approximately.
- Internet facilities for staff and students: All the Departmental laboratories containing computers are provided with internet facility (through LAN). In addition to this, there is also Wi-Fi facility which can be accessed both by the students and staff.
- Total number of class rooms: 15 (ICT - 9 rooms, CB - 6 rooms)
- Class rooms withy ICT facility: ICT facility is installed in one classroom (ICT 408). In addition to this, there is portable LCD projector which can be used in a number of rooms as is required by the faculty members.
- Students' laboratories: 11 (ICT- 7 labs, CB- 4 labs)
- Research laboratories: 1 (ICT 503)

## 28. Number of students of the department getting financial assistance from college:

## ▪ Financial Assistance from State Government

Course	Course Year	2014-15	2013-14	2012-13	2011-12
B.Tech (ECE)	1st year	4	2	7	18
	2nd year	2	5	9	9
	3rd year	1	6	11	10
	4th year	6	5	9	7
M. Tech (ECE)	1st year	3	0	1	1
	2nd year	0	1	2	0

## ▪ Institute Freeship Scholarship Assistance

Course	Course Year	2015-16	2014-15	2013-14	2012-13
B.Tech (ECE)	1st year	3	28	13	19
	2nd year	15	24	53	37
	3rd year	18	58	45	39
	4th year	29	34	44	31

## 29. Was any need assessment exercise undertaken before the development of new program(s)? If so, give the methodology.

The development of a new program is associated with the following procedure.

- A market survey is undertaken by the management team
- The idea is discussed with the Principal, Deans and HODs.
- The parent department is identified.
- The department fixes the syllabi and structure with the help of experts.
- The department calls a BOS meeting to ratify the programme.

The BOS minutes is placed before the Academic Council meeting for final approval..

## 30. Does the department obtain feedback from

- faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize it?

Yes, the department obtains the feedback from faculty on curriculum and teaching-learning evaluation and their suggestions are placed before the Board of Studies in framing the syllabus for autonomy. The faculty members teaching different subjects are directly involved in designing the course structure and syllabus of the corresponding subjects.

- students on staff, curriculum as well as teaching-learning-evaluation and what is the response of the department to the same?

The feedback from the students are obtained centrally and the results are communicated to the faculty members through the HOD. The HOD depending on the feedback report, counsels the concerned teacher individually. The faculty members in turn takes effective steps to improve the faculty-student coordination. Moreover, the results obtained in course of Rubrics exercises (as part of NBA evaluation) and suggestions from the students are also kept in mind while framing the syllabus.

- Alumni and employers on the programmes and what is the response of the department to the same?

The suggestions from the alumni and employers are placed before the Board of Studies for appropriate action. The alumni and employers are also invited to the meetings of the Board of Studies for their valuable suggestions.

31. List the distinguished alumni of the department (maximum 10)

Serial no.	Name of the students	Current position
1.	Anubhav Adak	Scientist (Ministry of Defence, Govt. Of INDIA)
2.	Sankhadeep Mullick	Working under BEL on Indian navy project on warship in Kamorta & Kadmat
3.	Devdatt Chattopadhyay	Student Teaching Assistant at Department of Electrical & Computer Engineering, Missouri S&T, Rolla, USA, Graduates from Missouri University of Science and Technology.
4.	Saptarshi Das	Graduate Research Assistant at Michigan State University, USA
5.	Sudipta Kundu	Works at Juniper Networks, Master degree from Indian Institute of Science
6.	Pushpita Biswas	Master degree in Visual information processing and embedded systems at IIT Kharagpur. Working as Graphics Hardware Engg at INTEL, India
7.	Baibhav Babu Yadav	Embedded System Engineer at L&T Integrated Engineering Services
8.	Binit Syamal	Works at GLOBALFOUNDRIES. Doctoral from Nanyang Technological University, Singapore
9.	Suvabrato Ghosal	MS from Ohio University, USA, working as Technology analyst at Bank of America
10.	Aniket Dawn	RF Tools Engineer at Qualcomm and Systems Engineer at TATA Engineering & Industrial Services-TCS (EIS)

32. Give details of student enrichment programmes (special lectures/ workshops/ seminar) with external experts.

Name of the Enrichment Programme	Date	External Experts(s)	Nos. of Participants	Sponsored by
Workshop on UNIX Basic Commands and Shell Programming	28th – 31st October and 7th November, 2014	Mr. Dipendu Mishra Mr. Kaushik Ghosh Mr. Titas Roychowdhury Ms. Indrani Kundu	108	TEQIP
Workshop on Android Application	24th March- 1st April, 2014	Mr. Rajmohan De Sarkar, Mr. Charanjib Bhattacharyya Mr. Amitava Chatterjee Mr. Dipanjan	147	TEQIP

Name of the Enrichment Programme	Date	External Experts(s)	Nos. of Participants	Sponsored by
		Bhattacharya		
Lectures by Eminent Speakers	19th Feb, 2014	Dr. Salil Sanyal	50	TEQIP
Remedial classes on Basic Science- Physics	13th April, 2013	Dr. Swarup Ranjan Shao, Assistant Professor, Govt. College of Engineering and Ceramic Technology	50	TEQIP
Bridge Course on C Programming Language	31st August & 14th & 21st September 2013	Mr. Dhiman Roy, DOEACC Society, Kolkata	30	TEQIP
Next Generation 2-D channel Material based MOSFETs: Overview & Simulation Tools	4th September 2013	Dr. Amretashis Sengupta, IISC, Bangalore	102	TEQIP
Professional Training Workshop on Communication skill "Speaking Clearly"	14th -15th June 2012	British Council	20	TEQIP

33. List the teaching methods adopted by the faculty for different programmes

The faculty members use flat boards and OHP to impart lectures on various subjects allotted to them during the semester

The following Course Delivery Methods are used by the faculty members of ECE Department:

- Audio visuals presentation (OHP, PPT)
- Lecturing
- Quiz
- Experimental Demonstration
- Organizing seminar
- Group tasks
- Case Study
- Hands on training

34. How does the department ensure that programme objectives are constantly met and learning outcomes monitored?

**Programme Educational Objectives (PEOs) – B. Tech**

The B. Tech (ECE) students will:

- Establish their ability to analyze and synthesize current Electronics and Communication

Engineering practices by assimilating its basic and advanced approaches. They will establish themselves as successful practicing professionals in core industries.

- Prove their research orientation by their ability to handle versatile problems in Communication and related field by virtue of their knowledge acquired in course of the degree. They will prove this ability by successfully pursuing research work in institutes of national and international repute.
- Demonstrate their ability to work in teams. They will prove themselves as good natured and well-behaved members of working teams as well as leaders in various diverse industries.
- Show their learning and teaching abilities and their communication efficiency in educational institutes.

### **Programme Educational Objectives (PEOs) – M. Tech**

Postgraduate students with the M. Tech (ECE), Communications specialization degree from Heritage Institute of Technology, Kolkata are expected to attain the following after a few years of getting this degree:

- Established themselves as successful practicing professionals or are engaged in advanced study in the field of Electronics and Communication Engineering.
- Demonstrated their ability to work successfully as a member of a team in a profession and function effectively as successful professionals.
- Proved their learning and teaching abilities and also obtained higher academic degrees in educational institutes.

### **Programme Outcomes (POs) – B. Tech**

- Apply the knowledge of mathematics, science, engineering practices, innovation techniques, entrepreneurship and human factors to provide value-adding solutions to complex engineering challenges.
- Identify, formulate, analyze and document complex engineering challenges to arrive at viable solutions and substantiated conclusions.
- Conceive, Design, Implement and Operate solutions for complex engineering challenges that meet specified requirements with appropriate consideration for public health and safety, cultural, societal, environmental and economical considerations.
- Conduct research and investigation into complex challenges using methods which include experiment design, analysis of data and synthesis of information to provide valid conclusions.
- Create, select and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modelling, to complex engineering activities, with an awareness of the accompanying assumptions and limitations.
- Apply reasoning informed by contextual knowledge to assess societal, health, safety, legal, economical and cultural issues and the consequent responsibilities relevant to professional engineering practice.
- Explain the global impact of professional engineering solutions in societal, economical and environmental contexts and demonstrate knowledge of and need for sustainable development.
- Apply professional and ethical responsibilities of engineering practice.

- Effectively communicate complex engineering activities, both orally and in a written form, in both technical & non-technical contexts.
- Function effectively as an individual and in multidisciplinary settings with the capacity to be a leader.
- Recognize the importance of lifelong learning and engaging in continuous professional development activities in accordance with technological change.
- Effectively manage projects in multidisciplinary environments and apply project management tools and techniques to one's own work, as a member and leader in a team to satisfy stakeholders' requirements.
- Ability to develop circuit/system design and subsequent measurement & analysis of the developed product. They learn the use of measuring equipments to trouble shoot the circuits.

### **Programme Outcomes (POs) – M. Tech**

The programme must demonstrate that their students attain the following outcomes.

- An ability to apply knowledge of mathematics, science and engineering in the areas of electronics and communication engineering.
- An ability to analyze a situation and interpret a data.
- An ability to think about a solution within the realms of reality, taking into consideration the realistic constraints like health hazard, ecological balance, relevance to society etc.
- An ability to pursue systematically research work-through different logical steps.
- An ability to learn and apply modelling based approach through the extensive use of simulator tools- for example in the study of wireless networking.
- An ability to work in multidisciplinary groups in a collaborative manner – the work ethics based on open – mindedness, objectivity and rational analysis.
- An ability to manage projects efficiently.
- An ability to communicate effectively with team members and customers.
- Imbibement of a passion to pursue learning for life.
- Acquiring social responsibility and ethical values to understand responsibility towards society.
- An ability for independent and reflective learning to enable one examine critically any outcome.
- An ability to understand and participate in new path breaking research work in new areas of communication engineering like cognitive radios and ad hoc wireless network.
- An ability to pursue research work related to new theories of antenna and various new types of antenna.

The Department continuously analyzes the departmental progress through a number of assessment tools in order to ensure that the programme outcomes and program educational objectives are continuously met. The analysis is done with the help of the following methods:

Assessment method	Procedure
Feedback from the students	Students give feedback on the teaching-learning process for various subjects through an online feedback system
Rubrics Analysis	This assessment tool gives a statistical analysis of the curriculum based on the understanding of a particular subject by the students
Internal Exam	In-house monitoring of the performance of the students based on the

	marks achieved by them
Quiz, Assignment, Tutorials, etc	Periodic analysis to test the basic concepts and critical thinking of the students
Semester Marks Analysis	The grade points earned by the students in a particular subject and during the semester are continuously monitored to make an analysis of the attainment of POs and PEOs

The students are evaluated using the assessment tool of Rubrics. A series of assignments, MCQs, problems and tutorials are placed in front of the students to assess their performance based on which the POs and PEOs are monitored to find out whether they are continuously met or not.

35. Highlights the participation of students and faculty in extension activities.

- Every year the ECE Department organises a two week duration workshop for the students of ITI, Tollygunje. Faculty members of ECE Department are involved in imparting training to these students.
- Students of ECE Department are members of the Rotaract Club of the Institute (Udaan) under the parent body Rotary Club of Mahanagar which organises various seminars, workshops and short-term as well as long-term projects to fulfil societal commitment

36. Give details of “beyond syllabus scholarly activities” of the department.

- The students of 3rd year of ECE Department participate in the Circuit Making Workshop organised annually
- Radio Making Workshop for 2nd year students enables them to learn the basic concepts of circuit design

37. State whether the programme/ department is accredited / graded by other agencies. Give details.

- The ECE Department has been accredited twice by the National Board of Accreditation (NBA). ECE Department was last accredited by NBA in September 2013 for 2 years.
- ECE Department is approved by AICTE

38. Detail any five Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department

▪ Strengths

- ECE Department is very strong in terms of Human Resources quality. Both faculty and TA quality are excellent.
- The department has top grade infrastructure with excellent laboratories and spacious classrooms
- Number of Ph. Ds awarded in the last five years is 7.
- 11 seminars, 2 FDPs, 2 workshops and 2 conferences have been organized during the last five years
- The autonomous status of the Institute has helped to frame the syllabus of the department in compliance with the contemporary requirements

▪ Weaknesses

- Lack of funds from reputed funding agencies to carry out Departmental Projects
- Scarcity of senior faculty members especially Associate Professors and Professors

▪ Opportunities

- A number of student enrichment programmes are organized where the external experts impart technical training to the students
- Departmental laboratories are well equipped to carry out project works
- Remedial classes provided to the weak students under the assistance of funds from TEQIP
- Due to the brand image of HITK, more and more students from other states are seeking admission in various B. Tech and M. Tech programmes
- Availability of funds from TEQIP are enabling students and faculty members to participate in conferences, workshops and FDPs at national as well as international level

▪ Challenges

- Curriculum and syllabi needs to be reviewed and modified continually to face the emerging requirements
- Optimization of the balance between teaching and research
- Lack of subscription to online journals have limited the scope of research work to be carried out within the Institute
- Placement of students in core companies is feeble
- Lack of International Collaboration

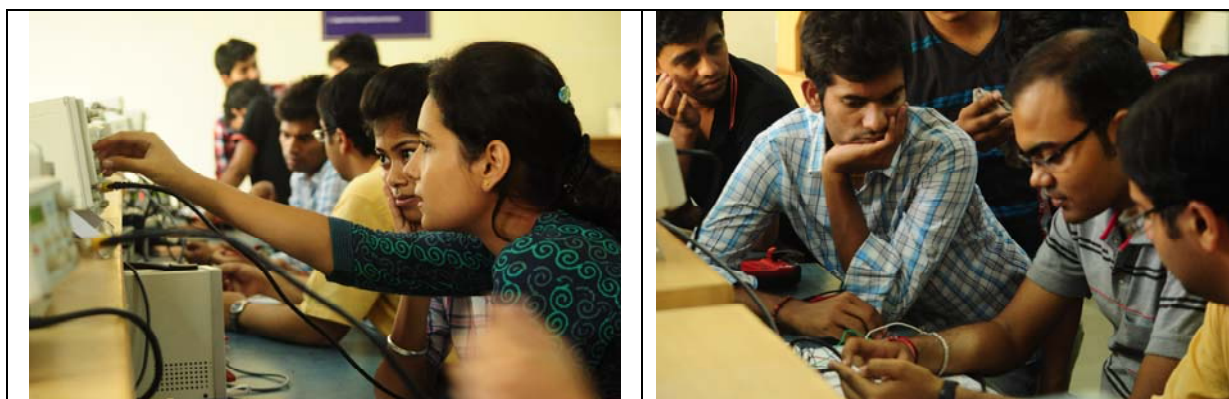
39. Future plan of the department

- Improvement of the R & D activities in the field of Communications and VLSI – the two thrust areas in which the Department has already started the M. Tech courses from 2009.
- Enhancement of the Industry-Institute Interaction. The collaboration (MOU) of HITK with Sankalp Semiconductor Pvt. Ltd. And IEST Shibpur are the steps towards the attainment of this future objective
- Improve the statistics regarding the progression of students to higher studies by shifting their inclination towards research-related activities

## Electronics Communication Engineering, Kolkata







1. Name of the Department & Its year of establishment : Department of ELECTRICAL ENGINEERING  
2001 ( As supporting department)  
2012 ( As degree awarding department)
2. Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., etc.) : UG:-B.Tech (Electrical Engineering )
3. Interdisciplinary courses and departments involved:

Courses	Department Involved
Physics	Department of Physics
Basic Electronics Engineering Communication Engineering. Digital Communication	Department of Electronics and Communication Engineering
Basic Environmental Engineering & Elementary Biology	Department of Chemical Engineering
Mathematics Numerical Methods	Department of Mathematics
Values & Ethics in Profession Economics for Engineers Principles of Management	Department of Humanities
Engineering Drawing, Workshop Engineering Mechanics Engineering Thermodynamics & Fluid Mechanics Thermal Power Engineering	Department of Mechanical Engineering
Chemistry	Department of Chemistry
Introduction to Computing Object Oriented Programming	Department of Computer Science & Engineering

4. Annual/ semester/choice based credit system :  
Semester based credit system.
5. Participation of the department in the courses offered by other departments
  - Department of Electronics & Communication Engineering,
  - Department of Applied Electronics & Instrumentation Engineering.
  - Department of Chemical Engineering.
  - Department of Biotechnology Engineering.
  - Department of Civil Engineering
  - Department of Mechanical Engineering.

- Department of Computer Science & Engineering
- Department of Information Technology

6. Number of teaching posts sanctioned and filled (Professors/Associate Professors/Asst. Professors)

	Sanctioned	Filled
Professor	02	01
Associate Professors	04	01
Asst. Professors	16	12+1*=13
Total	22	15

\*Adjunct Assistant Professor

7. Faculty profile with name, qualification, designation, specialization (D.Sc./D.Litt./ Ph.D./M.Phil., etc.)

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. students guided in the last 4 years
Dr. Satadal Mal	Ph.D(Engg.)	Professor & HOD	Microprocessor, Microcontroller	39	01 (Prasun Halder)
Dr. Saibal Dutta	Ph.D(Engg.)	Associate Professor	Measurement & Instrumentation	13	Nil
Mr. Amitava Hatia	MEE	Assistant Professor	High Voltage Engg.	12	Nil
Ms.Emily Datta	M.Tech	Assistant Professor	Control & Instrumentation	9	Nil
Mr. Sudipta Mitra	M.Tech	Assistant Professor	Power System	7	Nil
Mr. Sanjay Chandra Das	MEE	Assistant Professor	High Voltage Engg.	4	Nil
Ms. Nabanita Chatterjee	M.E.E.	Assistant Professor	Measurement & Instrumentation	5	Nil
Ms.Sarmistha Sinha	M.Tech	Assistant Professor	Power System	4	Nil
Mr. Sanjib Kumar Kundu	M.Tech	Assistant Professor	Electrical Engineering	7	Nil
Ms. Jayita Sarkar	M.E.E.	Assistant Professor	Illumination Engineering	3	Nil
Ms. Bidisha Roy	M.E.E	Assistant Professor	Power System	11	Nil
Mr. Bivash Mondal	M.Tech	Assistant Professor	Electrical Engineering	1	Nil
Mr. Reetwik Bhadra	M.Tech	Assistant Professor	Power Electronics & Drives	4	Nil
Mr. Anirban Kolay	M.Tech	Assistant Professor	Electrical Engineering	2	Nil

**Adjunct Assistant Professor**

Name	Qualification	Designation	Specialization	No. of	No. of Ph.D.
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				Years of Experience	students guided in the last 4 years
Dimpy Sood	M.Tech	Adjunct Assistant Professor	Electrical Power System	1 Year & 4 Months (Teaching) 1 Year Industrial	NIL

8. Percentage of classes taken by temporary faculty – programme-wise information : Nil
9. Programme-wise Student Teacher Ratio: UG - B.Tech(Electrical) :15:1
10. Number of academic support staff (technical) and administrative staff: sanctioned and filled

	Sanctioned	Actual
Technical Staff	9	9
Administrative staff	-	-

11. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Mention names of funding agencies and grants received project-wise. : Nil
12. Departmental projects funded by DST-FIST; DBT, ICSSR, etc.: Project Lab: sponsored by MODROBS, AICTE : Nil
13. Research facility / centre with:
- State recognition Nil
  - National recognition Nil
  - International recognition Nil
14. Publications:
- Number of papers published in peer reviewed journals (national / international): 28
  - Monographs: Nil
  - Chapter(s) in Books: 1

Author	Chapter Title	Book Title	Publisher	Year
Saibal Dutta	Hybrid correlation-neural network synergy for gait signal classification	Advances in Heuristic Signal Processing and Applications	Springer	2013

- Editing Books : Nil
  - Books with ISBN numbers with details of publishers: Nil
  - Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.) : 02
  - Citation Index-range/average: 0-41
  - SNIP :
  - SJR :
  - Impact factor-range/average: 0-2.223
  - h-index :
15. Details of patents and income generated: Nil

16. Areas of consultancy and income generated: Nil

17. Faculty recharging strategies:

The various activity of Electrical Engineering department includes organizing different programmes such as workshops, seminars, conference, and faculty developments programs on a regular basis. As a part of knowledge development and carrier upgradation the faculty members used to attend such programmes on recent and relevant topics organized by different departments and institutes.

▪ Following are the various activities:

- Encouraging faculty to publish technical papers in conferences and journals
- Conducting short-time seminars/ workshops by inviting industry experts and researchers.
- Encouraging faculty to attend workshops/ Faculty Development Programme in other colleges.
- Special Faculty Development Programmes are arranged for new joining faculties.
- Lists of workshop/seminar/ faculty development programmes are listed below.

Name of Faculty(s)	Program	Details (Lecture delivered / Organizing Workshop, Seminar / Invited Speaker / Reviewer / External Examiner)
Dr. Satadal Mal	Pedagogy Training	The Programme was organised by IIT KGP at IIT, KGP
Ms. Jayita Sarkar and Mr. Sanjib Kr. Kundu	Faculty development program for Effective Teaching	The Programme was organised by IIT KGP at IIT, KGP
Ms. Jayita Sarkar	Interactive workshop on Leadership Skill	Talk by Debasish Chatterjee at HITK
Prof .Samiran Choudhuri, Dr. Saibal Dutta and Dr. Prithwiraj Das	leadership development	The Programme was organised by HITK under TEQIP-II.
Mr. Sudipta Mitra and Mr. Sanjay Ch. Das	"Pedagogy training for teaching faculties"	The Programme was organised by HITK under TEQIP-II.
Mr. Amitava Hatial	"Workshop on Energy Conservation Techniques in Industries"	Organized by HITK and PCRA
Mr. Amitava Hatial	Attended National Conference on "Mathematical Trends In Physical Sciences",	Organized by HITK.

18. Student projects

- percentage of students who have done in-house projects including inter-departmental: UG: 100%,
- percentage of students doing project in collaboration with industries / institutes: 0%

19. Awards / recognition received at national and international level by

- Faculty: Nil
- Doctoral / Post doctoral fellows: Nil
- Students: Nil

20. Seminars / Conferences / Workshops organized and the source of funding (national and international) with details of outstanding participants, if any.

Seminars/Conference /Workshops Title	Source of Funding	Duration of Seminar
National Conference on “Recent Trends in Power Engineering” (NCRTPE-2014)	Technical Education Quality Improvement Programme (TEQIP-II)	13th & 14th March, 2014
One day workshop on “Occupational Health and Safety with Related Environmental Issues”	Technical Education Quality Improvement Programme (TEQIP-II)	27th March, 2014

## 21. Student profile course-wise:

## ▪ Admission process

Name of the Course	Percentage of Intake	Intake Process
B.Tech in EE	80%	WBJEE rank wise
	10%	JEE Main rank wise
	10%	Management Quota (State Govt. rule) for WBJEE rank holders
B.Tech in EE	5%	Tuition fees waiving scheme
B.Tech in EE (Lateral Entry)	20%	JELET

Name of the Course (refer question no. 2)	Eligibility / Entrance Test	Academic Year	Applications received	Selected		Pass percentage	
				Male	Female	Male	Female
B.Tech. (Electrical Engineering)	WBJEE / JEE Mains / MQ / TFW	2015-2016	70	67	3	Pursuing	Pursuing
		2014-2015	72	66	6	Pursuing	Pursuing
		2013-2014	72	63	9	Pursuing	Pursuing
		2012-2013	63	58	5	Pursuing	Pursuing

## 22. Diversity of students

Name of the Course (refer question no. 2)	Academic Year	% of students from the College	% of students from the State	% of students from other States	% of students From other countries
B.Tech (Electrical Engineering)	2012-2013	-	88.89	11.11	00
	2013-2014	-	87.30	12.70	00
	2014-2015	-	74.60	25.40	00
	2015-2016	-	58.73	41.27	00

## 23. How many students have cleared Civil Service, Defense Services, NET, SLET, GATE and any other competitive examinations? N/A

## 24. Student progression

Student progression	Percentage against enrolled
UG to PG	NA
PG to M.Phil	NA
PG to Ph.D.	NA
Ph.D. to Post-Doctoral	NA
Employed	75
Campus selection	02
Other than campus recruitment	
Entrepreneurs	Nil

## 25. Diversity of staff

Percentage of faculty who are graduates	
of the same parent university	7%
from other universities within the State	86%
from other universities from other States	7%

26. Number of faculty who were awarded Ph.D., D.Sc., and D.Litt during the assessment period :  
01 Saibal Dutta (Ph.D) in 2012

27. Present details about infrastructural facilities

Library: Yes. Number of Books: 300, Number of journals: 02

▪ Internet facilities for staff and students: All the Departmental laboratories containing computers are provided with internet facility (through LAN). In addition to this, there is also Wi-Fi facility which can be accessed both by the students and staff.

▪ Total number of class rooms: 07

▪ Class rooms withy ICT facility: 01

▪ Students' laboratories: 14

▪ Research laboratories:Yes. 2

28. Number of students of the department getting financial assistance from college:

▪ B.Tech (Govt. Scholarships)

AY	1st Year	2nd Year	3rd Year	4th Year
2014-15	4	1	5	-
2013-14	2	-	-	-
2012-13	8	-	-	-

29. Was any need assessment exercise undertaken before the development of new program(s)? If so, give the methodology.

- A market survey was carried out before the introduction of the 4 year B.Tech course in Electrical Engineering.
- It was seen that the marker demand in Electrical Engineering was sufficiently high and late on it may grow up in future as co-department.
- The matter was discussed elaborately in presence of Principal, Deans and HOD's

30. Does the department obtain feedback from

▪ faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize it?

The faculty members, through departmental meetings, exchange their opinions regarding the addition and alteration (if any) in the syllabus of various subjects and provide feedback on teaching-learning methodology. The experts from specialized field of education and industry are included in the Board of Studies (BOS) .The BOS considers the suggestions offered by the department and accordingly finalizes the syllabus.

▪ students on staff, curriculum as well as teaching-learning-evaluation and what is the response of the department to the same?

The faculty members get regular feedback from the students about the teaching methodology and course completeness. The Head of the Department share this feedback with faculty members and suggests necessary steps to improve the teaching-learning skills.

▪ Alumni and employers on the programmes and what is the response of the department to the same?

The advice from the employers regarding curriculum is given due importance and their recommendations are placed in BOS and analyzed.

31. List the distinguished alumni of the department (maximum 10) New Department

32. Give details of student enrichment programmes (special lectures/ workshops/ seminar) with external experts.

Speaker Name	Designation	Topic Discussed	Date of the event	Source of Fund
Mr. Mriganka Majumdar	Former Managing Director, DPL	Challenges in Power System	13th March, 2014	TEQIP-II
Prof. M.U. Deshpande	Former Professor, IIT Bombay	Power System	13th March, 2014	TEQIP-II
Prof. Sujoy Basu	Former Professor, JU	Non-conventional Energy	13th March, 2014	TEQIP-II
Prof. Biplab Paul	Principal, Shri Ram Institute of Technology Sciences	Power System Reforms	13th March, 2014	TEQIP-II
Prof. Goutam Bandyopadhyay	Professor, IEST	Power System Protection	14th March, 2014	TEQIP-II
Prof. Swapan Kumar Goswami	Professor, JU	Current Issues in Power System	14th March, 2014	TEQIP-II
Prof. Sumana Choudhury	Associate Professor, CU	Power Electronics and Non-conventional Energy	14th March, 2014	TEQIP-II
Prof. Prithwiraj Purkait	Professor, Haldia Institute of Technology	Condition Monitoring of Electrical Apparatus	14th March, 2014	TEQIP-II

33. List the teaching methods adopted by the faculty for different programmes

Best on the course curriculum different faculty members adopt different ways of teaching methods. In general the methods adhered to within the periphery of : Chalk & Talk, OHP and power-point presentation as part the teaching methodology to make the students understand well of the subjects.

34. How does the department ensure that programme objectives are constantly met and learning outcomes monitored?

### **Programme Educational Objectives**

Graduates of B.Tech in Electrical Engineering program are expected to attain after about 5/7 years of graduation:

1. To establish themselves as successful professionals of the society.
2. To acquire the requisite knowledge for higher studies in India and abroad.
3. To acquire the qualities of team work, leadership and entrepreneurship.

### **Programme Outcomes**

On successful completion of 4 year B. Tech program in Electrical Engineering, the outgoing students will be able to:

1. Apply the knowledge of mathematics, science, engineering fundamentals to solve engineering problems.
2. Design electrical products, accessories, control and measurement systems and evaluate their performance.

3. Study the characteristics of different Electrical Machines to recommend its applications, the performance and design.
4. Undertake the activities related to maintenance of equipments and accessories.
5. Perform the experiments, analyse and interpret data and reach to a technical conclusion.
6. Communicate effectively in their field of work
7. Act in a global economic, environmental and societal context.
8. Follow the codes of professional ethics in workplace.
9. Ensure the safety practices in all walks of life.
10. Work in multidisciplinary and multicultural teams.
11. Design the basic structure of power system with protective schemes and its operation.
12. Acquire the skill of learning to ever-changing technological environments.

A series of class tests, assignments, tutorials, viva and small projects based on respective subject are put in place to evaluate performance of the students. Based on the above assessments, student performances are monitored to achieve the course outcome.

35. Highlights the participation of students and faculty in extension activities.  
The students are encourages to participate the social activity like NCC, NSS etc.
36. Give details of “beyond syllabus scholarly activities” of the department.  
Students present seminars on areas outside the capacity of the syllabus and develop various small project works under the guidance of the faculty members.
37. State whether the programme/ department is accredited / graded by other agencies. Give details.: New Department
38. Detail any five Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department
  - Strengths
    - Qualified and Experienced faculty as well as Teaching Assistants
    - The infrastructural facility of Laboratory for Undergraduate level is latest.
    - Better Campus discipline and Ragging free environment
    - Internet facility and implementation of ERP system make the working culture efficient.
  - Weaknesses
    - A few faculties have Industry exposure.
    - Shortage of senior level faculty.
    - Lack of grants from National or International bodies.
  - Opportunities
    - The department encourages teachers to pursue research and PhD. Hence, it is a huge opportunity of teachers in this department for self-growth.
    - Funds to buy useful software is generally provided by TEQIP
  - Challenges
    - To excel in teaching of theory papers supported by the good laboratory experimental set-up.
    - To initiate the Research work in different specialization of EE
    - To support the under-privileged / weak students
    - To collaborate with Industry to solve the industrial problems
    - To collaborate with the Departments of National / International repute



## 39. Future plan of the department

- To excel in teaching of theory papers supported by the good laboratory experimental set-up.
- To initiate the Research work in different specialization of EE
- To support the under-privileged / weak students
- To collaborate with Industry to solve the industrial problems





1. Name of the Department & Its year of establishment : Department of Mechanical Engineering  
2001 (as Supporting Department)  
2011 (as Degree Awarding Department)
2. Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., etc.) : UG : B.Tech (Mechanical Engineering)
3. Interdisciplinary courses and departments involved:

Name of the Interdisciplinary course	Departments involved
Business English (HMTS 1101) Language Practice Lab (Level 1) (HMTS 1111) Co-curricular activities (HMTS 1121) Human values & Professional Ethics (HMTS 2001) Indian Culture and Heritage (HMTS 2002) Language Practice Lab (Level 2) (HMTS 2011) Principles & Practices of Management (HU 511) Group Discussions (ME 783) Economics for Engineers [ME 801 (HU)]	Department of Humanities
Physics I (PHYS 1001) Physics I Lab (PHYS 1011) Physics II (PHYS 2001)	Department of Physics
Mathematics I (MATH 1101) Mathematics II (MATH 1201) Mathematical Methods (MATH 2001) Numerical & Statistical Methods (MATH 2002) Numerical & Statistical Methods Lab (MATH	Department of Mathematics

2012)	
Basic Electronics Engineering (ECEN 1001) Basic Electronics Engineering Lab (ECEN 1011)	Department of ECE
Introduction to Computing (CSEN 1201) Introduction to Computing Lab (CSEN 1211)	Department of CSE
Chemistry I (CHEM 1001) Chemistry I Lab.(CHEM1011)	Department of Chemistry
Basic Electrical Engineering (ELEC 1001) Basic Electrical Engineering Lab (ELEC 1011) Electrical Machines (ME 505A) Electrical Machines Lab (ME 595B)	Department of Electrical
Industrial Instrumentation (ME 705B)	Department of Applied Electronics & Instrumentation Engineering

## 4. Annual/ semester/choice based credit system :

Semester based Credit System

## 5. Participation of the department in the courses offered by other departments

The department participates & takes adequate responsibilities for few subjects in the courses offered by other departments like:

Chemical Engineering > Machine Design theory and Lab both for 3rd year students

Civil Engineering > Engineering Materials theory and Lab both and Materials Handling for 3<sup>rd</sup> year students

Electrical Engineering > Thermal Power Engineering theory and Lab both for 2<sup>nd</sup> year students

## 6. Number of teaching posts sanctioned and filled (Professors/Associate Professors/Asst. Professors)

	Sanctioned	Filled
Professor	3	01
Associate professor	6	02
Assistant Professor	17	20
Total	26	23

## 7. Faculty profile with name, qualification, designation, specialization (D.Sc./D.Litt./ Ph.D./M.Phil., etc.)

Sl. No.	Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D . students guided in last 4 years
1	Siddhartha Ray	PhD.(Engg.)	Dean(UG Programm) & Professor	Production & Manufacturing Engineering	30(Industrial) 14(Academic)	01 (Dr. Manik Das, JU, completed)
2	Sukanta Sarkar	PhD.(Engg.)	Associate Professor	Fluid Mechanics & Hydraulics Engg, & Turbomachinery	05(Industrial) 14(Academic)	Nil
3	Amal Kumar Ray	PhD.(Engg.)	Associate	Operations Research	26(Industrial)	Nil

			Professor		12(Academic)	
4	Rajarshi Sengupta	PhD.(Engg.)	Assistant Professor	Fluid Mechanics & Hydraulics Engg.	01(Industrial) 05(Academic)	Nil
5	Sumanta Banerjee	PhD.(Engg.)	Assistant Professor	Heat Power	04(Academic)	Nil
6	Sankarnath Mukhopadhyay	M.S.	Assistant Professor	Manufacturing Technology	34(Industrial) 03(Academic)	Nil
7	Arup Jyoti Bhowal	M.E.	Assistant Professor	Heat Power	18(Industrial) 09(Academic)	Nil
8	Bankim Pattanayak	M.Tech	Assistant Professor	Fluid Machinery & Power	26(Industrial) 06(Academic)	Nil
9	Amalendu Biswas	M.E.	Assistant Professor	Machine Design & Mechanism, CAD/CAM	04(Industrial) 09(Academic)	Nil
10	Ritwik Mondal	M.E.	Assistant Professor	Design & Production	05(Academic)	Nil
11	Sukanta Saha	M.M.E.	Assistant Professor	Fluid Mechanics & Hydraulics Engg.	05(Academic)	Nil
12	Subham Kundu	M.E.	Assistant Professor	Production Engineering	03(Industrial) 02(Academic)	Nil
13	Prasanta Mondal	M.M.E.	Assistant Professor	Applied Mechanics	04(Academic)	Nil
14	Hareram Lohar	M.M.E.	Assistant Professor	Machine Design	03(Academic)	Nil
15	Sudip Kumar Halder	M.Tech	Assistant Professor	Production Engineering	01(Academic)	Nil
16	Sudipta Roy	M.M.E.	Assistant Professor	Production Engineering	03(Academic)	Nil
17	Manik Barman	M.Tech	Assistant Professor	Production Technology & Management	01(Academic)	Nil
18	Vishnu Kumar Singh	M.Tech	Assistant Professor	Production Engineering	01(Academic)	Nil
19	Anubhab Basu	M.Tech	Assistant Professor	Manufacturing Technology	01(Academic)	Nil

## 7.1 Distinguish Faculty:

Sl. No.	Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D . students guided in last 4 years
1	Dr. B.K. Basak	PhD.(Engg.)	Assistant Professor	Manufacturing Process	47(Industrial) 07(Academic)	Nil

## 7.2 Guest Faculty:

Sl. No.	Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D . students guided in last 4 years
1	Mr. Ashok Banerjee	MME	Guest Faculty	Machine Design	25(Industrial) 06(Academic)	Nil
2	Mr. Abhishek Ghosh	MME	Guest Faculty	Production	03(Academic)	Nil
3	Mr. Suranjan Mistri	MPE	Guest Faculty	Production	01(Academic)	Nil

8. Percentage of classes taken by temporary faculty – programme-wise information: 44 hours out of total 418 hours (10.52%)

## 9. Programme-wise Student Teacher Ratio:

Year	Teacher	Student	Ratio
1 <sup>st</sup> Year		900	16.36:1
2 <sup>nd</sup> Year	08	120	15:1
3 <sup>rd</sup> Year	04	60	15:1
4 <sup>th</sup> year	04	60	15:1

## 10. Number of academic support staff (technical) and administrative staff: sanctioned and filled

	Sanctioned	Filled
Technical Assistant	11	11
Administrative Staff	0	Nil

## 11. Number of faculty with ongoing projects from funding agencies / Names of funding agencies and grants received project-wise

- (a) National : Nil  
 (b) International : Nil  
 (c) Total grants received : Nil / Not Applicable

## 12. Departmental projects funded by DST-FIST; DBT, ICSSR, etc.; total grants received : Nil

## 13. Research facility/centre with

- state recognition : Nil
- national recognition : Nil
- international recognition : Nil

## 14. Publications :

- number of papers published in peer reviewed journals
  - National- 16
  - International – 23
- monographs - 02
- Chapter(s) in Books –
- Editing Books -02
- Books with ISBN numbers with details of publishers: 5

Author's Name	Title of the Book	ISBN No.	Publisher's Name
Prof. (Dr.)Siddhartha Ray	Introduction to Materials Handling	ISBN(10) : 81-224-2099-0	New Age International (P) Ltd.
Prof. (Dr.)Siddhartha Ray	Principles And Applications of Metal Rolling	ISBN : 9781107076099	Cambridge University Press
Dr. Sukanta Sarkar	Engineering Mechanics	ISBN 978-93-80221-01-4	Matrix Educare
Dr. Sukanta Sarkar	Engineering Thermodynamics & Fluid Mechanics	ISBN 978-93-80221-21-2	Matrix Educare
Dr. Sukanta Sarkar	Thermal Power Engineering	ISBN 978-93-80221-45-8	Matrix Educare

- number listed in International Database (e.g., Web of Science, Scopus
- Humanities, International Complete, Dare Database-International Social
- Sciences Directory, EBSCO host, etc.)
- Citation Index-range/average
- SNIP
- SJR
- Impact factor-range/average

- h-index

15. Details of patents and income generated : Nil

16. Areas of consultancy and income generated: Nil

17. Faculty recharging strategies:

- The Faculty members are allowed to attend both national and international conferences seminars, workshops, refresher courses in their related areas besides attending the short term courses etc.
- The Faculty members also obtain the registration charges for pursuing their PhD'S.
- The Faculty members are permitted to present their research articles and get the opportunity to interact with other researchers at the Internal Conference.
- the Faculty members frequently visit different industries for practical exposure.

18. Student Projects:

Percentage of students who have done in-house projects including inter – departmental projects:

- UG : 90%

Percentage of students doing projects in collaboration industries/institutes :

- UG : 10%

19. Awards /recognitions received at the national and international level by

- Faculty : Nil
- Doctoral/post doctoralfellows: 5
- Students : Nil

20. Seminars/ Conferences/ Workshops including Departmental activities like Industry Visits etc. organized and the source of funds (national/international) with details of outstanding participants, if any:

**Departmental Activities (Conduct of Workshops/ Seminars/ etc)**

Sl. No.	Name of Topic	Date	Sponsored/ funded by	No. Of Participants	Guest/Speaker
01	Workshop on Research Methodology	29.07.2014 to 31.07.2014	TEQIP-II under FDP scheme	32	Dr. Tapan Kumar Ghoshal (Honorary Emeritus Professor, EE, JU) Dr. Bijan Sarkar (Prof. & former head, Production Engg. Dept, JU) Prof. M.K.Tiwari (FNAE, Head, Dept. of Industrial Engg. And Management, IIT, KGP) Prof. S. P. Mukherjee (Ex Prof. CU) Dr. Jaya Sil (Prof. CSE, BESU)
02	Occupational Health & Safety with related Environmental Issues	27.03.2014	TEQIP-II	62	Dr. Amitava Mustafi (Ex. Prof. EE, BESU) Dr. Tapas Kumar Gupta (Chief Engineer, WBPDCCL) Mr. Saroj Kumar Sarkar (Consultant on Environment of Electro Steel Casting) Mr. Sujoy Ghosh (Consultant, BOC) Mr. Amarnath Bhadra

					(Consultant, Institutions of Engineers(India))
03	"Research Methodology" course for PhD students of WBUT.	06.03.2014 to 08.05.2014	WBUT	57	Prof. Siddhartha Ray (HOD, ME, HITK) Prof. Samir Saha (Ex. Prof. ME Dept, JU) Prof. Bijan Sarkar (Prof. & former head, Production Engg. Dept, JU) Dr. Tapan Kumar Ghoshal (Honorary Emeritus Professor, EE, JU) Dr. Amal Kumar Ray (Associate Prof., ME Dept, HITK)
04	Workshop on Value Engineering	27.04.2016 to 28.04.2016	TEQIP-II	42	Dr. Bimal Kumar Basak, Adjunct Professor – HITK  Dr. Siddhartha Ray, Professor, ME Dept. & Dean (UG), HITK  Dr. Habiba Hussain, Assistant Professor, NITTTTR Kolkata  Dr. Bijan Sarkar, Professor & Former Head of Production Engineering Dept., Jadavpur University  Mr. Sankar Nath Mukhopadhyay, Asstt. Professor, HITK

#### Departmental Activities (Industry Visit)

Sl. No.	Name of Industry	Batch of Students	Date	No. Of Students	Sponsored / Funded by
01	Ultra Tech Cement Limited, Durgapur	2014-2018	10.10.15	26	TEQIP-II
02	Ultra Tech Cement Limited, Durgapur	2014-2018	08.10.15	26	TEQIP-II
03	Ultra Tech Cement Limited, Durgapur	2014-2018	26.09.15	32	TEQIP-II
04	Ultra Tech Cement Limited, Durgapur	2014-2018	24.09.15	34	TEQIP-II
05	CESC Budge-Budge	2013-2017	17.04.15	30	TEQIP-II
06	CESC Budge-Budge	2013-2017	27.03.15	30	TEQIP-II
07	Tata Metalliks Ltd, Kharagpur	2013-2017	26.02.15	32	TEQIP-II
08	Tata Metalliks Ltd, Kharagpur	2013-2017	25.02.15	35	TEQIP-II
09	Premium Transmission Limited Falta, South 24 Parganas	2012-2016	22.01.2015	31	TEQIP-II
10	Premium Transmission Limited Falta, South 24 Parganas	2012-2016	21.01.2015	31	TEQIP-II
11	Electro Steel Castings Ltd, Khardah	2012-2016	16.09.2014	74 (in two	TEQIP-II

				batches)	
12	Kolaghat Thermal Power Plant, Kolaghat (Organized by ME dept for EE dept)	2012-2016 (EE)	05.08.2014	32	TEQIP-II
13	Kolaghat Thermal Power Plant, Kolaghat (Organized by ME dept for EE dept)	2012-2016 (EE)	04.08.2014	33	TEQIP-II
14	Kiswok Industries Pvt Ltd, Jalan Complex, Domjur	2012-2016	08.04.2014	71 (in two batches)	TEQIP-II
15	J.K.B. Gases Pvt Ltd, Budge Budge	2011-2015	12.02.2014	24	TEQIP-II
16	J.K.B. Gases Pvt Ltd, Budge Budge	2011-2015	11.02.2014	37	TEQIP-II
17	Kolaghat Thermal Power Plant, Kolaghat	2012-2016	20.11.2013	27	TEQIP-II
18	Kolaghat Thermal Power Plant, Kolaghat	2012-2016	19.11.2013	24	TEQIP-II
19	Tata Metalliks Ltd, Kharagpur	2011-2015	28.09.2013	12	TEQIP-II
20	Tata Metalliks Ltd, Kharagpur	2011-2015	27.09.2013	26	TEQIP-II
21	Tata Metalliks Ltd, Kharagpur	2011-2015	21.09.2013	26	TEQIP-II
22	Kolaghat Thermal Power Plant, Kolaghat	2011-2015	18.04.2013	43	Industry Institute Partnership Cell, HITK
23	Kolaghat Thermal Power Plant, Kolaghat	2011-2015	17.04.2013	40	Industry Institute Partnership Cell, HITK

## 21. Student profile course-wise:

Name of the Course	Percentage of Intake	Intake Process
B.Tech in ME	80%	WBJEE rank wise
	10%	JEE Main rank wise
	10%	Management Quota (State Govt. rule) for WBJEE/JEE main rank holders
	5%	Tuition fee waiver(TFW)
	20%	Lateral entry

Name of the Course (refer question no. 2)	Applications received	Year	Selected		Pass Percentage	
			Male	Female	Male	Female
B.Tech in ME	WBJEE/JEE Main/ MQ/ TFW and Lateral entry	2015-16	123	03	Pursuing	Pursuing
		2014-15	134	01	Pursuing	Pursuing
		2013-14	75	01	Pursuing	Pursuing
		2012-13	74	02	Pursuing	Pursuing

## 22. Diversity of students:

Name of the Course (refer question no. 2)	% of students from the College	% of students from the State	% of students from other States	% of students From other countries
2015-2016	NA	38.89	61.11	NA
2014-2015	NA	55.65	44.35	NA



2013-2014	NA	73.01	26.99	NA
2012-2013	NA	84.13	15.87	NA

23. How many students have cleared Civil Services, Defense Services, NET, SLET, GATE and any other competitive examinations?

#### GATE 2015: 6 Numbers

- Shri Debojyoti Hazra (Class Roll No. 115703)
- Shri Avirup Baral (Class Roll No. 115705)
- Shri Sovan Bhowmik (Class Roll No. 115707)
- Shri Dibyendu Mukherjee (Class Roll No. 115715)
- Shri Krishna Nath Dutta (Class Roll No. 115725)
- Shri Sayantan Das (Class Roll No. 115728)

24. Student progression

Student progression	Percentage against enrolled
UG to PG	2.63
PG to M.Phil	NA
PG to Ph.D.	NA
Ph.D. to Post-Doctoral	NA
Employed	67.1
Campus selection	Data not available
Other than campus recruitment	
Entrepreneurs	Nil

25. Diversity of staff

Percentage of faculty who are graduates	
of the same parent university	4%
from other universities within the State	83%
from other universities from other States	13%

26. Number of faculty who were awarded Ph.D., D.Sc. and D.Litt. during the assessment Period (2011-2015) : 5

Sl. No.	Name	Degree awarded	Year
1	Sukanta Sarkar	Ph.D.	2011
2	Nilabha Sankar Mitra	Ph.D.	2011
3	Sumanta Banerjee	Ph.D.	2012
4	Jayanta Das	Ph.D.	2012
5	Nimai Pada Mandal	Ph.D.	2014
6.	Bikash Sarkar	Ph.D.	2015

27. Present details about infrastructural facilities

- |   |                                     |
|---|-------------------------------------|
| a) Library                                    | - Yes [ No. of books available 110] |
| b) Internet facilities for staff and students | - Yes for staff                     |
| c) Total number of class rooms                | - 08 (Including two tutorial)       |

- d) Class rooms with ICT facility - 02  
 e) Students' laboratories - 22 (including 3 drawing halls)  
 f) Research laboratories - Nil

28. Number of students of the department getting financial assistance from College:

Academic year	Details
2011-12	3 <sup>rd</sup> semester: 9
2012-13	3 <sup>rd</sup> semester : 3 5 <sup>th</sup> semester : 8
2013-14	3 <sup>rd</sup> semester : 5 4 <sup>th</sup> semester : 3 5 <sup>th</sup> semester : 5 6 <sup>th</sup> semester : 8
2014-15	1 <sup>st</sup> semester : 5 2 <sup>nd</sup> semester : 5 3 <sup>rd</sup> semester : 5 4 <sup>th</sup> semester : 6 5 <sup>th</sup> semester : 5 6 <sup>th</sup> semester : 4 7 <sup>th</sup> semester : 8 8 <sup>th</sup> semester: 5
2015-16	1 <sup>st</sup> semester : 3 3 <sup>rd</sup> semester : 5 5 <sup>th</sup> semester : 5 7 <sup>th</sup> semester : 2

29. Was any need assessment exercise undertaken before the development of new program(s)? Yes  
 If so, give the methodology.

Scenario of Engineering Studies

- (i) There were enquiries from the industries looking for mechanical engineering graduates  
 (ii) There were enquiries from prospective students/ guardians and also from alumni of the institute.

30. Does the department obtain feedback from

**a. faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize it?**

The faculty members, through departmental meetings, exchange their opinions regarding the addition and alteration (if any) in the syllabus of various subjects and provide feedback on teaching-learning methodology. The experts from specialized field of education and industry are included in the Board of Studies (BOS). The BOS considers the suggestion offered by the department and accordingly finalizes the syllabus.

**b. students on staff, curriculum as well as teaching-learning-evaluation and what is the response of the department to the same?**

The faculty members get regular feedback from the students about the teaching methodology and course completeness. The Head of the Department share this feedback with faculty members and suggests necessary steps to improve the teaching-learning skills.

**c. alumni and employers on the programmes and what is the response of the department to the same?**

The advice from the employers regarding curriculum is given due importance and their recommendations are placed in BOS and analyzed.

31. List the distinguished alumni of the department: NA

32. Give details of student enrichment programmes (special lectures / workshops / seminar) with external experts.

Speaker Name	Designation	Topic Discussed	Date of the event
Dr.Bimal Kumar Basak	Former Executive Director-Wesman Engg.(P) Ltd.	Foundry Equipment -Usages & Applications	24 <sup>th</sup> April,2014
Dr.Bimal Kumar Basak	Former Executive Director-Wesman Engg.(P) Ltd.	Foundry Equipment-Usages & Applications	24 <sup>th</sup> April,2013

33. List the teaching methods adopted by the faculty for different programmes.

Best on the course curriculum different faculty members adopt different ways of teaching methods. In general the methods adhered to within the periphery of : Chalk & Talk, OHP and power-point presentation as part the teaching methodology to make the students understand well of the subjects.

34. How does the department ensure that programme objectives are constantly met and learning outcomes monitored?

#### Programme Educational Objective (PEO)

The students of mechanical engineering department after about 5/7 years of graduation will

1. Prove themselves to be successful professionals in different industries in both private and public sectors in India and abroad.
2. Acquire higher educational qualifications in India & abroad and successfully apply their knowledge in teaching and research.
3. Exhibit qualities of team work, leadership and entrepreneurship.

#### Programme Outcome (PO)

After going through the 4 year mechanical engineering course of studies, the outgoing graduates are expected to:

1. Apply knowledge of mathematics, science and engineering.
2. Design mechanical products and systems.
3. Select a material, processes and parameters for manufacturing products.
4. Undertake activities concerning maintainability and quality of processes and equipment.
5. Perform experiments, analyse and interpret data and take technical decisions.
6. Work in multidisciplinary and multicultural teams.
7. Cope up with adverse environmental conditions to perform effectively.
8. Acquire the skill of learning to learn changing technologies.
9. Communicate effectively in their field of work.
10. Appreciate and act in a global economic, environmental and societal context.
11. Follow codes of professional ethics in workplace as well as in personal life.
12. Ensure safety practices in all walks of life.

The final year students appear for various on line tests, , competitive exams by professional agencies so that their feedback and suggestion from the competitive agencies well utilized.

35. Highlight the participation of students and faculty in extension activities :

- National Seminars & conferences are organized on a regular basis
  - Refresher courses are organized
  - Special Lecture delivered by eminent personalities in various technical fields are organized very frequently
  - Training programme on special skills are organized for further enhancement & upgrade of knowledge
  - Yoga and inner sciences
  - Youth hostel association of India: National Himalayan Trekking and Cycling
  - Parbat Aviyatri Sangha, Kolkata: Rock climbing
  - Rotaract club activities
36. Details of Strength, Weakness, Opportunities and Challenges of the department:

#### **Strength:**

- Faculty members have experiences both in Industry and Academics with an average age below 38.
- Laboratories are equipped with modern instruments and adequate spaces are available.
- Beyond curriculum, materials and books are available for learning that motivates the students towards higher studies.
- Faculty members are in good contact with other industries and institutions
- Laboratory manuals are available for each experiment and the procedures is effectively explained to the students
- The department conducts frequent industrial visits for our students with real life exposure.
- Safety precautions are followed in each and every laboratory.
- Faculty members take active interest in writing books / research work and regularly publish research articles in national / international conferences and Journals
- Students are encouraged to participate in technical competitions and sports held in eminent institutes including different IITs.

#### **Weakness:**

- Manpower turnover rate for the department is high because many young faculty members opt for higher studies.
- Focus should be given on enhancement for generating research funds from Government and Private sources to produce more research facilities / work.
- Spaces for faculty rooms need to be enhanced for good interactions with student groups and backward students

#### **Opportunities:**

- Mechanical Engineering graduates from this institute have opportunities both in Core and Software industries
- Some software industries are showing interest in inducting students in software with technical knowledge in mechanical engineering
- Opportunities for higher studies for the students in national and international institutes of repute are high.

#### **Challenges:**

- It is highly challenging to develop employability skills in students from the family of 1st generation graduates
- The research facilities need to be upgraded regularly in order retain good faculty members.
- Quality of education and exposure to industries need to be continuously improved in order to remain competitive amongst other institutes to attract best talents.

#### **37. Future plans of the department**

- Introduction of new M.Tech. course

- Introduction of a modern research lab
- Introduction of more elective papers both theory and practical based on market demands.





1. Name of the Department & Its year of establishment : Department of Information Technology  
2001
2. Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., etc.) : U.G.: B.Tech (Information Technology)  
M. Tech. (Information Technology)
3. Interdisciplinary courses and departments involved:  
Participation of other department for the courses offered by the department of IT.

Courses	Department Involved
Values & Ethics in Profession	Department of Humanities
Physics	Department of Physics
Analog & Digital Electronics	Department of ECE
Basic Environmental Engineering & Elementary Biology	Department of Chemical Engineering
Mathematics	Department of Mathematics
Economics for Engineers	Department of Humanities
Principles of Management	Department of Humanities
Communication Engg & Coding Theory	Department of ECE
Engineering Mechanics	Department of ME

4. Annual/ semester/choice based credit system :  
Semester System
5. Participation of the department in the courses offered by other departments

Name of the department	Courses Offered
Applied Electronics and Instrumentation Engineering	Introduction to computing(CSEN 1201),Data Structure and Algorithm(IC 504A),DBMS(IC 604B)
Electronics and	Introduction to computing(CSEN 1201), Data

Communication Engineering	Structure and C(EC 504B),DBMS(EC 705C)
Chemical Engineering	Introduction to computing(CSEN 1201),Data Structure and Database Concept(CHE401)
Biotechnology,	Introduction to computing(CSEN 1201)
Civil Engineering	Introduction to computing(CSEN 1201)
Mechanical Engineering	Introduction to computing(CSEN 1201)
Electrical Engineering	Introduction to computing(CSEN 1201)

6. Number of teaching posts sanctioned and filled (Professors/Associate Professors/Asst. Professors)

	Sanctioned	Filled
Professor	02	01
Associate Professors	03	01
Asst. Professors	10	13
<b>Total</b>	<b>15</b>	<b>15</b>

7. Faculty profile with name, qualification, designation, specialization (D.Sc./D.Litt./ Ph.D./M.Phil., etc.)

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. students guided in the last 4 years
Dr. Tapan Chakraborti	Ph.D	Professor and HOD	Sensor Network, Data Acquisition & Processing	30	Nil
Dr. Anindya Jyoti Pal	Ph.D	Associate Prof. and Dy. Controller	Evolutionary Algorithms for GCP	15	Nil
Mr. Hemanta De	M.S	Asst Prof.	Business Intelligence, E-Business	16	Nil
Ms. Satarupa Biswas	MTech	Asst Prof.	Image Processing Patterns Recognition	12	Nil
Mr. Rudra Nath Mitra	MTech	Asst Prof.	Wireless Sensor Network	10.5	Nil
Mr Susobhon Baidya	MTech	Asst Prof.	Bioinformatics and soft computing	8	Nil
Mr. Sandipan Dutta	MTech	Asst Prof.	Image Processing	8	Nil
Ms. Rituparna Sinha	MTech	Asst Prof.	Bioinformatics	9	Nil
Mr. Sudipta Bhadra	MTech	Asst Prof.	Bioinformatics	10	Nil
Mr. Uttam Kr. Dash	MTech	Asst Prof.	Cloud Computing	10	Nil
Mr. Deep Malya Mukhopadhyaya	ME	Asst Prof.	Cognitive Network, Cryptography	10	Nil
Ms. Smritikona Barai	M.Tech	Asst Prof.	Image Processing, Opportunistic	5	Nil

			Network		
Mr. Bappa Sarder	MTech	Asst Prof.	Wireless Sensor Network	4	Nil
Mr. Rajib Biswas	MTech	Asst Prof.	Wireless N/W, Cryptography	11	Nil
Mr. Joydev Hazra	ME	Asst Prof.	Image Processing	10	Nil

8. Percentage of classes taken by temporary faculty – programme-wise information : Nil

9. Programme-wise Student Teacher Ratio:

Sl.No.	Course	Ratio
1	B.Tech(IT)	15:1
2	M.Tech(IT)	12:1

10. Number of academic support staff (technical) and administrative staff: sanctioned and filled

	Sanctioned	Filled
Technical staff	14	8
Administrative staff	Nil	Nil

11. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Mention names of funding agencies and grants received project-wise. : Nil

12. Departmental projects funded by DST-FIST; DBT, ICSSR, etc.: Project Lab: sponsored by MODROBS, AICTE :

Name of Project	Funding Agency	Amount	Date
MODROBS Ref.No. File no.:8024/RID/BOR/MOD-883/2009-10	AICTE	Rs. 5,00,000/-	21.12.2009 – 12.08.2011
MODROBS Ref.No. File No. 8024/RIFD/MOD-95(PVT)/Policy-III/2011-12	AICTE	Rs. 6,00,000/-	06.03.2012 – 22.03.2013

13. Research facility / centre with:

- State recognition Nil
- National recognition Nil
- International recognition Nil

14. Publications:

- Number of papers published in peer reviewed journals (national / international): 35

	2014-15	2013-14	2012-13	2011-12	2010-11
Journal(National/International)	5	0	3	11	0
Conference(National/International)	1	2	5	7	1
Book Chapter	Nil	Nil	Nil	Nil	Nil
Patents	Nil	Nil	Nil	Nil	Nil

- Monographs: Nil
- Chapter(s) in Books: Nil
- Editing Books : Nil
- Books with ISBN numbers with details of publishers: 1

Serial No	Book Title	Publisher Name	ISBN NO
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1	"Computer Architecture and organization", by T. K. Ghosh and A. J. Pal	Tata Mcgraw Hill	9780070699830
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- Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.) : Nil
  - Citation Index-range/average: 0-17 / 3.846
  - SNIP : 0–1.210
  - SJR : 0–1.920
  - Impact factor-range/average: 0.611–3.8 / 1.975
  - h-index : 0-1
15. Details of patents and income generated: Nil
16. Areas of consultancy and income generated: Nil
17. Faculty recharging strategies:  
Faculties are permitted to attend Orientation and Refresher courses periodically. They are also allowed to participate in National and International level Conferences /Workshops/Seminars to update their knowledge in their respective areas of research.

▪ Following are the various activities:

- Encouraging faculty to publish technical papers in conferences and journals and offering financial assistance for registration and travel.
- Conducting short-time seminars/ workshops by inviting industry experts and researchers.
- Encouraging faculty to attend workshops/ Faculty Development Programme in other colleges.
- Special Faculty Development Programmes are arranged for new joining faculties.
- The faculty members attend programmes organized by IITs, NITs, etc.

List of Conference / Seminars attended by faculty during the last 5 years.

Faculty Name	Workshop/Seminar/Conference/Faculty Development Programme(FDP)	Date
Dr. Tapan Chakraborti, Dr. Anindya Jyoti Pal, Hemanta De, Satarupa Bagchi Biswas, Rudranath Mitra, Deep Malya Mukhopadhyay, Sandipan Dutta, Susobhan Baidya, Sudipta Bhadra, Rituparna Sinha, Uttamkumar Dash, Rajib Biswas, Bappa Sarder, Smritikona Barai, Joydev Hazra	Faculty Development Program On "Image Processing and Data Mining using Open Source Tools" under Technical Education Quality Improvement Program (TEQIP – II)	06-Aug-2015 – 12-Aug-2015
Satarupa Bagchi Biswas	Faculty Development Program on Effective Teaching	17-Nov-14 – 19-Nov-14
Sandipan Dutta, Joydev Hazra	Faculty Development Program on Effective Teaching	24-Sep-14 -26-Sep-14
Deep Malya Mukhopadhyay, Sudipta Bhadra	Faculty Development Program for achieving Academic Excellence	04-Aug-14 - 09-Aug-14
Satarupa Bagchi Biswas, Smritikona Barai	Faculty Development Program on Recent advances in Computer Science	31-Mar-14 - 04-Apr-14
Sudipta Bhadra	Workshop on Management Development Program	05-Aug-13 - 09-Aug-13
Dr. Tapan Chakraborti, Dr. Anindya Jyoti Pal, Satarupa Bagchi Biswas, Smritikona Barai, Hemanta De, Sandipan Dutta, Susobhan Baidya, Deep Malya Mukhopadhyay, Bappa Sarder, Sudipta Bhadra, Rajib Biswas, Rudranath Mitra, Uttam Kr. Dash, Joydev	Refresher Course on Algorithm	22-Jul-13 - 26-Jul-13

Faculty Name	Workshop/Seminar/Conference/Faculty Development Programme(FDP)	Date
Hazra		
Dr. Tapan Chakraborti, Dr. Anindya Jyoti Pal, Satarupa Bagchi Biswas, Smritikona Barai, Hemanta De, Sandipan Dutta, Susobhan Baidya, Deep Malya Mukhopadhyay, Bappa Sarder, Sudipta Bhadra, Rajib Biswas, Rudranath Mitra, Uttam Kr. Dash	Workshop on Complex and Social Networks	24-Jan-13- 25-Jan-13
Hemanta De, Susobhan Baidya, Deep Malya Mukhopadhyay, Sudipta Bhadra, Rajib Biswas, Uttam Kr. Dash	Faculty Development Program on "Cloud Computing" under TEQIP II	08-Oct-12 - 8-Oct-12
Hemanta De, Joydev Hazra, Rudranath Mitra	Faculty Development Program on "Big Data" under TEQIP II	27-Sep-12 - 27-Sep-12
Satarupa Bagchi Biswas, Sandipan Dutta, Joydev Hazra	Faculty Development Program on "Privacy Preservation Mechanism in Internet-of-Things (IOT)" under TEQIP II	21-Aug-12 - 21-Aug-12
Dr. Tapan Chakraborti, Satarupa Bagchi Biswas, Smritikona Barai, Hemanta De, Sandipan Dutta, Susobhan Baidya, Deep Malya Mukhopadhyay, Bappa Sarder, Sudipta Bhadra, Rajib Biswas, Rudranath Mitra, Uttam Kr. Dash	Faculty Development Program on "Wireless Networking" under TEQIP II	17-Jul-12 - 19-Jul-12
Dr. Tapan Chakraborti, Satarupa Bagchi Biswas, Smritikona Barai, Sandipan Dutta, Deep Malya Mukhopadhyay, Bappa Sarder, Rudranath Mitra	Workshop on "Selected Topics in Computer Science: State-of-the-art Perspectives"	12-Jul-12 - 13-Jul-12
Sudipta Bhadra	Seminar on "Vacuum Technology"	24-Apr-12 - 24-Apr-12
Dr. Tapan Chakraborti, Smritikona Barai, Sandipan Dutta, Susobhan Baidya, Deep Malya Mukhopadhyay, Bappa Sarder, Sudipta Bhadra, Rajib Biswas, Uttam Kr. Dash	Workshop on "Distributed Systems and Networks"	22-Mar-12 - 22-Mar-12
Satarupa Bagchi Biswas, Smritikona Barai, Hemanta De, Sandipan Dutta, Susobhan Baidya, Deep Malya Mukhopadhyay, Bappa Sarder, Sudipta Bhadra, Rudranath Mitra	Seminar on "Distributed Consensus and the Byzantine Generals Problem"	16-Feb-12 - 16-Feb-12
Satarupa Bagchi Biswas, Smritikona Barai, Hemanta De, Sandipan Dutta, Susobhan Baidya, Deep Malya Mukhopadhyay, Bappa Sarder, Sudipta Bhadra, Rajib Biswas, Rudranath Mitra, Uttam Kr. Dash	Workshop on "Wireless Communication & Computing: Current Trends & Research"	20-Jan-12 - 20-Jan-12
Satarupa Bagchi Biswas, Smritikona Barai, Hemanta De, Sandipan Dutta, Susobhan Baidya, Deep Malya Mukhopadhyay, Bappa Sarder, Sudipta Bhadra, Rajib Biswas, Rudranath Mitra, Uttam Kr. Dash	National Seminar on "Recent Trends of Data Warehousing and Data Mining"	02-Jan-12 - 02-Jan-12

## 18. Student projects

- percentage of students who have done in-house projects including inter-departmental:  
UG: 100

	Academic Session [Year of Passing]	Percentage of students
B.Tech	2015-2016	100
	2014-2015	100
	2013-2014	100
	2012-2013	100
	2011-2012	100
	2010-2011	100
M.Tech	2014-2015	100
	2013-2014	100
	2012-2013	100

	2011-2012	100
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- percentage of students doing project in collaboration with industries / institutes: Nil

19. Awards / recognition received at national and international level by

- Faculty:

Prof.(Dr.) Anindya Jyoti Pal was a Post doctoral fellow in the Universiti Teknologi Petronas, Malaysia for a tenure of 2 years (2011-2013)

- Doctoral / Post doctoral fellows: Nil

- Students: Nil

20. Seminars / Conferences / Workshops organized and the source of funding (national and international) with details of outstanding participants, if any.

Title	Convener	Date	Funding
Faculty Development Program On "Image Processing and Data Mining using Open Source Tools" under Technical Education Quality Improvement Program (TEQIP – II)	Prof. (Dr.) Tapan Chakraborti, Prof. (Dr.) Anindya Jyoti Pal, Prof. Satarupa Bagchi Biswas	06-Aug-15 - 12-Aug-15	Sponsored by TEQIP II
1 <sup>st</sup> International Conference on Applied Algorithms (ICCA 2014) under TEQIP II	Prof. (Dr.) Tapan Chakraborti	13-Jan-14 - 15-Jan-14	Sponsored by TEQIP II
Faculty Development Program on "Machine Intelligence"	Prof. (Dr.) Tapan Chakraborti	15-July-13- 19-July-13	Sponsored by TEQIP II
Faculty Development Program on "Wireless Networking" under TEQIP II	Prof. (Dr.) Tapan Chakraborti	17-Jul-12- 19-Jul-12	Sponsored by TEQIP II
Workshop on " Distributed Systems and Networks"	Prof. (Dr.) Tapan Chakraborti	22-Mar-12 - 22-Mar-12	Institute Funding
Seminar on "Distributed Consensus and the Byzantine Generals Problem"	Prof. Deep Malya Mukhopadhyay	16-Feb-12 - 16-Feb-12	Institute Funding
Workshop on "Wireless Communication & Computing: Current Trends & Research"	Prof. (Dr.) Tapan Chakraborti	20-Jan-12 - 20-Jan-12	Sponsored by TEQIP II
National Seminar on "Recent Trends of Data Warehousing and Data Mining"	Prof. (Dr.) Tapan Chakraborti, Prof. Sudipta Bhadra, Prof. Sandipan Dutta, Prof. Satarupa Bagchi Biswas	02-Jan-12 - 02-Jan-12	Institute Funding

21. Student profile course-wise:

- Admission process

Name of the Course	Percentage of Intake	Intake Process
B.Tech in IT	80%	WBJEE rank wise
	10%	JEE Main rank wise
	10%	Management Quota (State Govt. rule) for WBJEE rank holders
M.Tech in IT	100%	Post-Graduate Entrance Test( PGET) Counseling (Conducted By MAKAUT)

Name of the Course	Year of Passing	Applications received	Selected		Pass percentage	
			Male	Female	Male	Female
B.Tech(IT)	2014-15	Admitted through WBJEE, JEE Main Exam.	48	20	93.75	100
	2013-14		44	21	95.45	100
	2012-13		43	23	100	95.65

	2011-12		44	21	100	95.23
	2010-11		39	21	97.44	100
M.Tech(IT)	2014-15	Admitted through PGET counseling	6	5	50	60
	2013-14		7	11	71.4	81.8
	2012-13		5	5	80	100

**Note:**

- 5% of the sanctioned AICTE intake will be tuition fee waived candidates  
 ➤ 20% of the sanctioned AICTE intake will be lateral entry from 3<sup>rd</sup> semester

**22. Diversity of students**

Name of the Course	Year of Admission	% of students from the College	% of students from the State	% of students from other States	% of students from other countries
B.Tech(IT)	2015-16	NA	57.14	42.86	Nil
	2014-15	NA	56.45	43.55	Nil
	2013-14	NA	82.26	17.74	Nil
	2012-13	NA	90.32	9.68	Nil
	2011-12	NA	95.23	4.77	Nil
M.Tech(IT)	2015-16	Nil	100	0	Nil
	2014-15	Nil	--	--	Nil
	2013-14	9.09	100	0	Nil
	2012-13	5.55	94.45	0.55	Nil
	2011-12	Nil	90	10	Nil

**23. How many students have cleared Civil Service, Defense Services, NET, SLET, GATE and any other competitive examinations?**

Year of Passing	GATE	CAT	GRE	OTHER(TOEFL, E LITMAS etc)
2014-15	2	1	3	1
2013-14	2	5	3	3
2012-13	4	10	2	7
2011-12	3	15	1	4
2010-11	19	15	1	2

**24. Student progression**

Course Name	Student progression	Percentage against enrolled				
		2014-15	2013-14	2012-13	2011-12	2010-11
B.Tech	UG to PG	--	--	1.51	3.07	1.67
	PG to M.Phil.	--	--	--	--	--
	PG to Ph.D.	--	--	--	--	--
	Ph.D. to Post-Doctoral	--	--	--	--	--
	Employed					
	▪ Campus selection	61.78	69.23	68.18	90.76	83.33
	▪ Other than campus recruitment	No record available	No record available	No record available	No record available	No record available
	Entrepreneurs	--	--	--	--	--
	UG to PG	NA	NA	NA	NA	NA
	PG to M.Phil.	--	--	--	--	--

M.Tech	PG to Ph.D.	--	--	--	--	--
	Ph.D. to Post-Doctoral	--	--	--	--	--
	Employed	9	5.55	0	0	NA
	<ul style="list-style-type: none"> <li>■ Campus selection</li> <li>■ Other than campus recruitment</li> </ul>	No record available	No record available	No record available	No record available	
	Entrepreneurs	--	--	--	--	--

## 25. Diversity of staff

Percentage of faculty who are graduates	
of the same parent university	31.25
from other universities within the State	56.25
from other universities from other States	12.50

## 26. Number of faculty who were awarded Ph.D., D.Sc., and D.Litt during the assessment period :

The name of the faculty who are pursuing Ph.D. are given below:

Name	Year of Registration
Prof. Rajib Biswas	2014
Prof. Rudranath Mitra	2012

## 27. Present details about infrastructural facilities

■ Library: Yes.

Area: 400 sqft(Approx.)

No of Titles: 195

No of Journal: 15

■ Internet facilities for staff and students – Yes

■ Total number of class rooms - 8(4 Theory Class room and 4 Tutorial room and 1 seminar room)

■ Class rooms with ICT facility - Yes (1)

■ Students' laboratories - Yes (6)

■ Research laboratories - Yes (1)

## 28. Number of students of the department getting financial assistance from college:

■ B.Tech (Govt. Scholarships)

Name of the Course	Year of Admission	No of students
B.Tech(IT)	2014-15	9
	2013-14	11
	2012-13	17
	2011-12	10
	2010-11	14
M.Tech(IT)	2014-15	0
	2013-14	0

	2012-13	3
	2011-12	0
	2010-11	0

■ M.Tech (Teaching Assistantship from TEQIP)

Session	1st year	2nd year
2014-15	0	4
2013-14	4	3
2012-13	3	0
2011-12	0	NA

29. Was any need assessment exercise undertaken before the development of new program(s)? If so, give the methodology.

NA

30. Does the department obtain feedback from

- Faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize it?

The feedback of curriculum obtained from the faculty on various subjects and their suggestions are placed before the Board of studies for the consideration and appropriate action.

- students on staff, curriculum as well as teaching-learning-evaluation and what is the response of the department to the same?

The feedback of teaching learning evaluation obtained from the students and their Suggestions are placed before the Board of studies for the consideration and appropriate action.

- Alumni and employers on the programmes and what is the response of the department to the same?

The feedback of curriculum obtained from the alumni on various subjects and their suggestions are placed before the Board of studies for the consideration and appropriate action.

31. List the distinguished alumni of the department (maximum 10) New Department

Name	Current Position
Aditya Dwarkani (2015)	Process Associate at Xplorsoft Pvt Ltd
Swarnadeep Chatterjee(2014)	SAP (ABAP HCM) Consultant at Capgemini
Aruni Roy Chowdhury(2013)	Pursuing PhD at University of Massachusetts, Amherst
Yash Agarwal(2012)	Manager, Tata Services
Abhishek Ganeriwala(2012)	Manager, Business Planning at Netwar18
Malay Sanghi(2010)	Compiler Engineer, Nvidia Graphics
Nakul Mittal(2010)	Senior Manager at CK Birla Group
Dip Nag(2009)	Consultant at Allianz Group
Srishti Mukherjee(2009)	Graphics Hardware Engineer, Intel Corp, California
Aditi Tagore(2007)	Vice President,Engineering,Bank of America

32. Give details of student enrichment programmes (special lectures/ workshops/ seminar) with external experts.

Sl. No.	Topic of the Workshop/Seminar/Special Lecture	Participants	Date	Resource Person(s)
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1	Workshop on “C and Embedded C Programming Language”	Students of 2 <sup>nd</sup> and 3 <sup>rd</sup> Year	22 <sup>nd</sup> Feb – 3 <sup>rd</sup> Mar 2014	Mr. Gourav Dutta Chowdhury, Project Engineer, ICT & S, CDAC,Kolkata,Mr. Swarup Kumar Saha, Trainer,VMS, Kolkata
2	Workshop on “Application Development on Android Platform”	Students of 2 <sup>nd</sup> and 3 <sup>rd</sup> Year	23 <sup>rd</sup> – 27 <sup>th</sup> Sep 2013	Mr. Gourav Dutta Chowdhury, Project Engineer, ICT & S, CDAC,Kolkata

33. List the teaching methods adopted by the faculty for different programmes

- Lectures & tutorials
- Chalk & board
- Presentation
- Experimental Laboratory Work
- Assignments

34. How does the department ensure that programme objectives are constantly met and learning outcomes monitored?

#### **Programme Educational Objectives (PEOs) of B. Tech. in IT Course:**

(List and articulate the programme educational objectives of the programme under accreditation) Graduates of the B. Tech programme in Information Technology at Heritage Institute of Technology are expected to achieve the following objectives after 5 years of graduation:

- Established themselves as practicing professionals in industry or have significant contribution in R&D.
- Achieved terminal degree & excelled in academia.
- Adapted themselves with latest developments in the discipline to survive and excel in the dynamic world of I.T.
- Demonstrated their ability to work as team members and ready to become leaders at workplace.

#### **Programme Educational Objectives (PEOs) of M. Tech. in IT Course:**

Graduates of the M. Tech programme in Information Technology at Heritage Institute of Technology are expected to achieve the following objectives after 5 years of graduation:

- Established themselves as promising professionals in industry or have significant contribution in R&D.
- Achieved terminal degree & excelled in academia.
- Adapted themselves with latest developments in the discipline to survive and excel in the dynamic world of I.T.
- Working with excellence in incubation centers and R&D Laboratories to improvise existing and develop new IT Tools and State-Of-The-Art Softwares.

#### **Programme outcomes**

##### **List of Pos:**

Graduates of the M. Tech programme in Information Technology at Heritage Institute of Technology are expected to achieve the following objectives after 5 years of graduation:

- An ability to apply knowledge of mathematics, science, engineering fundamentals and expertise in Information Technology for the solution of complex problems.
- An ability to identify, formulate, solve and analyze complex engineering problems.
- An ability to design a system, component or process to meet design means within realistic constraints such-as economic, environmental, social, political, ethical, health and safety, maintainability and sustainability.
- An ability to create, select, apply appropriate techniques, resources and modern IT tools with an

- understanding of limitations.
- An ability to understand the impact of engineering solution in a global economic environmental and social context.
- Understanding as well as application of professional and ethical responsibilities.
- An ability to function effectively as an individual or as a member or leader in multi-disciplinary settings.
- An ability to communicate effectively in all respect with the engineering community and with the society at large.
- An ability to apply knowledge and understanding of engineering and management principles towards managing projects.
- Developing the mindset for lifelong learning in the ever changing field of information technology.

A series of class tests, assignments, tutorials, viva and small projects based on respective subject are put in place to evaluate performance of the students. Based on the above assessments, student performances are monitored to achieve the course outcome.

Rubrics analysis	Statistical analysis of the curriculum and its applicability by the students
Unit test	Internal evaluation of student progress
Internal Assessment	This is done by giving several home assignments to each student.
Semester Exam.	Final exam. At the end of each semester
Result analysis	The scores of the students on each subject and on the whole is analyzed to understand the readiness of the student to meet the PEO and PO.

35. Highlights the participation of students and faculty in extension activities.

- Hands on training programmes are conducted for the students to enhance their skills which can be useful to them when they join the industry.
- The Grooming and Personality Development programmes are organized with Training & Placement cell which is beneficial for students in placement.
- Students are active member of Rotaract Club, under the parent body Rotary Club of Mahanagar, which conducts programs like blood donation camps, tree plantation, relief and rehabilitation to disaster struck areas etc.
- Student takes active participation in NEN(National Entrepreneurship Network)

36. Give details of “beyond syllabus scholarly activities” of the department.

- Grooming Session by Mr. Amitabh Mohan from HLS India, Kolkata and Ardent Computech Pvt. Ltd., Kolkata for the 4<sup>th</sup> year batch for cracking interviews.
- Departmental Industrial Visit.
- Soft Skill Class is there in 1<sup>st</sup> year as a preparatory course work for campus to job ready format.
- Group Discussion classes for 4<sup>th</sup> year to make ready final year students for placements.

37. State whether the programme/ department is accredited / graded by other agencies. Give details. :

- Department is approved by AICTE.
- In first phase B. Tech (IT) program was accredited by NBA for 3 years from 2009 to 2012.
- In second phase B. Tech (IT) program was accredited by NBA for 2 years from 18.09.2013 to 17.09.2015.

38. Detail any five Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department

- Strengths



- Many National/International Conferences, Seminars, workshop were organized.
- Highly qualified and expertise Faculty members with multiple specialization
- High demand for admission in B.Tech course.
- Very good infrastructure with well equipped Laboratories
- Updated curriculum
- Majority of the faculty members and Technical Assistants are young and energetic(Average Age 34 years)

▪ Weaknesses

- Scarcity of experienced faculty at senior level.
- Smart Classroom with digital facilities
- Focus should be given for getting funds from Government and Private sources.

▪ Opportunities

- A very good library to get information regarding new arrivals in subject domain and latest technologies
- With ex-students placed in reputed institutions and industry, CSE Dept. students have the scope to get valuable insights of these premier institutes through alumni interaction.
- Courses to meet high demand for employment
- Funds to buy useful software is generally provided by TEQIP. That provides opportunity for both teachers and students to stay abreast with the latest technologies.

▪ Challenges

- 100 % campus placement.
- To become well known department nationally
- To become the best department in terms of publications
- Because of the active involvement of most of the faculties with classes and laboratories, they get less time to pursue their own research interests. The department should be allowed to recruit on a regular basis to cope with the increasing number of students.

39. Future plan of the department

- To accelerate and motivate research activities in the Department
- To make the Department as the Centre of Excellence.





1. Name of the Department & Its year of establishment : 

Department of Physics
2001
2. Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., etc.) : Supporting Department for B.Tech Course
3. Interdisciplinary courses and departments involved:  
Not offered in the curriculum.
4. Annual/ semester/choice based credit system :  
Semester System
5. Participation of the department in the courses offered by other departments  
Physics as a subsidiary subject under B.Tech. curriculum under the code PHYS1001 and PHYS2001 as theory papers & PHYS1011 and 2011 as practical papers in first year and second year respectively under autonomous status.

6. Number of teaching posts sanctioned and filled (Professors/Associate Professors/Asst. Professors)

	Sanctioned	Filled
Professor	1	0
Associate Professors	2	1
Asst. Professors	7	9
<b>Total</b>	<b>10</b>	<b>10</b>

7. Faculty profile with name, qualification, designation, specialization (D.Sc./D.Litt./ Ph.D./M.Phil., etc.)

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. students guided in the last 4 years
Dr.Nirmalya Prasun Nayak(HOD)	Ph.D	Associate Prof. and HOD	X-ray & Crystallography	20 years(including 6 yrs of research ex.)	None
Dr.Ajanta Das	Ph.D.(B.Ed.)	Asst. Prof	High energy Physics	22 yrs (including 5 yrs of research ex.)	None
Dr. Sudipto Sen	Ph.D.	Asst. Prof	Polymer Physics	11 years including 5 yrs. of research experience.)	None
Dr. Dibyendu Mal	Ph.D.	Asst. Prof	Polymer Physics	11 years including 5 yrs. of research experience.)	None
Dr.Arindam Chakraborty	Ph.D.	Asst. Prof	Atomic – molecular physics	13 yrs (including 4yrs. of research ex.)	None
Dr. Shinjinee Das Gupta	Ph.D.	Asst. Prof	Condensed Matter Physics	8 yrs ( including 6yrs of research ex.)	None
Dr. Hirak Kumar Chandra	Ph.D.	Asst. Prof	Condensed Matter Physics	8 yrs ( including 6yrs of research ex.)	None
Dr. Himadri Ghosh	Ph.D.	Asst. Prof	Astrophysics	2 yrs. of post doctoral experience + 7 yrs. Of research experience as Ph.D student	None
Dr. Mili Das	Ph.D.	Asst. Prof	Experimental Nuclear Physics	14 years teaching + research	None
Dr. Rajib Pal	Ph.D.	Asst. Prof	Guest Faculty	Electronics, Condensed Matter	None

8. Percentage of classes taken by temporary faculty – programme-wise information : (21/165)  
12.7% of total. (For even semester 2016, .Jan'16 – June 16)

9. Programme-wise Student Teacher Ratio:  
1<sup>st</sup> year student teacher ratio 16.36:1

10. Number of academic support staff (technical) and administrative staff: sanctioned and filled

	Sanctioned	Filled
Admin Staff	Nil	-
Technical Support Staff	6	6

11. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Mention names of funding agencies and grants received project-wise. : Nil

12. Departmental projects funded by DST-FIST; DBT, ICSSR, etc.: Project Lab: sponsored by MODROBS, AICTE : Nil

13. Research facility / centre with:  
☒ State recognition Nil

- National recognition Nil
- International recognition Nil

## 14. Publications:

- Number of papers published in peer reviewed journals (national / international): 35

Name of the faculty	Topic/Journal	Impact factor	ISSN
	<b><u>International Journal</u></b> “3797Rb60: The Cornerstone of the Region of Deformation around A ~ 100” Published in Physical Review Letters 115, 172501 (2015) C. Sotty, S. Das Gupta, et. al.	7.728	0031-9007
	Ferroelectric distortions in doped ferroelectrics: BaTiO <sub>3</sub> :M (TM = V-Fe), Hirak Kumar Chandra, Kapil Gupta, et. al, PHYSICAL REVIEW B 87, 214110 (2013).	3.66	2469-9969
	Boron diffusion in MgO and emergence of magnetic ground states: A first-principles study, Hirak Kumar Chandra and Priya Mahadevan, PHYSICAL REVIEW B 89, 144412 (2014).	3.66	2469-9969
	<b><u>National Conference Proceedings:</u></b> “Mystery of <sup>151</sup> Ho isotope” published in Proceedings of the DAE Symp. on Nucl. Phys. 60 (2015), 296. S. Das Gupta and M. Saha Sarkar		

- Monographs: Nil
- Chapter(s) in Books: Nil
- Editing Books : Nil
- Books with ISBN numbers with details of publishers:

SI No	Author	Publisher	Title	ISBN NO
1	Nirmalya Prasun Nayak	Matrix Edicare Pvt Ltd.	Engineering Physics – Vol 1	ISBN 978-93-80221-00-7
2	Nirmalya Prasun Nayak	Matrix Edicare Pvt Ltd.	Physics II (EC)	ISBN 978-93-81633-51-9
3	Nirmalya Prasun Nayak	Matrix Edicare Pvt Ltd.	Physics II (EE)	-

- Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.) : Nil
- Citation Index-range/average: Nil
- SNIP : Nil
- SJR : Nil
- Impact factor-range/average: Nil
- h-index : Nil

## 15. Details of patents and income generated: Nil

16. Areas of consultancy and income generated: Nil
17. Faculty recharging strategies:  
Sending faculties to different orientation programs organized by different IITs, Universities and Research Institutions.  
Detail:

NAME OF THE FACULTY	WORKSHOP/CONFERENCE etc.	Source of Funding
Dr Ajanta Das	1.Workshop on Astrophysics and Cosmology.(January 13-14, 2010) Jointly organized by , Department of Applied mathematics, Calcutta University IUCCA, Pune. 2.One day seminar on "Contemporary issues in Astrophysics and Cosmology" (March23,2010), Organised by RCRC, JU. 3.. Workshop on 'Mechanics in Physics' at IIT, Kanpur ,(23rd June to 27th June,2014)	HITK  Not Required  TEQIP Phase II
Dr. Dibyendu Mal	1."Pedagogy workshop for Teaching Faculty" organized by IIT Bombay as TEQIP phase II program. Part I is from 12th to 14th June 2014 (3 Days). Part II is on 24th to 26th July 2014 (3 Days). 2. Workshop on 'EM theory, Optics and Laser' at IIT, Kanpur ,(1st May to 5th May,2015)	TEQIP Phase II  TEQIP Phase II
Dr. Hirak Kumar Chandra	"Pedagogy workshop for Teaching Faculty" organized by IIT Bombay as TEQIP phase II program. Part I is from 12th to 14th June 2014(3 Days). Part II is on 24th to 26th July 2014(3 Days). Spent one year as post doctoral fellow in Taiwan.----- ( from 01-01-2015 to 31-12-15)	TEQIP Phase II  NUT ( National University of Taiwan)

18. Student projects
- percentage of students who have done in-house projects including inter-departmental:  
N.A as it is a Supporting Department
19. Awards / recognition received at national and international level by
- Faculty:  
Hirak Kumar Chandra ( Awarded), Arindram Chakraborty ( Thesis Submitted )
  - Doctoral / Post doctoral fellows:  
Hirak Kumar Chandra (Taiwan)
  - Students: Supporting department
20. Seminars / Conferences / Workshops organized and the source of funding (national and international) with details of outstanding participants, if any.

Title / Speaker	Organiser/ Convenor	Date, Time, Venue	Funding
A Talk by Prof. Palash B.Paul., Saha Institute of Nuclear Physics, Kolkata Topic; Small particles at high energy. Speaker : Prof. Palash B.Paul., Saha Institute of Nuclear Physics, Kolkata	Physics Department  Convenor: N.P.Nayak	Venue; Seminar Room, A- building Time:3:15 p.m. Date; 21-03-2012	HITK
A Talk by Prof. Bikash Sinha Topic: 'Chasing the missing link at CERN: Higgs Boson' Speaker: Prof. Bikash Sinha,	Physics Department  Convenor: N.P.Nayak	Venue: HITK,Auditorium Time : 3 p.m. Date : 08-08-2012	HITK

Former Director, Saha Institute of Nuclear Physics, Kolkata			
National Conference on Mathematical Trends in Physical Sciences.	Physics and Mathematics Department Convenor: Nirman Ganguly N.P.Nayak	Venue: HITK, campus Date : August 13-14 ,2014	TEQIP Phase II

21. Student profile course-wise: NA. (Data is available in the respective Degree awarding department of B.tech Program)
22. Diversity of students : ( Data is available in the respective Degree awarding department of B.tech Program)
23. How many students have cleared Civil Service, Defense Services, NET, SLET, GATE and any other competitive examinations? ( Data is available in the respective Degree awarding department of B.tech Program)
24. Student progression: (Data is available in the respective Degree awarding department of B.tech Program)
25. Diversity of staff

Percentage of faculty who are graduates	
of the same parent university	0
from other universities within the State	89
from other universities from other States	11

26. Number of faculty who were awarded Ph.D., D.Sc., and D.Litt during the assessment period : Two  
The name of the faculty who are pursuing Ph.D. are given below:

1. Dr. Hirak Kumar Chandra in Dec,2014 (awarded)
2. Mr. Arindam Chakraborty , submitted his thesis, in August 2015( submitted thesis)

27. Present details about infrastructural facilities
  - Library: Total : Title - 238 / Vol- 1676
  - Internet facilities for staff and students – Yes
  - Total number of class rooms - No assigned class room for the department as it is a supporting department
  - Class rooms with ICT facility - Nil
  - Students' laboratories - 3 Laboratory rooms [ Two for Physics 1 lab(CB104 + CB105) and one for Physics 2 lab (CB108)
28. Number of students of the department getting financial assistance from college: ( Data is available in the respective Degree awarding department of B.tech Program)
29. Was any need assessment exercise undertaken before the development of new program(s)? If so, give the methodology.  
NA
30. Does the department obtain feedback from
  - Faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize it?  
The framing of the syllabi are done by the faculty together and finalized in presence of experts. Regular meetings are held in the department to discuss the contents of the syllabus. Two faculty members are representing physics department in the Board of Studies of the degree awarding departments. Hence the curriculum is constantly being reviewed for relevance time to time.
  - Students on staff, curriculum as well as teaching-learning-evaluation and what is the response of the department to the same?  
The TAQ questionnaires administered by the College give valuable feedback to each

professor. This is reviewed by the Head HR ,Principal and HOD and action taken accordingly.

- Alumni and employers on the programmes and what is the response of the department to the same? ( Data is available in the respective Degree awarding department of B.tech Program)
31. List the distinguished alumni of the department (maximum 10) New Department : ( Data is available in the respective Degree awarding department of B.tech Program)
  32. Give details of student enrichment programmes (special lectures/ workshops/ seminar) with external experts.
    - Special lectures are arranged for Lateral entry students for two reason.
      - They are found weak in physics and mathematics
      - They usually join one month late because of the admission process.
    - Special classes are arranged for weak students.
    - Third class tests are arranged for the students who get extremely poor marks in both the class tests.
      - Seminars with external speakers are arranged to motivate and knowledge enrichment.
  33. List the teaching methods adopted by the faculty for different programmes: Chalk and board.
  34. How doe the department ensure that programme objectives are constantly met and learning outcomes monitored?
    - Continuous Internal Assessment.
    - Two or three class tests
    - Constant monitoring in the lab performance
    - Assignments
    - Regular departmental meetings of faculty and Technical Assistants to take stock and plans
  35. Highlights the participation of students and faculty in extension activities.
    - Hands on training programmes are conducted for the students to enhance their skills which can be useful to them when they join the industry.
    - The Grooming and Personality Development programmes are organized with Training & Placement cell which is beneficial for students in placement.
    - Students are active member of Rotaract Club, under the parent body Rotary Club of Mahanagar, which conducts programs like blood donation camps, tree plantation, relief and rehabilitation to disaster struck areas etc.
    - Student takes active participation in NEN(National Entrepreneurship Network)
  36. Give details of “beyond syllabus scholarly activities” of the department. ( Data is available in the respective Degree awarding department of B.tech Program)
  37. State whether the programme/ department is accredited / graded by other agencies. Give details. :

All the departments of B.Tech programmes are NBA accredited of which Physics is one of the subsidiary subject.

38. Detail any five Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department
  - Strengths



- Excellent course structure and the introduction of new application oriented topics like Superconductivity, Fiber optics, LASER etc..
- Dedicated professors constantly encourage students to learn the subject with proper understanding so that at least a hand some number of them use the knowledge in the research work in their respective branch in the long run.
- Cordial relationship among the members of faculty and the Technical Assistant.
- Regular lecture session being arranged where in house members deliver lectures on topics of recent research works in Physics as well as existing fundamental topics to enrich our knowledge.
- One faculty being posted abroad as post doctoral fellow in Taiwan. Another faculty member has submitted his doctoral thesis recently and all other having Ph. D. degree.
- Department has two laboratories including two dark rooms.

■ Weaknesses

- The academic staff also needs to focus more on research.
- The permanent faculty needs to engage themselves in refresher courses as resource personals.
- Involve in the teacher exchange program with IITs and other Technological Institutes within India and abroad.

■ Opportunities

- To offer choice based credits courses to different departments.
- To have exchange programmes with universities within India and abroad.
- Offer undergraduate and postgraduate courses in Physics, Engineering Physics etc.

■ Challenges

- To motivate greater number of students to grow their interest in Engineering Physics rather than taking the subject just as a subsidiary one.

39. Future plan of the department

- To grow as a department offering Undergraduate honors course at its discretion at the beginning .Eventually to convert it as post graduate course.



1. Name of the Department  
&

: Chemistry and Environment  
September 2001

- Its year of establishment
2. Names of Programmes / : Supporting Department of B.Tech program  
Courses offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., etc.)
3. Interdisciplinary courses and departments involved: Not offered
4. Annual/ semester/choice based credit system :  
Yes, CSE, IT, EE, ECE, AEIE, BT, CHE, CE, ME are offered CHEM 1001, CHEM 2001, CHEM 1011, CHEM 2201 (for chemical engineering 4th semester students, HU 401 (for MCA students).
5. Participation of the department in the courses offered by other departments  
Chemistry is a subsidiary subject under B.Tech curriculum.
6. Number of teaching posts sanctioned and filled (Professors/Associate Professors/Asst. Professors)

	Sanctioned	Filled
Professor	1	0
Associate Professor	2	0
Assistant Professor	7	10
<b>Total</b>	10	10

7. Faculty profile with name, qualification, designation, specialization (D.Sc./D.Litt./ Ph.D./M.Phil., etc.)

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. student guided in last 4 years
Dr.Anandalok Audhya	Ph.D.	Assistant Professor & DC	Inorganic Chemistry	11 Years	0
Dr. Ruma Roy Choudhury	Ph.D.	Assistant Professor	Inorganic Chemistry	14 Years	0
Ritu Mukherjee (Mishra)	Ph.D.	Assistant Professor	Inorganic Chemistry	8 Years	0
Dr. Abhijit Mandal	Ph.D.	Assistant Professor	Physical Chemistry	17 Years	
Dr. Kasturi Sanyal	Ph.D.	Assistant Professor	Inorganic Chemistry	16 Years	0
Dr. Sisir Debnath	Ph.D.	Assistant Professor	Organic Chemistry	11 Years	0
Dr. Debarati Dey	Ph.D.	Assistant Professor (on lien)	Inorganic Chemistry	12 Years	0
Dr. Sreedhara Gupta	Ph.D.	Assistant Professor (on lien)	Organic Chemistry	13 Years	0
Dr. Ratna Mukherjee	Ph.D.	Assistant Professor (on lien)	Organic Chemistry	11 Years	0

Guest faculty

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. student guided in last 4 years
Prof. (Dr.) Dulal Chandra Mukherjee	Ph.D.	Advisor	Physical Chemistry	48 years	0
Dr. Manisha Chakraborty	Ph.D.	Guest faculty	Physical Chemistry	22 years	0

8. Percentage of classes taken by temporary faculty – programme-wise information : 19.4%
9. Programme-wise Student Teacher Ratio:  
1<sup>st</sup> year student teacher ratio 16.36:1
10. Number of academic support staff (technical) and administrative staff: sanctioned and filled

	Sanctioned	Filled
Administrative Staff	0	0
Technical staff	2	2

11. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Mention names of funding agencies and grants received project-wise.: Nil
12. Departmental projects funded by DST-FIST; DBT, ICSSR, etc.: Project Lab: sponsored by MODROBS, AICTE : Nil
13. Research facility / centre with: NA
- State recognition
  - National recognition
  - International recognition
14. Publications: Faculty wise

#### Dr. Anandalok Audhya

- “Coordination Asymmetry in Divanadium(V) Compounds Containing a V<sub>2</sub>O<sub>3</sub> Core: Synthesis, Characterization and Redox Properties”. Chatterjee, P. B.; Bhattacharya, S.; **Audhya, A.**; Choi, K. -Y.; Endo, A. and Chaudhury, M. **Inorg. Chem.** **2008**, *47*, 4891-4902.
- “Reporting a New Class of Divanadium(V) Compounds Connected by an Unsupported Hydroxo Bridge”. Chatterjee, P. B.; Mandal, D.; **Audhya, A.**; Choi, K. -Y.; Endo, A. and Chaudhury, M. **Inorg. Chem.** **2008**, *47*, 3709-3718.
- “Anion-Controlled Assembly of Silver (I) Complexes of Multiring Heterocyclic Ligands: A Structural and Photophysical Study”. Kundu, N.; **Audhya, A.**; Abtab, S. M. T.; Ghosh, S.; Tiekink, E. R. T. and Chaudhury, M. **Cryst. Growth Des.** **2010**, *10*, 1269-1282.
- “Building Metallacrown Topology around a Discrete [M<sub>3</sub>(μ<sub>3</sub>-O)] (M = Ni(II) and Pd(II)) Core Using Oximate Oxygen Linkers: Synthesis, Structures, and Spectroscopic Characterization of a New Family of Compounds with an Inverse-9-MC-3 Motif”. **Audhya, A.**; Bhattacharya, K.; Maity, M. and Chaudhury, M. **Inorg. Chem.** **2010**, *49*, 5009-5015.
- “Tri- and Tetranuclear Nickel(II) Metallacrown Complexes Involving Oximate Oxygen Linkers: Role of the Guest Anion (Oxo- Versus Alkoxo-) in Controlling the Size of the Ring Topology”. **Audhya, A.**; Maity, M.; Bhattacharya, K.; Clerac, R. and Chaudhury, M. **Inorg. Chem.** **2010**, *49*, 9026-9035.
- “Single Crystal-to-Single Crystal Irreversible Transformation from a Discrete Vanadium(V)-Alcoholate to an Aldehydic-Vanadium(IV) Oligomer”. Chatterjee, P. B.; **Audhya, A.**; Bhattacharya, S.; Abtab, S. M. T.; Bhattacharya, K. and Chaudhury, M. **J. Am. Chem. Soc.** **2010**, *132*, 15842-15845.
- Polyols as ancillary ligands in manganese-oxime chemistry: Syntheses, structures and magnetic properties of a series of trinuclear complexes involving a linear MnII–MnIV–MnII core”. **Audhya, A.**; Maity, M.; Abtab, S. M. T.; Mathonière, C.; Kalisz, M. and Clerac, R. **Polyhedron**. **2012**, *33*, 353-359.

- "Tetranuclear homo-(Zn<sup>II</sup><sub>2</sub> and Cd<sup>II</sup><sub>2</sub>) and hetero metal (Zn<sup>II</sup><sub>2</sub> Tb<sup>III</sup><sub>2</sub> and Cd<sup>II</sup><sub>2</sub> Tb<sup>III</sup><sub>2</sub>) complexes with a pair of carboxylate ligands in a rare  $\eta^2: \eta^2: \eta^4$ -bridging mode: syntheses, structures and emission properties". Aftab, S. M. T.; **Audhya, A.**; Kundu, N.; Samanta, S. K.; Sardar, P. K.; Butcher, R. J.; Ghosh, S. and Chaudhury, M. *Dalton Trans.* **2013**, 42, 1848-1861.
- Targeted syntheses of homo-and heterotrinnuclear complex involving M<sup>II</sup>-Ni<sup>II</sup>-M<sup>II</sup> M=Ni, Cu and Pd) nonlinear core: Structure, spectroscopy, magnetic and redox studies". Mandal, D.; Aftab, S. M. T.; **Audhya, A.**; Tiekink, E. R. T.; Clerac, R. and Chaudhury, M. *Polayhedron* **2013**, 52, 355-363.

### Dr. Ruma Roy Choudhury

- First report of singly phenoxo-bridged copper(II) dimeric complexes: synthesis, crystal structure and low-temperature magnetic behaviour study C. R. Choudhury, S. K. Dey, R. Karmakar, S. Mitra, C. D. Wu, C. Z. Lu New J. Chem., 2003, 27, 1360.
- One novel manganese(III) quadridentate Schiff-base dimeric complex: Synthesis, crystal structure and magnetic properties R. Karmakar, C. R. Choudhury, G. Bravic, J. P. Sutter, S. Mitra Polyhedron, 2004, 23, 949.
- One novel dichromato-bridged Nickel(II) polymeric complex: Formation of metal-oxygen chain structure R. Karmakar, C. R. Choudhury, V. Gramlich, S. Mitra Inorg. Chim. Acta, 2004, 357, 3785.
- Synthesis and Structural Characterisation of Two Copper(II) Complexes of N-(1-acetyl-2-propylidene)(2-pyridylmethyl) amine R. Karmakar, C. R. Choudhury, A. S. Batsanov, S. R. Batten, S. Mitra Str. Chem., 2005, 16, 535.
- One Novel Cu(II)-Amino acid Schiff Base Complex Derived From Salicylaldehyde and L-Serine: Identification of Unusual Monodentate 4,4'-Bipyridine R. Karmakar, C. R. Choudhury, S. Mitra, L. Dahlenburg. Str. Chem., 2005, 16, 611.
- Two new end-to-end single dicyanamide bridged Cu(II) complexes with Schiff base ligands : structural, electrochemical and magnetic properties R. Karmakar, C. R. Choudhury, D. L. Hughes, G. P. A. Yap, M. S. El Fallah, C. Desplanches, J. -P. Sutter, S. Mitra Inorg. Chim. Acta, 2006, 359, 1184.
- Two new copper(II) complexes with the shortest (N-N) diazine based rigid ligand: Example of unusual tridentate coordination mode R. Karmakar, C. R. Choudhury, S. R. Batten, S. Mitra J. Mol. Str., 2007, 826, 75.
- Two new halo-bridged cadmium(II) polymers: Effect of halogen towards metal coordination R. Karmakar, C. R. Choudhury, D. L. Hughes, S. Mitra Inorg. Chim. Acta, 2007 360, 2631.
- Architecture of a new selenocyanato bridged 1-D polymeric complex of cadmium(II): Synthesis, crystal structure and spectroscopic studies R. R. Choudhury, C. R. Choudhury, Stuart R. Batten, S. Mitra Str. Chem., 2008, 19, 645.
- Mono- and dinuclear coordination complexes of Cu(II), Ni(II) and Zn(II) with tridentate N2O donor Schiff base ligands: Syntheses, characterizations and crystal structures M. Chakraborty, R. R. Choudhury, S. Mitra Communicated for publication
- One rare nickel(II)-sodium(I) doubly-phenoxo bridged dimer: Synthesis, spectral characterisation and structural study R. R. Choudhury, C. R. Choudhury, S. Mitra, A. J. Real Communicated for publication

### Dr. Ritu Mukherjee (Mishra)

- Ritu Mishra, Subrata Mukhopadhyay and Rupendranath Banerjee. Cu(II) catalyzed oxidation of some thiols by superoxide ligated to Co(II). J. Phys. Org. chem., 2012, 25, 1193-1197.
- Ritu Mishra, Subrata Mukhopadhyay and Rupendranath Banerjee. Kinetics of Oxidation of Nitroxyl Radicals by coordinated superoxide in aqueous acidic media. Inorg. Chim. Acta, 2012, 392, 137-140.
- Sekhar Gain, Ritu Mishra, Subrata Mukhopadhyay and Rupendranath Banerjee. Kinetics of oxidation of hydrogen peroxide and hydrazine in weakly acidic media by the superoxide ligand in [(en)(dien)Co<sup>III</sup>(μ-O<sub>2</sub>)Co<sup>III</sup>(en)(dien)]<sup>5+</sup> Inorg. Chim. Acta, 2011, 373, 311-314
- Ritu Mishra, Subrata Mukhopadhyay and Rupendranath Banerjee. Mechanistics of reduction of a bound superoxide by thiols in acidic media. Dalton Trans., 39, 2010, 2692-2696.
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### **Dr. Abhijit Mandal**

- Proton transfer reaction of 4-methyl-2,6-diamidophenol in aqueous medium at room temperature and 77K, D. Guha, **A. Mandal** and S. Mukherjee, **J. Lumin.**, 85 (1999) 79.
- Excited state intramolecular proton transfer in a new o-hydroxy Schiff base in non polar solvents at room temperature and 77K, **A. Mandal**, A. Koll, A. Filarowski, D. Majumder and S. Mukherjee, **Spectrochim. Acta Part A**, 55 (1999) 2861.
- Ground and Excited State Proton Transfer in Some Orthohydroxy Aromatic Compounds and Solvent Effect, D. Guha, **A. Mandal**, R. Das, S. Mitra and S. Mukherjee, **Israel J. Chem.**, 39 (1999) 375.
- Spectroscopic properties of 2-hydroxypyridine and excited state anion formation. G. Will, E. Waghorne, D. Fitzmaurice, D. Guha, **A. Mandal** and S. Mukherjee, **Indian J. of Chemistry**, 38A, August (1999) 753.
- Proton transfer rxn. Of a new o-hydroxy Schiff base in protic solvents at room temp. D. Guha, **A. Mandal**, A. Koll, A. Filarowski and S. Mukherjee, **Spectrochim. Acta Part A**, 56 (2000) 2669.
- Experimental and theoretical aspects of proton transfer in 4-methyl-2,6- diamidophenol at room temperature and 77K D. Guha, **A. Mandal** and S. Mukherjee, **J. Lumin.**, 90 (2000) 7.
- Proton transfer reaction of 4-methyl-2,6-diacetylphenol and an analysis with AM1 potential energy surfaces **A. Mandal**, D. Guha, R. Das, S. Mitra and S. Mukherjee, **J. Chem. Phys.**, 114 (2001) 1336.
- Proton transfer reaction of 4-methyl-2,6-dicarbomethoxyphenol in polar aprotic solvents at room temperature and 77K **A. Mandal** and S. Mukherjee, **Chem. Phys. Lett.**, 343 (2001) 265.
- Proton transfer reaction of 4-methyl-2,6-diamidophenol in alcoholic solvents at room temperature and 77K, D. Guha, **A. Mandal**, D. N. Nath, N. Chattopadhyay and S. Mukherjee, **J. Mol. Struct.: Theo. Chem.**, 542 (2001) 33.
- Excited state proton transfer reaction of 4-methyl-2,6-dicarbomethoxyphenol in some protic solvents at room temperature and 77K : interaction with base **A. Mandal**, D. Guha and S. Mukherjee, **J. Mol. Spect.**, 210(2001)183.
- Luminol fluorescence quenching reaction and its forensic application as a presumptive test **A. Mandal** and S. Mukherjee, **J. Ind. Acad. Foren. Sc.**, 40 (2001) 1.
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- Ground and excited state interaction between luminol and ethylenetrithiocarbonate: a fluorescence quenching study D. Banerjee, **A. Mandal**, S. Mukherjee, **Ind. J. Chem.** 41A (2002) 2456.
- Strengthening of the intramolecular O...H...N hydrogen bond in 2-(N-benzyl iminoethyl)-naphthol as a result of steric repulsion, **A. Mandal**, A. Koll, S. Mukherjee, **Ind. J. Chem.**, 41A (2002) 1107.
- Strengthening of the intramolecular hydrogen bond in 7-ethylsalicylidene aniline due to steric repulsion **A. Mandal**, A. Filarowski, T. Glowiake, A. Koll, and S. Mukherjee, **J. Mol. Struct.: Theo. Chem.**, 577 (2002) 153.
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- Proton transfer reaction of 4-methyl-2,6-dicarbomethoxyphenol in nonpolar and weakly polar solvents **A. Mandal**, S. Mitra, R. Das, D. N. Nath and S. Mukherjee, **J. Chem. Phys.**, 117 (2002) 5280.
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- Single-Molecule Dynamics Reveal an Altered Conformation for the Autoinhibitory Domain of Plasma Membrane  $\text{Ca}^{2+}$ -ATPase Bound to Oxidatively Modified Calmodulin K. D. Osborn, R. K. Bartlett, **A. Mandal**, A. Zaidi, R. J. B. Urbauer, J. L. Urbauer, N. Galeva, T. D. Williams, C. K. Johnson, **Biochemistry**, 43 (2004) 12937.
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Book publication:

Environment and Ecology, K.Sanyal, M.Kundu, S.Rana published by books and allied publisher, Kolkata and the book is for undergraduate students.(ISBN: 81-87134-33-X)

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15. Details of patents and income generated:  
Method of Synthesizing Isoindolequinones and Derivatives Thereof, US Patent 5,889,185, March 30, 1999 Youngs, Wiley. J.; Chakraborty, Manisha
16. Areas of consultancy and income generated: Nil

## 17. Faculty recharging strategies:

Name of the faculty	Workshop/Conference	Source of funding
Dr. Anandalok Audhya	➤ Seminar on Acharya Prafulla Chandra Ray and Chemistry Today, Department of Chemistry & Environment in collaboration with Department of Biotechnology, Heritage Institute of Technology, Kolkata, September 28, 2011.	Academic Science culture promotion society.
	➤ National Seminar on Recent Advances in Chemistry, Department of chemistry, Jadavpur University, Kolkata, Feb 10-11, 2012.	TEQIP II
	➤ Acharya Prafulla Chandra Ray Memorial Symposium on Chemistry and Industry: Indian Chemical Society, Kolkata, August 02-03, 2013.	UGC
	➤ Workshop on Computational Biology and Protein Structure Prediction, Department of Biotechnology, Heritage Institute of Technology, Kolkata, Sept 23-27, 2013.	TEQIP II
	➤ Workshop on Energy Conservation Techniques in Industries, Department of Chemical Engineering, Heritage Institute of Technology, Kolkata, Sept 27-28, 2013.	TEQIP II
Dr. Ruma Roy Choudhury	➤ Seminar on Acharya Prafulla Chandra Ray and Chemistry Today, Department of Chemistry & Environment in collaboration with Department of Biotechnology, Heritage Institute of Technology, Kolkata, September 28, 2011.	Academic science culture promotion society
	➤ Acharya Prafulla Chandra Ray Memorial Symposium on Chemistry and Industry: Indian Chemical Society, August 02-03, 2013.	TEQIP II
	➤ Workshop on Computational Biology and Protein Structure Prediction, Department of Biotechnology, Heritage Institute of Technology, Sept 23-27, 2013.	TEQIP II
	➤ Workshop on Pedagogy for Effective use of ICT in Engineering Education conducted by IIT, Bombay from 12th June to 2nd August, 2014.	TEQIP II
	➤ Presentation in the 52nd Annual Convention of Chemists 2015, organized by Indian Chemical Society, held at the JECRC University, Jaipur, December 28-30, 2015.	TEQIP II
Ritu Mukherjee (Mishra)	➤ Seminar on Acharya Prafulla Chandra Ray and Chemistry Today, Department of Chemistry & Environment in collaboration with Department of Biotechnology, Heritage Institute of Technology, Kolkata, September 28, 2011.	Academic Science culture promotion society
	➤ Acharya Prafulla Chandra Ray Memorial Symposium on Chemistry and Industry: Indian Chemical Society, August 02-03, 2013.	TEQIP II
	➤ Workshop on Computational Biology and Protein Structure Prediction, Department of Biotechnology, Heritage Institute of Technology, Sept 23-27, 2013.	TEQIP II
	➤ Workshop on Pedagogy for Effective use of ICT in Engineering Education conducted by IIT, Bombay from 12th June to 2nd August, 2014.	TEQIP II
	➤ Oral Presentation in the 52nd Annual Convention of Chemists 2015, organized by Indian Chemical Society,	TEQIP II

Name of the faculty	Workshop/Conference	Source of funding
	held at the JECRC university, Jaipur, December 28-30, 2015.	
Dr. Abhijit Mandal	<ul style="list-style-type: none"> <li>➤ Seminar on Acharya Prafulla Chandra Ray and Chemistry Today, Department of Chemistry &amp; Environment in collaboration with Department of Biotechnology, Heritage Institute of Technology, Kolkata, September 28, 2011.</li> <li>➤ Acharya Prafulla Chandra Ray Memorial Symposium on Chemistry and Industry: Indian Chemical Society, August 02-03, 2013.</li> <li>➤ Workshop on Computational Biology and Protein Structure Prediction, Department of Biotechnology, Heritage Institute of Technology, Sept 23-27, 2013.</li> </ul>	TEQIP II  TEQIP II  TEQIP II
Dr. Kasturi Sanyal	Attended and presented paper on the NANOMED conference at Manchester state university Manchester, UK. 23-25 November 2015.	CIES, Govt. of India
Dr. Sisir Debnath	Attended and presented an invited lecture in the national seminar on "Chemistry for sustainable development" at G.B. College, Naugachia, Bhagalpur at 22-23 September 2015	UGC
Dr. Manisha Chakraborty	52nd Annual Convention of Chemists and International Conference on Recent Advances in Chemical Sciences, Dec 28-30, 2015; JECRC University, Jaipur, Rajasthan, India.	DBT

18. Student projects : Supporting Department

19. Awards / recognition received at national and international level by

▪ Faculty

Dr. Kasturi Sanyal

➤ Awarded from Department of Chemistry Jadavpur University for academic excellence.

➤ Washington chapter Annual scholarship awarded by alumni association Jadavpur University for academic excellence.

20. Seminars / Conferences / Workshops organized and the source of funding (national and international) with details of outstanding participants, if any.

Seminar/Conference/ Workshop	Date	Topic	Funding	National/International
Seminar	28.09.2011	Acharya Prafulla Chandra Ray and Chemistry today	Academic Science Culture Promotion Society	National

21. Student profile course-wise: Supporting department, data is available in the B.Tech program

22. Diversity of students: Supporting department, data is available in the B.Tech program

23. How many students have cleared Civil Service, Defense Services, NET, SLET, GATE and any other competitive examinations? Supporting department, data is available in the B.Tech program

24. Student progression: Supporting department, data is available in the B.Tech program

25. Diversity of staff:

Percentage of faculty who are graduates	
of the same parent university	0%
from other universities within the State	100%
from other universities from other States	0%

26. Number of faculty who were awarded Ph.D., D.Sc., and D.Litt during the assessment period :  
one got PhD degree [1. Ritu Mukherjee (Mishra) from Jadavpur University on December 2012.]
27. Present details about infrastructural facilities
- Library: We have a departmental library that contains sufficient number of books of Chemistry and Environmental Science.
  - Internet facilities for staff and students: All the staffs have internet facility.
  - Total number of class rooms: No assigned classroom of the department. Teachers use to go to the respective classrooms assigned by the parent departments for chemistry classes.
  - Class rooms with ICT facility: Nil
  - Students' laboratories: Two laboratories CB101 (Acharya Prafulla Chandra laboratory) and CB102 (Marie Curie laboratory)
  - Research laboratories: Nil
28. Number of students of the department getting financial assistance from college: Supporting department, data is available in the B.Tech program
29. Was any need assessment exercise undertaken before the development of new program(s)? If so, give the methodology.  
NA
30. Does the department obtain feedback from
- faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize it?
  - The framing of the syllabi are done by the faculty together and finalized in presence of experts. Periodical meetings are held in the department to discuss the content of the syllabus. Faculty members are nominated for the board of studies of every degree awarded department. Hence the curriculum is constantly being reviewed for relevance.
  - students on staff, curriculum as well as teaching-learning-evaluation and what is the response of the department to the same?
  - Faculty members are evaluated by the students on a regular basis. This is monitored and reviewed by the head HR, Principal and HOD and action taken accordingly.
  - Alumni and employers on the programmes and what is the response of the department to the same? : NA
31. List the distinguished alumni of the department (maximum 10): NA
32. Give details of student enrichment programmes (special lectures/ workshops/ seminar) with external experts.  
We are arranging occasional special classes.
33. List the teaching methods adopted by the faculty for different programmes  
We use 'Chalk and talk' method, seminar by the students, project on relevant topics.
34. How doe the department ensure that programme objectives are constantly met and learning outcomes monitored?
- Students feedback report
  - Continuous internal assessment
  - Two or three class test
  - Constant monitoring in the lab performance

- Assignments
  - Regular departmental meeting of faculty and technical assistants to take stocks and plans.
35. Highlights the participation of students and faculty in extension activities.
- Chemistry is taught as a subsidiary subject
36. Give details of “beyond syllabus scholarly activities” of the department.
- 4. Paper presented by the faculty at state, national and international level
  - 5. Faculty participation in various seminars and workshop
  - 6. Involvement of the faculty in the research activities (projects submitted by two faculty members in the department of atomic energy)
37. State whether the programme/ department is accredited / graded by other agencies. Give details.
- All the departments of B.Tech program are NBA accredited.
38. Detail any five Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department
- Strengths
    - All the Faculty members have Ph.D. degree from well recognized universities and institutes.
    - All the faculty members are very good teachers and well experienced
    - Excellent course structure and introduction of new application oriented topics like Polymer chemistry, Spectroscopy, Electrochemistry, Industrial chemistry etc.
    - Well connections of the faculty members with recognized universities in India and abroad.
    - Vast research experience by the faculty members and published more than 100 papers in reputed journals.
  - Weaknesses
    - The permanent faculty members should engage themselves in more refresher courses as resource personal.
    - Involve in the teacher exchange program with the other technological institutes.
    - Poor communication skill of students from vernacular background resulting in additional challenges in grooming and language training.
    - Hesitation and reluctance on the part of some of the well known corporate to go beyond government engineering colleges for recruitment. This issue is being constantly persued to get them to source their engineering freshers from reputed private sector colleges like ours with notable success.
    - Backlogs/Low grades among students making them ineligible for campus selection
  - Opportunities
    - To offer choice based elective courses to different departments in the higher semester
    - To have more exchange programs with universities within India and abroad.
    - Offer undergraduate honors and post-graduate courses in the institute.
    - Internship and pre-placement offers from reputed companies
    - Industry tie up for pre-final year project oriented training
    - Overseas placement opportunities
    - Campus connect with reputed industries in software and core industries
    - New opportunities with start-ups/Renewable energy sector
    - Connect with Alumni and placement opportunities by reference
  - Challenges
    - Large no of engineering colleges and new universities in West Bengal
    - Competition for getting good students
    - High standards of selection by corporates resulting in low selection nos.

➤ Slow pick up in industries resulting in reduced intakes

39. Future plan of the department

To grow as a department offering undergraduate honors course at its discretion at the beginning and eventually to take it as offering post-graduate course.



1. Name of the Department

: Department of Mathematics

- &
- 2001
- Its year of establishment
2. Names of Programmes / Courses offered : Undergraduate (UG) : B.Tech  
(UG, PG, M.Phil., Ph.D., Integrated Postgraduate (PG) : M.Tech  
Masters; Integrated Ph.D., etc.)
  3. Interdisciplinary courses and departments involved:  
The course Engineering Mathematics and Biostatistics (BIOT 5104) in the curriculum for M.Tech Biotechnology is jointly taken by the Department of Mathematics and Department of Biotechnology
  4. Annual/ semester/choice based credit system :  
Semester based credit system.
  5. Participation of the department in the courses offered by other departments  
Courses under Maulana Abul Kalam Azad University of Technology (MAKAUT) (formerly West Bengal University of Technology (WBUT ))

Paper Code	Paper Name	Semester	Programme	Streams
M 101	Mathematics-I	1	B.Tech	CSE , IT, ECE , AEIE, CHE , BT , EE , ME , CE
M 302/ M 402	Mathematics-III	3 & 4	B.Tech	ECE , AEIE, CHE , ME , EE,CE
M(CS) 301/M(CS) 401	Numerical Methods	3 & 4	B.Tech	ECE , AEIE, CHE , ME , EE,CE,BT
M(CS) 391/M(CS) 491	Numerical Methods Lab	3 & 4	B.Tech	ECE , AEIE, CHE , ME , EE,CE,BT
M 201	Mathematics-II	2	B.Tech	CSE , IT, ECE , AEIE, CHE , BT , EE , ME , CE
M 401	Mathematics	4	B.Tech	CSE , IT
CS 503	Discrete Mathematics	5	B.Tech	CSE
IT 504D	Operations Research	5	B.Tech	IT
IT 594D	Operations Research Lab	5	B.Tech	IT
CS 605 A	Operations Research	6	B.Tech	CSE
CE 605A	Operations Research	6	B.Tech	CE
IT 605 A	Discrete Mathematics	6	B.Tech	IT
EIEM100(AM)	Advanced Engineering Mathematics	1	M.Tech	AEIE
MCE 101	Advanced Engineering Mathematics	1	M.Tech	ECE
MVLSI 101	Advanced Engineering Mathematics	1	M.Tech	VLSI
ITM 102	Advanced Mathematics	1	M.Tech (IT)	IT
CSEM 101	Advanced Mathematics for Computer Sc. And Engg.	1	M.Tech(CSE)	CSE
EC 704B	Advanced Engg. Mathematics for Electronics Engineers	7	B.Tech	ECE
M(CS) 511	Operations Research & Optimization Techniques	5	B.Tech	IT
M(CS)581	Operations Research Lab	5	B.Tech	IT

**From the Academic Session 2014-15**



Paper Code	Paper Name	Semester	Programme	Streams
MATH 1101	Mathematics-I	1	B.Tech	CSE , IT, ECE , AEIE, CHE , BT , EE , ME , CE
MATH 1201	Mathematics-II	2	B.Tech	CSE , IT, ECE , AEIE, CHE , BT , EE , ME , CE
MATH 2001	Mathematical Methods	3 & 4	B.Tech	ECE , AEIE, ME , EE,CE
MATH 2002	Numerical And Statistical Methods	3 & 4	B.Tech	ECE , AEIE, ME , EE,CE,BT,IT
MATH 2202	Probability and Numerical Methods	4	B.Tech	CSE
MATH 2012	Numerical And Statistical Methods Lab	3 & 4	B.Tech	IT, ECE , AEIE, BT , EE , ME , CE
MATH 2212	Probability and Numerical Methods Lab	4	B.Tech	CSE
MATH2201	Number Theory and Algebraic Structures	4	B.Tech	CSE
MATH 2203	Graph Theory and Algebraic Structures	4	B.Tech	IT
CSEN2102	Discrete Mathematics	3	B.Tech	CSE
MATH5101	Advanced Mathematical Methods	1	M.Tech	AEIE
MATH5102	Advanced Discrete Mathematics	1	M.Tech	CSE
MATH5103	Advanced Mathematics	1	M.Tech	ECE
MATH5103	Advanced Mathematics	1	M.Tech	VLSI
MATH5103	Advanced Mathematics	1	M.Tech	IT

6. Number of teaching posts sanctioned and filled (Professors/Associate Professors/Asst. Professors)

	Sanctioned	Filled
Professor	1	0
Associate Professor	2	0
Asst. Professor	7	12
<b>Total</b>	10	12

7. Faculty profile with name, qualification, designation, specialization (D.Sc./D.Litt./ Ph.D./M.Phil., etc.)

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. students guided in the last 4 Years
Dr. Anindita Maitra Bhattacharyya	Ph.D.	Assistant Professor & HOD	Experimental Fluid Mechanics, Environmental Fluid Mechanics, Sediment transport, Image processing, PTV, PIV, Flow through porous media	11	NIL
Dr. Nirman Ganguly	Ph.D.	Assistant Professor	Quantum Information and Computation	12	NIL

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. students guided in the last 4 Years
Dr. Somjit Datta	Ph.D.	Assistant Professor	Number Theory, Algebra, Jacobian Elliptic Functions, Theta Functions, q-series.	Industry: 1 Teaching: 22	NIL
Ms. Moulipriya Sarkar	M.Sc.	Assistant Professor	Mathematical Biology	10	NIL
Mr. Sandip Chatterjee	M.Sc.	Assistant Professor	Functional Analysis , Optimization Techniques	11	NIL
Mr. Jyotishman Chatterjee	M.Tech.(Comp. Sc.) and M.Stat.	Assistant Professor	General	Industry:12 Teaching:6	NIL
Ms. Arpita Paul	M.Sc.	Assistant Professor	Supply chain management	Industry:2 Teaching:6	NIL
Ms. Jhumpa Bhadra	M.Sc.	Assistant Professor & DC	Theory of Elasticity and Plasticity	8	NIL
Ms. Swarnali Sharma	M.Sc.	Assistant Professor	Mathematical Modeling in Ecology and Epidemiology	5	NIL
Mr. Dipankar Chakraborty	M.Sc.	Assistant Professor	Optimization under Imprecise Environment	5	NIL
Ms. Rituparna Ghosh	M.Sc.	Assistant Professor	Abstract Algebra, Semirings, Lattice theory	5	NIL
Ms. Sudipta Sarkar	M.Sc.	Assistant Professor	Optimal Management Of Renewable Resources	8	NIL

## 8. Percentage of classes taken by temporary faculty – programme-wise information :

Name	Period	Percentage of classes	Programme
Prof(Dr.) R. K. Bera	2012-13 ODD Semester	4%	B.Tech and M.Tech
Prof(Dr.) R. K. Bera	2012-13 EVEN Semester	6.25 %	B.Tech
Mr. Brojeswar Pal	2014-15 ODD Semester	6.78 %	B.Tech

## 9. Programme-wise Student Teacher Ratio:

First year B.Tech student teacher ratio : 16.36:1

## 10. Number of academic support staff (technical) and administrative staff: sanctioned and filled

## 11. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Mention names of funding agencies and grants received project-wise. : Nil

## 12. Departmental projects funded by DST-FIST; DBT, ICSSR, etc.: Project Lab: sponsored by MODROBS, AICTE : Nil

## 13. Research facility / centre with:

- State recognition Nil

- National recognition Nil
- International recognition Nil

## 14. Publications:

- Number of papers published in peer reviewed journals (national / international): 68

Academic Session	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
National Journal	NIL	NIL	NIL	NIL	NIL
International Journal	9	22	17	12	8

- Monographs: Nil
- Chapter(s) in Books:  
 Name of Book: Heroin: Pharmacology, Effects and Abuse Prevention  
 Title of Chapter: Dynamic Behaviour for Heroin Epidemic Models  
 Authors: G.P.Samanta, Swarnali Sharma  
 Year: 2012  
 Publisher: Nova Science Publishers, New York  
 Date of Publication: August, 2012  
 ISBN: 978-1-61122-241-8 (e book)  
 Title: Independent Component Analysis for Dimension Reduction: Hough Transform and Cash Algorithm  
 Author: A.K.Chattopadhyay, T. Chattopadhyay, Tuli De and S. Mondal  
 Book: Astrotatistical Challenges for the New Astronomy  
 Chapter: Chapter 9  
 Publisher: Springer  
 Editor: Joseph Hilbe.  
 Date of publication: July 2012  
 ISBN number: 978-1461435075
- Editing Books : Nil
- Books with ISBN numbers with details of publishers:  
 Title: Basic Engineering Mathematics.  
 Authors: Dr. Dipak Kumar Jana, Dipankar Chakraborty.  
 Publishers: Platinum Publishers.  
 ISBN: 978-81-89874-27-8.  
 Title: Advanced Engineering Mathematics  
 Authors: Dipankar Chakraborty, Sumana Hatui, Dipak Kumar Jana.  
 Publishers: Macmillan Publishers India Ltd.  
 ISBN: 935-059-392-0.
- Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.) : 68
- Citation Index-range/average: Total Citations/Number of Publications = 199/68=2.92
- SNIP : 0.957
- SJR : 0.862
- Impact factor-range/average: 1 - 7.512
- h-index : 1-5

## 15. Details of patents and income generated: Nil

## 16. Areas of consultancy and income generated: Nil

## 17. Faculty recharging strategies:

Faculty members attend national and international conferences / seminars / symposia /workshop / short term courses / periodically.

## 18. Student projects

As per the curriculum under Autonomy which started from the academic session 2014-15 , the students in first year B.Tech programme from any stream have to compulsorily execute a

project pertaining to the subject codes MATH 1101 (1st semester) and MATH 1201 ( 2nd semester ).

19. Awards / recognition received at national and international level by

▪ Faculty:

Prof. Sandip Chatterjee, Assistant Professor, received award for outstanding teaching in the year 2014 from Heritage Institute of Technology.

▪ Doctoral / Post doctoral fellows:

Faculty Name	Status
Mr. Sandip Chatterjee	Ph.D. Thesis Submitted
Ms. Swarnali Sharma	Ph.D. Thesis Submitted
MS. Jhumpa Bhadra	Ph.D. Thesis Submitted
Mr. Dipankar Chakraborty	Pursuing Ph.D.
MS. Rituparna Ghosh	Pursuing Ph.D.

▪ Students: Nil

20. Seminars / Conferences / Workshops organized and the source of funding (national and international) with details of outstanding participants, if any.

Title	Time	Organiser	Source of funding
National Conference on Mathematical Trends in Physical Sciences	August 13-14, 2014	Jointly organised by Departments of Mathematics and Physics , Heritage Institute of Technology	TEQIP-II
National Seminar on Role of Mathematics in Socio-Economic Research	March 28-29, 2015	Jointly organised by L'SER , ORSI and Department of Mathematics, Heritage Institute of Technology	L'SER

21. Student profile course-wise: NA. Supporting Department

22. Diversity of students : Supporting Department

23. How many students have cleared Civil Service, Defense Services, NET, SLET, GATE and any other competitive examinations?: Supporting Department

24. Student progression: Supporting Department

25. Diversity of staff

Percentage of faculty who are graduates	
of the same parent university	0
from other universities within the State	83.33 % ( 10 out of 12 )
from other universities from other States	16.67% ( 2 out of 12 )

26. Number of faculty who were awarded Ph.D., D.Sc., and D.Litt during the assessment period : Three

Faculty Name	Year	University
Dr. Nirman Ganguly (Ph.D)	2015	University of Calcutta
Dr. Somjit Datta (Ph.D)	2013	University of Pune
Dr. Nantu Sarkar (Ph.D)	2013	Jadavpur University

27. Present details about infrastructural facilities

- Library: The department owns an almirah containing books on various topics. The total number of books is 131.
- Internet facilities for staff and students – The department contains 13 computers with internet facility for faculty and staff. The department possesses two printers(one with copying and scanning facility). The department also has another scanner.
- Total number of class rooms - Supporting Department
- Class rooms with ICT facility - The department owns a laptop and a projector which caters to

- the students' project presentations.
- Students' laboratories - Supporting Department
  - Research Laboratories - Supporting Department
28. Number of students of the department getting financial assistance from college: ( Data is available in the respective Degree awarding department of B.tech Program): Supporting Department
29. Was any need assessment exercise undertaken before the development of new program(s)? If so, give the methodology.  
NA
30. Does the department obtain feedback from
- faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize it?  
Yes. Departmental Academic Committee meetings are organized at regular intervals where the suggestions and inputs from the faculty members are taken on teaching-learning evaluation and implemented suitably.
  - Students on staff, curriculum as well as teaching-learning-evaluation and what is the response of the department to the same?  
Yes. Feedback from the students are taken. The faculty members take inputs from the students through personal interactions. Objective tests for the identification of weak students have been taken. The department then decides, through meetings, proper remedial measures for weak students. In general, faculty members also circulate study notes and assignments and ensure appropriate submissions of the tasks assigned.
- Alumni and employers on the programmes and what is the response of the department to the same? Supporting Department
31. List the distinguished alumni of the department (maximum 10) New Department :  
Supporting Department
32. Give details of student enrichment programmes (special lectures/ workshops/ seminar) with external experts.  
Aptitude tests based on elementary skills in Mathematics were organized by an organization named VISTAMIND in 2013-14.
33. List the teaching methods adopted by the faculty for different programmes: Chalk and board.  
Following are the teaching methods followed in our department:
- Lectures & Tutorials
  - Power point presentation
  - Use of Mathematical Models.
  - In addition student project presentation seminars are conducted periodically.
34. How does the department ensure that programme objectives are constantly met and learning outcomes monitored?  
Regular academic committee meetings are conducted where the feedback and inputs from faculty are taken on programmes and their outcomes. The suggestions are noted and implemented to ensure efficient monitoring of the academic activities of students. Result analysis is done at suitable intervals. In first year, the students are also evaluated through project presentations, where they work on possible applications of the topics they are taught.
35. Highlights the participation of students and faculty in extension activities.:  
Supporting Department
36. Give details of "beyond syllabus scholarly activities" of the department.  
Conferences and Seminars are organized by the department at appropriate intervals

which gives an opportunity to the faculty members to enhance their skills. Some faculty members are also involved in activities motivating students in entrepreneurship endeavours.

37. State whether the programme/ department is accredited / graded by other agencies. Give details. : Supporting Department

38. Detail any five Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department

■ Strengths

- Well qualified, experienced and committed faculty.
- Diverse fields of research in both pure and applied Mathematics with publications in various internationally reputed journals and conference proceedings.
- About 29% of faculty members have Ph D. Degree, 21% of faculty members have submitted their Ph.D. thesis and 21% of the faculty members have enrolled for Ph.D..

■ Weaknesses

- Lack of classrooms equipped with ICT facilities
- Lack of Advanced Mathematical Software.
- Lack of collaboration in national and international level.

■ Opportunities

- Collaboration in research work with other departments of the institute and external institutions.
- Some of the faculty members have recently been awarded with PhD degree and some are nearing completion. This gives an opportunity to guide PhD students and thereby expand the scope of the department.

■ Challenges

- To motivate the students in various fields of inter-disciplinary research involving Mathematics.
- To get more financial Support from CSIR, DST, NBHM for conducting Conferences and Workshops periodically.

39. Future plan of the department

- The research interests of the members of the faculty of the department are diverse and representative of several areas of pure and applied mathematics. In the past, students have been involved in research activities in collaboration with the faculty and this effort has led to several publications. The department looks forward to involving more students in research and also to guiding doctoral work.
- The department has plans of establishing a laboratory of its own, in which instruction and research in numerical computation in various areas of engineering mathematics would be undertaken.
- The department will explore the possibility of setting up a school of mathematics in the campus in order to render advanced mathematical services to students and the faculties of the engineering departments of the institute, over and above the instructional services rendered in the classroom.
- There are plans of inviting members of the faculty of premier institutions to deliver lectures in the department on research and pedagogical methods in engineering mathematics.
- There are plans to organize departmental research seminars. Several members of the faculty have recently submitted their doctoral theses and others are nearing completion of theirs. They are expected to speak on their doctoral work in departmental seminars.



1. Name of the Department  
&  
Its year of establishment

E.13 Department of Humanities  
: 2001

2. Names of Programmes / Courses offered : Dept. of Humanities mans all humanities (UG, PG, M.Phil., Ph.D., Integrated courses offered by the degree awarding Masters; Integrated Ph.D., etc.) departments of the institute
3. Interdisciplinary courses and departments involved:  
Not Applicable (NA)
4. Annual/ semester/choice based credit system :  
Semester System
5. Participation of the department in the courses offered by other departments  
Dept. of Humanities mans all humanities courses offered by the degree awarding departments of the institute
6. Number of teaching posts sanctioned and filled (Professors/Associate Professors/Asst. Professors)

	Sanctioned	Filled
Professor	01	0
Associate Professor	02	0
Asst. Prof.	07	13
<b>Total</b>	<b>10</b>	<b>13</b>

7. Faculty profile with name, qualification, designation, specialization (D.Sc./D.Litt./ Ph.D./M.Phil., etc.)

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. students guided in the last 4 Years
Dr. Suparna Chakraborty	M.A., Ph.D	Assistant Professor	Indian English Writing and Translational Studies	19	-
Ms. Aditi Bhunia Chakraborty	M.A, PGDin English Language Teaching	Assistant Professor	Gender Studies	15	-
Dr. Arindam Das	M.A., Ph.D	Assistant Professor	English Literature, English Language, Business Communication, Soft Skills, Culture Studies	12	-
Dr. Kasturi Guha Thakurta	M.A., Ph.D	Assistant Professor	English Literature, American Literature, ELT.	16	-
Ms. Saptaparna Roy	M.A., NET	Assistant Professor	English Literature	8 Yrs. 5 months	-
Ms. Mousumi Mullick	M.A., NET	Assistant Professor	English Literature	6 months	-

8. Percentage of classes taken by temporary faculty – programme-wise information :



Name	Period	Percentage of classes	Programme
Mr.Gautam Dasgupta	2015-2016	25	1)Economics for Engineers
		25	2)Principles of Management
		100	3)Management Accounting
Mr.Atash Banerjee	2015-2016	24	1)Economics for Engineers
		25	2)Organizational Behaviour
Mr. Sumit Kr. Chakraborty	2015-2016	24	1)Economics for Engineers
		25	2)Principles and Practices of Management
		100	3)Business Management
		50	4) Project Management
Mr. Saibal Sen	2015-2016	27	1)Organizational Behaviour
		25	2)Principles and Practices of Management
		100	3)Production and Operations Management
		100	4)Research Methodology and Project Management
		50	5) Project Management
Dr. Kunal Chatterjee	2015-2016 (Odd)	25	1)Principles of Management
		27	2) Economics for Engineers
Ms. Moumita Chatterjee	2015-2016 (Odd)	23	1)Organization Behaviour
Dr. Nilina Ghosh	2015-2015	100	Indian Culture and Heritage
Ms. Koyel Mallick	2015-2016	19	1)Business English
		19	2)Language Practice Lab
		20	3)Values and Ethics
Ms. Sayantani Ukil	2015-2016 (Odd)	19	1)Language Practice Lab
Ms. Mrityika Ghosh	2015-2016 (Odd)	5	1)Business English
		15	2)Language Practice Lab

9. Programme-wise Student Teacher Ratio:  
First year B.Tech student teacher ratio : 16.36:1

10. Number of academic support staff (technical) and administrative staff: sanctioned and filled

	Sanctioned	Filled
Administrative staff		
Support staff (technical)	09	02

11. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Mention names of funding agencies and grants received project-wise. : Nil
12. Departmental projects funded by DST-FIST; DBT, ICSSR, etc.: Project Lab: sponsored by MODROBS, AICTE : Nil
13. Research facility / centre with:
- State recognition Nil
  - National recognition Nil
  - International recognition Nil
14. Publications: From the Academic session 2011-12 to 2015-16
- Number of papers published in peer reviewed journals (national / international): 21

**Dr. Suparna Chakraborti**

- 'History as Poetic Narrative' published in the Conference Proceedings of the 5th International Conference on English Language and Literature, Hyderabad. pp53-57, 2014.Print.
- 'Cultural Transportation Through translation: A Translator's Dilemma' published in Journal of Higher Education and Research Society. ISSN 23490209, Vol-3/Issue-II/Oct.2015,pp226-232.Web.

**Dr. Arindam Das**

- "Resisting De-racination, Reviving Identity: Re-Reading Kim Scott's True Country." Rupkatha Journal: On Interdisciplinary Studies in Humanities. 4.2. (2012):144-52. Web. (ISSN: 0975-2935)
- "In Search of 'Our Modernity': A Postcolonial Reading of A History of Hindu Chemistry. Hislopia Journal. 6.2 (December 2013): 35-42. Print. (ISSN: 0976-2124)
- "Magic Realism in Kim Scott's True Country." Indian Review of World Literature in English. 10.1 (2013): 1-8. Print. (ISSN: 0974-097X)
- "'Hyphenated Identity': Mestiza Nationalism and Virgin de Guadalupe." The Atlantic Review of Feminist Studies. 1.3 (July-September 2013): 10-18. Print. (978-8126917310)
- "The New Hōraios: A Geriatric and Feminist Study of Carmen Dell'Orefice." Atlantic Review of Feminist Studies, New Delhi. 2014. (978-8126917310)
- "Hungry Stones and Psychobiology of Romantic Love." Heteroglossia.VI. (2014): 63-9. Print.

**Ms. Saptaparna Roy**

- "The Langue and Parole of Leadership" in Leadership, B.smart Business Journal, April-June 2010 Vol. I Issue 2, p. 17-18 ISSN: ISSN 2230-8687-B:smart
- Co-authored the article titled "In Conversation with Ms. Beth A. Payne on Inclusive Growth", Strategy for Inclusive Growth, B:smart Business Journal, January-March, 2011 Vol. II Issue 1, p. 41-44 ISSN: ISSN 2230-8687-B:smart
- "Inclusion: A Pseudo-democratic Strategy", Strategy for Inclusive Growth, B.smart Business Journal, January-March, 2011, Vol. II Issue 1, p. 20-21, ISSN: ISSN 2230-8687-B:smart
- "Communicating Crisis in Business", Crisis Management in Business, B:smart Business Journal, April- September, 2013, Vol. 4 Issue 1, p. 13-15, ISSN: ISSN 2230-8687-B:smart
- "Is the Horse-Trainer Thirsty", ELTI Journal, IASE Bikaner (Rajasthan), March 2013, Vol.9, p. 52-54. ISSN: ISSN 2250-317X
- "From Fiction to Film- Issues of Representation in Life of Pi", Deep Focus Cinema, Sept.- Nov., 2014, Vol.2- Issue no.3, p. 48-54. ISSN: ISSN 2321-0044
- Aparna Sen's Goynar Baksho (2013)- A New Language for Bengali Cinema and Culture", Asian Quarterly: An International Journal of Contemporary Issues, Nov., 2014, Vol. 12, Issue No. 3, p. 224-233. ISSN: ISSN 2229-581X
- "Use of Films in ELT: A Mass to Class Approach", International Journal of Technical Research and Applications, June, 2015, Special Issue 18, p. 47-51 ISSN: e-ISSN: 2320-8163

**Ms. Mousumi Mullick**

- The Ballad of the Bleeding Bubbles and The Silent Days: A Tribute to Poetry, The Challenge, 2014, pp... ISSN: 2278-9499
- W.B. Yeats' Gender Connections and their Ambivalence. Literary Confluence: A Global Journal of English and Cultural Studies. ISBN 20152349- 6509
- Power Equation in the Man - Woman Relationships of D.H. Lawrence's Select Fiction. Literary Confluence: A Global Journal of English and Cultural Studies. 2015. ISBN 2349- 6509
- Feminist Ideology in the Novels of D.H. Lawrence. Literatures in English: Beyond Boundaries.2015. ISBN 9789381231937
- Exploring the Postmodern Poetics of William Butler Yeats. The Golden Line: A Magazine on English Literature (Online). 2015. 2395-1591 (Online)
  - Monographs: Nil
  - Chapter(s) in Books: 14

**Dr. Arindam Das, Asst. Prof.**

- “Tagore’s ‘The Hungry Stone’: A Gaze Theory Analysis.” Colonial Spectre and Beyond: Studies in Indian Writings in English. Eds. Sarbojit Biswas and Arindam Das. Kolkata: Booksway, 2011: 17-28. Print. (ISBN: 978-93-80145-83-9)
- “Returning the ‘Medusa’s Gaze: Aboriginal Decolonizing of Western Research Methodologies.” Research Methods in Social Science: Proceedings of the UGC Sponsored National Seminar. Ed. Sandip K. Ghatak. Bidisa: The Institute of Social Research and Applied Anthropology, 2011: 103-18. Print. (ISBN: 978-81-903700-5-9)
- “Bollywood in Australian Style: Re-imagining the Nation’s Multiculturalism through Silver Screen.” Landscape, Place and Culture: Linkages between Australia and India. Eds Deb N. Bandyopadhyay, Paul Brown and Christopher Conti. Newcastle upon Tyne: Cambridge Scholars Press, 2011: 160-75. Print. (ISBN: 978-1-4438-2632-7)
- “Perennialism, Primordialism, Ethnicity and Theoretical Urgings of Nation.” Modern Literary Theory: New Perspectives. Vol. I. Ed. Sunita Sinha. New Delhi: Atlantic Publishers and Distributors, 2012: 106-29. Print. (ISBN: 978-81-269-1655-9)
- “Feminism, Aboriginal Women and Unaipon’s ‘Marriage Customs of the Australian Aborigines.’ Australian Studies: Re-inventing Australian Literature and Culture. Eds. Deb Narayan Bandyopadhyay and Debomita Banerjee. Books Way: Kolkata, 2012: 62-8. Print. (ISBN: 978-93-81672-11-2)
- “Ernest Gellner, Building of White Australia and Condition of the Aborigines.” Nation and its Tribal People. Eds. Kalyan Chatterjee and Rajkumar Chakraborty. Dept. of History and Dept. of English, Jhargram Raj College, West Bengal and Booksway, Kolkata, 2012: 168-80. Print. (ISBN No. 978-93-81672-88-4)
- ‘Ethnonationalism’, ‘Strategic Essentialism’ and Aboriginal Identity Formation: Corroboree as Case Study.” Globalisation: Australian-Asian Perspectives. Eds. Cynthia vanden Driesen and T. Vijay Kumar. New Delhi: Atlantic Publishers and Distributors, 2014. 215-229. Print. (ISBN: 978-81-269-1857-7)
- “Mediating Image of a Lost Motherland: Chutney-Soca and Indo-Caribbean Diaspora.” Transnational Literature: Emergence of Transnational Literature. Ed. Keya Majumdar. New Delhi: Prestige Books International, 2014: 162-74. Print. (ISBN: 978-93-82186-49-6)
- “The Australian Shakespeare: The Nation in Evolvment from Bardolatry to Aropriation.” Shakespeare: A Reappraisal. Eds. Carole Rozzonelli and Sunita Sinha. New Delhi: Atlantic Publishers and Distributors, 2015. 181-91. Print. (978-81-26919-64-2)
- “(Un)Straightening Heterosexism: The Counter Discourse of LGBT Magazines and Newsletters of India.” Outside the British Canon: Reading Literatures from Fromer Euroean Colonies. Ed. Sarbojit Biswas. Jaipur: AADI Publications, 2015. 114-21. Print

### **Aditi Bhunia Chakraborty**

- Men’s Tongue, Women’s Tongue: Differences, Stereotypes and Idiosyncrasies in Literary Discourse’. Gender Sensitization, Women Empowerment and Distance Education: History, Society, Culture. Ed. Kajal De, Chandan Basu, Srideep Mukherjee. Netaji Subhas Open University. 2014. (978-93-82112-12-9. Pp 227-263)
- Stylistic Analysis of the Language of the Hustlers: A Depiction of the Invisibilities and Ambiguities of violence’ in the Interrelationship of Language and Social Structure. Women, Violence and Law: An Intimate Interrogation - Open Distance Paradigm (Vol - I & II.) Ed. Kajal De, Chandan Basu, Srideep Mukherjee. Netaji Subhas Open University. 2016. ISBN 978-93-82112-24-. Pp 210-243.

### **Dr. Suparna Chakraborti**

- ‘Globalisation, Youngistan and Chetan Bhagat’, The Indian English Novel Today. Authors Press, New Delhi. pp120-129, 2013. Republished in, The Indian English Novel of the New Millennium, published by Cambridge Scholars Publishing, Newcastle upon Tyne. pp97-104, 2013. Print.
- ‘Expression of Female Sexuality: An Aspect of Female Emancipation in Shobha De’s Novel Sisters’, Women Novelists-Feminist Vision. Yking Publishers, Jaipur. pp201-211, 2013 Print.

▪ Editing Books : 3

▪ Books with ISBN numbers with details of publishers:

- Colonial Spectre and Beyond: Studies in Indian Writings in English. Eds. Sarbojit Biswas and Arindam Das. Kolkata: Booksway, 2011. Print. (ISBN: 978-93-80145-83-9)
- Intertextuality: Poetics and Practice. A Collection of Critical Essays. Eds Ajoy Sengupta and Arindam Das. Kolkata: Radiance, 2013. (ISBN: 978-93-81037-21-8)
- Culture and Identity: Re-reading the Fictions of Raja Rao and Mulk Raj Anand. Eds. Aninda Basu Roy, Arindam Das and Sarbojit Biswas. Jaipur: AADI Publications, 2014. (ISBN: 978-93-82630-22-7)
- Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.) : 01
- Citation Index-range/average: Total Citations/Number of Publications = 01
- SNIP : 0.212
- SJR : 0.101
- Impact factor-range/average:
- h-index : 1-4
- 15. Details of patents and income generated: Nil
- 16. Areas of consultancy and income generated: Nil
- 17. Faculty recharging strategies:  
Faculty members participate and attend national and international conferences / seminars / symposia /workshop / short term courses / periodically. This allows them to remain updated in their respective areas of teaching and specialization.

#### **Dr. Suparna Chakraborti**

1. Name of the Program:FDP for Effective Teaching  
Conducted by: CET, IIT KGP  
No. of Days: 3 Date: 24<sup>th</sup> - 26<sup>th</sup> Sept., 2014
2. Name of Program: 'Management Enhancement Program'  
conducted by IIM Raipur under TEQIP -Phase II  
No. of Days: 7 / July 2015

#### **Ms. Saptaparna Roy**

1. Name of the Programme: 'Task Based Learning'  
Conducted by: The British Council, Kolkata  
No. of Days: 1 Date: 11<sup>th</sup> July, 2014
2. Name of the Programme: 'Learner Training'  
Conducted by: The British Council, Kolkata  
No. of Days: 1 Date: 9<sup>th</sup> July, 2014
3. Name of the Programme:FDP for Effective Teaching  
Conducted by: CET, IIT KGP  
No. of Days: 3 Date:24<sup>th</sup> - 26<sup>th</sup> Sept., 2014

#### **Dr. Kasturi Guha Thakurta**

1. Name of the Programme:Pedagogy for Effective Use of ICT in Engineering Colleges.  
Conducted by: IIT Mumbai  
No. of Days: 3 Date: 12, 13 and 14 June 2014

#### **Ms. Aditi Bhunia Charaborty**

1. Name of the Programme:Pedagogy for Effective Use of ICT in Engineering Colleges  
Conducted by:IIT Mumbai  
No. of Days: 3 Date: 12, 13 and 14 June 2014
18. Student projects
  - The Dept. of Humanities is a support department. This data is available with the respective degree awarding departments.

- percentage of students who have done in-house projects including inter-departmental
- percentage of students doing projects in collaboration with industries/ institutes

19. Awards / recognition received at national and international level by

- Faculty:
  - Was selected as Australia India Council Fellow 2010-11. Stood 1st among the 3 Junior Fellows of India. As a part of the Fellowship visited 5 universities of Australia for a period of 10 weeks: Australian National University, Canberra; Monash University, Melbourne, University of New South Wales, Sydney; South Australia University, Adelaide and University of Queensland, Brisbane.
  - Was nominated and fully funded by Monash University, Melbourne to represent India and present a paper at Monash University Centre, Prato Italy at its 1st World Conference in Australian Studies, 2010.
- Doctoral / Post doctoral: Nil
- Students: Nil

20. Seminars / Conferences / Workshops organized and the source of funding (national and international) with details of outstanding participants, if any.

Title	Time	Organiser	Source of funding
Re-inventing Patrick White: Reading the Fictive as Cultural Texts'	15-16 March 2012	Dept. of Humanities, Heritage Institute of Technology in association with IASA-Eastern Region, Univ. of New South Wales and Univ. of Western Sydney.	Heritage Institute of Technology and Australia India Council

21. Student profile course-wise: The Dept. of Humanities is a support department. This data is available with the respective degree awarding departments.
22. Diversity of students : The Dept. of Humanities is a support department. This data is available with the respective degree awarding departments.
23. How many students have cleared Civil Service, Defense Services, NET, SLET, GATE and any other competitive examinations? The Dept. of Humanities is a support department. This data is available with the respective degree awarding departments.
24. Student progression: The Dept. of Humanities is a support department. This data is available with the respective degree awarding departments.
25. Diversity of staff

Percentage of faculty who are graduates	
of the same parent university	0
from other universities within the State	66.5% (4/6)
from other universities from other States	33.5% (2/6)

26. Number of faculty who were awarded Ph.D., D.Sc., and D.Litt during the assessment period : One

Dr. Arindam Das, Asst. Professor (Degree awarded 2013)

27. Present details about infrastructural facilities

- Library: The department houses a small library containing about 50 books.
- Internet facilities for staff and students – The department contains 10 computers with internet facility for faculty and staff.
- Total number of class rooms - Classrooms are provided to the Dept. of Humanities by respective degree awarding departments for conducting the humanities courses.
- Class rooms with ICT facility - Classrooms are provided to the Dept. of Humanities by respective degree awarding departments for conducting the humanities courses. In case of such need, request is made to concerned dept. to make necessary ICT arrangement.

- Students' laboratories - The department has 2 Language Laboratories. The department owns a laptop and 2 projectors in two of its Language Labs where activities involving use of audio visual aids are carried out on a regular basis. In particular, the language lab at CME 005 is equipped with internet facility in all the computers.
  - Research Laboratories - Nil
28. Number of students of the department getting financial assistance from college: The Dept. of Humanities is a support department. This data is available with the respective degree awarding departments.
29. Was any need assessment exercise undertaken before the development of new program(s)? If so, give the methodology.  
NA
30. Does the department obtain feedback from
- faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize it?  
Workshops and meetings are conducted where faculty members provide their inputs based on their knowledge of the course and practical experience of teaching the same. These inputs are discussed broadly before finalizing either the curriculum or teaching-learning evaluation.
  - Students on staff, curriculum as well as teaching-learning-evaluation and what is the response of the department to the same?  
The institute has a structured student feedback mechanism. This feedback is shared with the departments and then used to make change, if necessary, in the teaching methodology of concerned faculty members.
- Alumni and employers on the programmes and what is the response of the department to the same?  
The Dept. of Humanities is a support department. This data is available with the respective degree awarding departments.
31. List the distinguished alumni of the department (maximum 10) New Department :  
The Dept. of Humanities is a support department. This data is available with the respective degree awarding departments.
32. Give details of student enrichment programmes (special lectures/ workshops/ seminar) with external experts.  
Panel Discussion on "Professional Ethics: Honesty is Still the Best Policy" on 20 March 2014 organised by Dept. of Humanities
33. List the teaching methods adopted by the faculty for different programmes: Chalk and board.  
Lecture Method, Presentation, Classroom activities such as role plays, film shows, debates, and Group discussions- aimed at enhancing student involvement
34. How does the department ensure that programme objectives are constantly met and learning outcomes monitored?  
Learning outcomes are best monitored through assessments conducted twice, internally and once, at the end of semester. In addition to this, assignments and activities, carried out on a regular basis, ensure that the programme objective is duly met.
35. Highlights the participation of students and faculty in extension activities.:  
The Dept. of Humanities is a support department. This data is available with the respective degree awarding departments.
36. Give details of "beyond syllabus scholarly activities" of the department.  
The Dept. of Humanities is a support department. This data is available with the respective degree awarding departments.

37. State whether the programme/ department is accredited / graded by other agencies. Give details. : No
38. Detail any five Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department
- Strengths
    - The wide range of subjects offered by the Dept. of Humanities, allows the student to obtain diversified knowledge. This not only enhances their employability quotient but also contributes greatly to holistic grooming of the students.
    - Two language labs, equipped with state-of-art facilities, are the assets of the Department. Courses involving language lab provide students with ample opportunities to develop their communication skills and overall personalities.
    - Qualified faculty members with rich experience is an asset of the department. Faculty members are engaged in research and other academic activities which allows them to stay updated in their respective fields of specialization.
  - Weaknesses
    - Large number of guest faculty manning Humanities courses across all years
  - Opportunities
    - The department has scope for enriching the quality of research by tapping the specialized knowledge of its faculty.
    - The department can coordinate with core departments to organize seminars and carry out projects involving participation of students.
  - Challenges
    - The college has a separate Training and placement cell that looks into training and placement issues. This cell engages in direct industry interface and obtains feedback from companies regarding student performance. Presently, there is no formal provision for sharing of this feedback with faculty members. It would be good to have such a feedback sharing mechanism, particularly with the Humanities department, as we may use this information to customize our classroom deliberations to meet placement expectations.
    - Catering to the needs of rising number of students from vernacular medium.
39. Future plan of the department
- The department plans to utilize the presence of academicians (from national and international institutes and universities) visiting the city, which is home to colleges and universities of repute such as Calcutta University, Jadavpur University, Presidency University among others. The department plans to organize Panel Discussions, Symposiums through which students can learn about challenging environments and ways to deal with them.
  - By aptly tapping the specialized knowledge of the faculty, the department plans to set up a centre for Gender studies. This will be of particular importance as gender sensitivity is a matter of much relevance in today's social (workplace) environment.



1. Name of the Department : E.14 Computer Application Centre, Heritage Institute of



&  
Its year of establishment

Technology
2003

2. Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., etc.) : Master of Computer Applications (PG Program)
3. Interdisciplinary courses and departments involved:

Course Name	Course Code	Department Involved
Business English and Communication	HU 101	Humanities
Business Communication Lab	HU 191	Humanities
Environment and Ecology	HU 401	Chemistry
Values and Ethics	HU 501	Humanities

4. Annual/ semester/choice based credit system :

Semester based credit system

5. Participation of the department in the courses offered by other departments

- Introduction to Computing (Theory & Lab) offered to Civil Engg., Mechanical Engg., Electronics and Communication Engg., Chemical Engg. Department
- Object Oriented Programming (Theory & Lab) offered to Electrical Engg., Electronics and Communication Engg. Department

6. Number of teaching posts sanctioned and filled (Professors/Associate Professors/Asst. Professors)

	Sanctioned	Filled
Professor	1	0
Associate Professors	2	1
Asst. Professors	9	11
<b>Total</b>	<b>12</b>	<b>12</b>

7. Faculty profile with name, qualification, designation, specialization (D.Sc./D.Litt./ Ph.D./M.Phil., etc.)

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. students guided in the last 4 years
Dr. Siuli Roy	Ph.D.(Engg.), MCA	Associate Professor and Director CAC	Mobile Wireless Network, Sensor Network, IoT	21	4
Mr. Souvik Basu	M.Tech(CSE),MCA	Assistant Professor	Delay Tolerant Network & its Application in Disaster Management	13	-
Mr. Debabrata Kar	MCA,MBA	Assistant Professor	Soft. Engg, E-Commerce	13	-
Ms. Sudeshna Goswami	M.Tech(CSE),MCA	Assistant Professor	DBMS, Data Structure & Algorithms, Secured Programming Practices	13	-

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. students guided in the last 4 years
Mr. Anirban Kundu	MCA	Assistant Professor	Image Processing	10	-
Ms. SubhraPramanik	M. Tech, MCA	Assistant Professor	Distributed Database Management System	11	-
Mr. SandipanGanguly	M. Tech(CSE), MCA	Assistant Professor	Delay Tolerant Network , NLP, Machine Learning, Compiler Design	10	-
Dr. Jyotirmoy Ghosh	Ph.D.(Comp. Sc.), MCA, M.Sc (Appl. Math)	Assistant Professor	Soft Computing, Optimization Technique	13	-
Mr. Palash Ghosh	MCA	Assistant Professor	Optimization Technique	13	-
Mr. Subhajit Rakshit	M.Tech(CSE), MCA	Assistant Professor	Networking, Data mining	10	-
Ms. Samapti Banerjee	M.Tech(IT), MCA, MBA(PM)	Assistant Professor	Wireless Sensor Network, Machine Learning, Data Mining	9	-
Mr. Sumon Ghosh	MCA	Assistant Professor	Machine Learning, Data Mining	4	-

8. Percentage of classes taken by temporary faculty – programme-wise information : Nil

Business Management	MBA301	2 hours per week
Management Accounting	MBA302	2 hours per week

9. Programme-wise Student Teacher Ratio:  
First year B.Tech student teacher ratio : 15.79:1

10. Number of academic support staff (technical) and administrative staff: sanctioned and filled

	Sanctioned	Filled
Technical Staff	3	3
Administrative Staff	4	4

11. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Mention names of funding agencies and grants received project-wise.

Ongoing Projects from national funding agencies:

Name of Project	Principal Investigator / Co-investigator	Funding Agency	Duration	Rs. (Lakhs)
Post-Disaster Situation Analysis and Resource Management Using Delay-Tolerant Peer-to-Peer Wireless Networks	Dr. Pranay Chaudhuri Co-investigator: Dr. Siuli Roy	Media Lab Asia, Department of Electronics & Information Technology, MCIT, Govt. of India	3 years (2013 – 2016)	43.55 *

Name of Project	Principal Investigator / Co-investigator	Funding Agency	Duration	Rs. (Lakhs)
(DiSARM )				
ShelterTrack: A Smart-phone based Shelter Management System for Post-Disaster Relief Operations using Opportunistic Wireless Networks	Dr. Siuli Roy Co-investigator: Mr. SouvikBasu	AICTE – RPS scheme	3 years (2013 – 2016)	1.00

\* Multi-institutional joint R&D Project with IIT KGP, IIM Calcutta, IEST Shibpur, NIT DGP, Kalyani Govt. Engg. College. Total Project Cost: 4.28 Crore

12. Departmental projects funded by DST-FIST; DBT, ICSSR, etc.: Project Lab: sponsored by MODROBS, AICTE : Same as in 11.
13. Research facility / centre with:
  - State recognition Nil
  - National recognition Nil
  - International recognition Nil
14. Publications:
  - Number of papers published in peer reviewed journals (national / international): 2 [Since 2012]
    - SouvikBasu, Siuli Roy, "Secured Categorization and Group Encounter Based Dissemination of Post Disaster Situational Data Using Peer-to-Peer Delay Tolerant Network", in Springer Advances in Intelligent Systems and Computing Journal, Volume 328(2), 2015, pp 747-755, doi: 10.1007/978-3-319-12012-6\_83.
    - Suman Bhattacharjee, Siuli Roy, SomprakashBandyopadhyay, "Exploring an Energy-efficient DTN Framework Supporting Disaster Management Services in Post Disaster Relief Operation". Springer Wireless Networks Journal, 2014. doi: 10.1007/s11276-014-0836-5.
  - Number of papers published in Conferences (national / international): 9 [Since 2012]
    - Apratim Mukherjee, SouvikBasu, Siuli Roy, SomprakashBandyopadhyay, "Developing a Coherent Global View for Post Disaster Situation Awareness using Opportunistic Network", COMSNETS 2015, IEEE Xplore
    - SouvikBasu, Suman Bhattacharjee, Siuli Roy, SomprakashBandyopadhyay, "SAGE-PRoPHET: A Security Aided and Group Encounter based PRoPHET Routing Protocol for Dissemination of Post Disaster Situational Data", in Proceedings of ICDCN 2015, ACM Digital Library, doi: 10.1145/2684464.2684492.
    - ChandrimaChakrabarti, Siuli Roy, "Adapting mobility of observers for quick reputation assignment in a sparse post-disaster communication network", AIMOC, 2015, 2015 Applications and Innovations in Mobile Computing (AIMoC), 2015 Applications and Innovations in Mobile Computing (AIMoC) 2015, pp. 29-35, doi:10.1109/AIMOC.2015.7083826.
    - SandipanGanguly, SouvikBasu, Siuli Roy, SuvankarMitra, "A Location Based Mobility Prediction Scheme for Post Disaster Network using DTN", AIMOC, 2015, 2015 Applications and Innovations in Mobile Computing (AIMoC), 2015 Applications and Innovations in Mobile Computing (AIMoC) 2015.
    - SouvikBasu, Siuli Roy, "Secured Categorization and Group Encounter Based Dissemination of Post Disaster Situational Data Using Peer-to-Peer Delay Tolerant Network", FICTA 2014. Springer Advances in Intelligent Systems and Computing Journal, Volume 328(2), 2015, pp 747-755, doi: 10.1007/978-3-319-12012-6\_83.
    - SouvikBasu, Siuli Roy, "A Group-based Multilayer Encryption Scheme for Secure Dissemination of Post-Disaster Situational Data using Peer-to-Peer Delay Tolerant Network", ICACCI 2014. IEEE Xplore.

- Souvik Basu, Siuli Roy, "A Global Reputation Estimation and Analysis Technique for Detection of Malicious Nodes in a Post-Disaster Communication Environment", in Proceedings of AIMoC 2014. IEEE Xplore, doi: 10.1109/AIMOC.2014.6785538.
- Chandrima Chakrabarti, Ananya Banerjee, Siuli Roy, "An observer-based distributed scheme for selfish-node detection in a post-disaster communication environment using delay tolerant network", AIMOC, 2014, 2014 Applications and Innovations in Mobile Computing (AIMoC), 2014 Applications and Innovations in Mobile Computing (AIMoC) 2014, pp. 151-156, doi:10.1109/AIMOC.2014.6785534.
- Samapti Banerjee, Sebanti Chakrabarti, Riyama Dey and Lakshmi Kumari Shaw, "Analysis of Particle Swarm Optimization using Multivariate Polynomials", accepted in International Conference on Intelligent Systems, ICIS 2015, University of Delhi, New Delhi. [Accepted but withdrawn due to non-availability of funds]

▪ Monographs: Nil

▪ Chapter(s) in Books: 1

- Recent Advances in Broadband Integrated Network Operations and Services Management Edited by Varadharajan Sridhar (Sasken Communication Technologies, India) and Debashis Saha (IIIM Calcutta, India) Release Date: June, 2011
- Chapter 16: Testbed Implementation of a Pollution Monitoring System Using Wireless Sensor Network for the Protection of Public Spaces (pages 263-276) Siuli Roy, Anurag D, Somprakash Bandyopadhyay

▪ Editing Books : Nil

▪ Books with ISBN numbers with details of publishers:

Somprakash Bandyopadhyay, Siuli Roy, and Tetsuro Ueda, "Enhancing the Performance of Ad Hoc Wireless Networks with Smart Antennas" CRC Press, Taylor and Francis Group, AU5081, ISBN-0849350816, 2005.

- Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.) : 2
- Citation Index-range/average: 22–33 / 27
- SNIP : 1.477
- SJR : 0.717
- Impact factor-range/average: 0.961
- h-index : 7 - 11

15. Details of patents and income generated: Nil

16. Areas of consultancy and income generated: Nil

17. Faculty recharging strategies:

Faculties of the department attend refresher course/workshop/ seminars/summer-winter schools/ faculty development programmes as per the AICTE guidelines.

Sl. No	Faculty Name	Year	Conference, Workshop, Summer/Winter Schools	Topic	Place	Period
1.	Dr. Siuli Roy	2016	Organized and Attended IEEE Workshop CORDIM	Distributed Systems for Coordinated Disaster Management (CORDIM-2016)	IIM Calcutta	2 Days – 2/1/2016 to 3/1/2016
		2015	Organized and Attended ShortTermCourse STC-NGN	Changing Communication Paradigm using Mobile Devices in Next Generation Network	IEST Shibpur & HIT Kolkata	6 Days – 22/6/2015 to 27/6/2015
			Attended TEQIP-II funded short-term course	Wireless Sensor Network and Internet of Things	IIT KGP, Kolkata Extension Centre	5 Days – 11/5/2015 to 15/5/2015
			Invited Talk	Special Lecture in Short Term Course on "Recent Trends in Opportunistic and Social Networks and its applications"	Kalyani Govt. Engineering College	29th June – 4th July 2015

Sl. No	Faculty Name	Year	Conference, Workshop, Summer/Winter Schools	Topic	Place	Period
		2013	Winter School	Recent Advances in Wireless and Mobile Computing and Communications	Jadavpur University, Kolkata	6 days – 14/01/2013 to 19/01/2013
2.	Mr. Souvik Basu	2016	Attended and presented paper in ACM International Conference ICDCN 2016	International Conference on Distributed Computing and Networking	Singapore Management University, Singapore	2 Days – 6/1/2016 to 7/1/2016
			Organized and Attended IEEE Workshop CORDIM	Distributed Systems for Coordinated Disaster Management	IIM Calcutta	2 Days – 2/1/2016 to 3/1/2016
		2015	Organized and Attended ShortTerm Course STC-NGN	Changing Communication Paradigm using Mobile Devices in Next Generation Network	IEST Shibpur & HIT Kolkata	6 Days – 22/6/2015 to 27/6/2015
			Attended TEQIP-II funded short-term course	Wireless Sensor Network and Internet of Things	IIT KGP, Kolkata Extension Centre	5 Days –11/5/2015 to 15/5/2015
			Attended and presented paper in IEEE International Conference ICACCI	Advances in Computing, Communications and Informatics	GCET, Greater Noida	3 Days – 24/9/2015 to 26/9/2015.
		2014	Workshop	Can You Teach a Zebra Some Algebra: The Alchemy of Teaching	Heritage School	1 Day – 18/10/2014
			Attended and presented paper in IEEE International Conference AIMoC	International Conference on Applications and Innovations in Mobile Computing	Jadavpur University, Kolkata	3 Days- 27/2/2014 to 1/3/2014
			Attended TEQIP II Sponsored Workshop IOMNA	Introduction to Opportunistic Mobile Networks and its Applications	NIT Durgapur	5 days - 2/1/2014 to 6/1/2014
		2013	Winter School	Recent Advances in Wireless and Mobile Computing and Communications	Jadavpur University, Kolkata	6 days – 14/01/2013 to 19/01/2013
		2012	Seminar	Applications of Soft Computing	Heritage Institute of Technology	2 Days -23/08/2012 to 24/08/2012
3.	Mr. Debabrata Kar	2015	Workshop	Communication Skills	British Council- Heritage Institute of Technology	2 Days – 23/07/2015 to 24/07/2015
		2013	Workshop	Mobile Computing & Wireless Sensor Networks	Heritage Institute of Technology	2 Days -24/10/2013 to 25/10/2013
			Workshop	Complex and Social Networks	Heritage Institute of Technology	2 Days -24/01/2013 to 25/01/2013
		2012	Workshop	Selected Topics In Computer Science: State-Of-The-Art Perspectives	Heritage Institute of Technology	2 Days -12/07/2012 to 13/07/2012
			National Seminar	Distributed Systems and Networks	Heritage Institute of Technology	1 Day- 22/3/2012.
4.	Ms. Sudeshna Goswami	2015	Faculty Development Program	Image Processing and Data Mining using open source tools	Heritage Institute of Technology	One week-6/8/2015 to12/8/2015
		2013	Workshop	Mobile Computing & Wireless Sensor Networks	Heritage Institute of Technology	2 Days -24/10/2013 to 25/10/2013.
			Refresher Course	Algorithms	Heritage Institute of Technology	One Week - From 22/07/2013
			Workshop	Complex and Social Networks	Heritage Institute of Technology	2 Days -24/01/2013 to 25/01/2013
		2012	Seminar	Applications of Soft Computing	Heritage Institute of Technology	2 Days -23/08/2012 to 24/08/2012
			Workshop	Selected Topics in Computer	Heritage Institute of	2 Days -12/07/2012

Sl. No	Faculty Name	Year	Conference, Workshop, Summer/Winter Schools	Topic	Place	Period
				Science : State – Of – The – Art – Perspectives	Technology	to 13/07/2012
5.	Mr. Anirban Kundu	2015	Faculty Development Program	Image Processing and Data Mining using open source tools	Department of Information Technology, Heritage Institute of Technology	One week- 6/8/2015 to 12/8/2015
		2013	Refresher Course	Algorithms	Department of Computer Science & Engineering, Heritage Institute of Technology	One Week - 22/07/2013 to 26/07/2013
			Continuing Education Program	Machine Intelligence	Department of Information Technology, Heritage Institute of Technology	One Week - 15/07/2013 to 19/07/2013
		2012	Seminar	Applications of Soft Computing	Computer Application Centre, Heritage Institute of Technology	2 Days -23/08/2012 to 24/08/2012
			Workshop	Selected Topics in Computer Science: State-of-the-art-perspectives	Department of Computer Science and Engineering, Heritage Institute of Technology	2 Days -12/07/2012 to 13/07/2012
6.	Ms. Subhra Pramanik	2016	IEEE Workshop	Distributed Systems for Coordinated Disaster Management	IIM Calcutta, India	2 Days- 2/1/2016 to 3/1/2016
		2015	Faculty Development Program	Image Processing and Data Mining using open source tools	Heritage Institute of Technology	One week- 6/8/2015 to 12/8/2015
			Workshop	Communication Skills	British Council- Heritage Institute of Technology	2 Days -23/07/2015 to 24/07/2015.
		2013	Workshop	Mobile Computing & Wireless Sensor Networks	Heritage Institute of Technology	2 Days -24/10/2013 to 25/10/2013.
			Workshop	ISTE on "DBMS"	IIT Bombay-Kalyani Govt. Engg. College	Two week - 21/05/2013 to 31/05/2013
			Refresher Course	Algorithms	Heritage Institute of Technology	One Week - From 22/07/2013.
			Continuing Education Program	Machine Intelligence	Heritage Institute of Technology	5 Days -15/07/2013 to 19/07/2013
			Workshop	Complex and Social Networks	Heritage Institute of Technology	2 Days -24/01/2013 to 25/01/2013
		2012	Seminar	Applications of Soft Computing	Heritage Institute of Technology	2 Days -23/08/2012 to 24/08/2012
			Workshop	Selected Topics in Computer Science : State – Of – The – Art – Perspectives	Heritage Institute of Technology	2 Days -12/07/2012 to 13/07/2012
7.	Mr. Sandipan Ganguly	2016	Workshop	CORDIM 2016 (IEEE Workshop on Distributed Systems for Coordinated Disaster Management)	IIM, Kolkata	2 Days - 02/01/2016 to 03/01/2016

Sl. No	Faculty Name	Year	Conference, Workshop, Summer/Winter Schools	Topic	Place	Period
		2015	Shortterm Course	Changing Communication Paradigm using Mobile Devices in Next Generation Network	IEST, Shibpur & Heritage Institute of Technology	6 days - 22/06/2015 to 27/06/2015
			TEQIP-II funded short-term course	Wireless Sensor Network and Internet of Things	IIT Kharagpur (Interacted through Video Conferencing from IIT, KGP extension centre, Kolkata)	5 days -11/05/2015 to 15/05/2015
			AIMOC 2015 (IEEE Sponsored International Conference)	Applications and Innovations in Mobile Computing	Jadavpur University, Salt Lake Campus	2 days – 02/02/2015 to 04/02/2015
		2014	Short Term Course	Introduction to Opportunistic Mobile Networks and its Application (IOMNA 2014)	National Institute of Technology, Durgapur	5 days - 02/01/2014 to 06/01/2014
		2013	Workshop	Mobile Computing & Wireless Sensor Networks	Heritage Institute of Technology	2 days – 24/10/2013 to 25/10/2013
			Refresher Course (Under TEQIP-II FDP)	Algorithm	Heritage Institute of Technology	5 days - 22/07/2013 to 26/07/2013
			Faculty Development Program (Under TEQIP-II FDP)	Machine Intelligence	Heritage Institute of Technology	5 Days -15/07/2013 to 19/07/2013
			Workshop (Under TEQIP-II FDP)	Complex and Social Networks	Heritage Institute of Technology	2 days – 24/01/2013 to 25/01/2013
			UGC Sponsored Winter School	Recent Advances In Mobile Computing & Communication	Jadavpur University, Salt Lake Campus	6 days – 14/01/2013 to 19/01/2013
		2012	Seminar	Application of Soft Computing	Heritage Institute of Technology	2 days – 23/08/2012 to 24/08/2012
			Faculty Development Program	Wireless Networking	Heritage Institute of Technology	3 days – 17/07/2012 to 19/07/2012
			Workshop (Under TEQIP-II FDP)	Selected Topics in Computer Science: State-Of-The-Art Perspectives	Heritage Institute of Technology	2 Days -12/07/2012 to 13/07/2012
			National Seminar	Distributed Systems and Networks	Heritage Institute of Technology	1 day - 22/03/2012
			National Seminar	Trends of Data Warehousing and Data Mining	Heritage Institute of Technology	1 day - 01/02/2012
			Workshop	Wireless Communication and Computing: Current Trends and Research	Heritage Institute of Technology	1 day - 20/01/2012
8.	Dr. Jyotirmoy Ghosh	2013	Refresher Course	Algorithms	Heritage Institute of Technology	One Week - 22/07/2013 to 26/07/2013
			Continuing Education Program	Machine Intelligence	Heritage Institute of Technology	5 Days -15/07/2013 to 19/07/2013
		2012	Seminar	Applications of Soft Computing	Heritage Institute of Technology	2 Days -23/08/2012 to 24/08/2012
9.	Mr. Palash Ghosh	2015	Workshop	Communication Skills	British Council- Heritage Institute of	2 Days -23/07/2015 to 24/07/2015.

Sl. No	Faculty Name	Year	Conference, Workshop, Summer/Winter Schools	Topic	Place	Period
					Technology	
		2013	Workshop	Complex and Social Networks	Heritage Institute of Technology	2 Days -24/01/2013 to 25/01/2013
			Refresher Course	Algorithms	Heritage Institute of Technology	One Week - From 22/07/2013.
			Continuing Education Program	Machine Intelligence	Heritage Institute of Technology	5 Days -15/07/2013 to 19/07/2013
		2012	FDP	Wireless Networking	Heritage Institute of Technology	3 Days- 17/07/2012 To 19/07/2012
			National Seminar	Recent Trends of Data Mining and Data Warehousing	Heritage Institute of Technology	1 Day- 01/02/2012
			Seminar	Application of Soft-Computing	Heritage Institute of Technology	2 Days- 23/08/2012 to 24/08/2012
10.	Mr. Subhajit Rakshit	2016	IEEE Workshop	Distributed Systems for Coordinated Disaster Management	IIM Calcutta, India	2 Days- 2/1/2016 to 3/1/2016
		2015	Faculty Development Program	Image Processing and Data Mining using open source tools	Heritage Institute of Technology	One week- 6/8/2015 to 12/8/2015
			Workshop	Communication Skills	British Council- Heritage Institute of Technology	2 Days -23/07/2015 to 24/07/2015
		2013	Workshop	Mobile Computing & Wireless Sensor Networks	Heritage Institute of Technology	2 Days -24/10/2013 to 25/10/2013.
			Faculty Development Program	Refresher Course on Algorithms	Heritage Institute of Technology	One Week - From 22/07/2013.
			Continuing Education Program	Machine Intelligence	Heritage Institute of Technology	5 Days – 15/7/2013 to 19/7/2013
			Workshop	Complex and Social Networks	Heritage Institute of Technology	2 Days -24/01/2013 to 25/01/2013
			Winter School	Recent Advances In Mobile Computing & Communication	Jadavpur University.	6 days – 14/01/2013 to 19/01/2013
		2012	Workshop	Selected Topics In Computer Science: State-Of-The-Art Perspectives	Heritage Institute of Technology	2 Days -12/07/2012 to 13/07/2012
			National Seminar	Distributed Systems and Networks	Heritage Institute of Technology	1 Day – 22/03/2012
11.	Ms. Samapti Banerjee	2016	IEEE Workshop	Distributed Systems for Coordinated Disaster Management	IIM, Calcutta	2 Days- 2/1/2016 to 3/1/2016
		2015	Webinar organized by Microstrategy and ESRI	Location Analytics	Online UK	1 Day-1/10/2015
			Communication Skills Workshop by British Council	Presentations	Kolkata	2 Days- 20/7/2015 to 21/7/2015
			Webinar organized by IMS	Foundations of Data Science	Online NC, USA	2 Days – 11/6/2015 to 12/6/2015
		2014	Interactive workshop	Leadership Skills-Can you teach a zebra some algebra	The Heritage School	1 Day-18/10/2014



Sl. No	Faculty Name	Year	Conference, Workshop, Summer/Winter Schools	Topic	Place	Period
			Workshop	Asset Management	IIT Kharagpur in collaboration with Ramakrishna Mission Institute of Culture	1 Day-25/8/2014
		2013	Workshop	Mobile Computing & Wireless Sensor Networks	Heritage Institute of Technology	2 Days-24/10/2013 to 25/10/2013
			Workshop	Complex and Social Networks	Heritage Institute of Technology	2 Days -24/01/2013 to 25/01/2013
			UGC Sponsored Winter School	Recent Advances in Mobile Computing & Communication	Jadavpur University	One week – 14/01/2013 to 19/01/2013
		2012	Seminar	Applications of Soft Computing	Heritage Institute of Technology	2 Days- 23/8/2012 to 24/8/2012
			Faculty Enablement Program	INFOSYS Technologies	Techno India, Salt Lake, Kolkata	6 days – 16/7/2012 to 21/7/2012
			Workshop	Selected Topics In Computer Science: State-Of-The-Art Perspectives	Heritage Institute of Technology	2 Days -12/07/2012 to 13/07/2012
			National Seminar	Distributed Systems and Networks	Heritage Institute of Technology	1 Day -22/3/2012
			National Seminar	Recent Trends of Data Warehousing and Data Mining	Heritage Institute of Technology	1 Day- 1/2/ 2012
			Workshop	Wireless Communication and Computing: Current Trends and Research	Heritage Institute of Technology	1 Day-20/1/2012
12.	Mr. Sumon Ghosh	2015	Faculty Development Program	Image Processing and Data Mining using open source tools	Heritage Institute of Technology	One week- 6/8/2015 to 12/8/2015
			Short Term Course	Data Mining	IIT KGP, Kolkata Extension Centre	6 days 18/04/2015 to 23/04/2015
		2013	Continuing Education Program	Machine Intelligence	Heritage Institute of Technology	5 Days -15/07/2013 to 19/07/2013
		2012	Seminar	Applications of Soft Computing	Heritage Institute of Technology	2 Days -23/08/2012 to 24/08/2012

## 18. Student projects

- percentage of students who have done in-house projects including inter-departmental: 100% students do in-house projects including inter-departmental projects in 5th semester
- percentage of students doing projects in collaboration with industries / institutes: 100% students do projects in collaboration with industries / institutes in 6th semester

## 19. Awards / recognition received at national and international level by

- Faculty
  - Mr. Souvik Basu received the “Award of Excellence for Teaching” from Heritage Institute of Technology in the year 2012.
- Doctoral / Post doctoral fellows:
  - Dr. Jyotirmoy Ghosh was awarded Ph.D. in Computer Science from Burdwan University in 2013.
- Students
  - Snehasish Mukherjee (2007-2010 Batch)
  - Competence in Software Technology (CST) exam, 2010, conducted by CDAC: AIR 6. Merit

certificate and cash award for being in the top 1% of students. Offered position of Software Developer at CDAC, Mumbai.

- M.Tech (CS) [ISI] results: 82%, First division with distinction, 3rd rank in class. Awarded by ISI teacher's committee in all 4 semesters for good results

20. Seminars / Conferences / Workshops organized and the source of funding (national and international) with details of outstanding participants, if any.

Organized with national source of funding:

Title	Date	Source of funding
IEEE Workshop on Distributed & Coordinated Disaster Management (CORDIM) *	02/01/2016 to 03/01/2016	ITRA, Media Lab Asia
Short Term Course on "Changing Communication Paradigm using Mobile Devices in Next Generation Network" **	22/06/2015 to 27/06/2015	ITRA, Media Lab Asia
Seminar on Applications of Soft Computing	23/08/2012 to 24/08/2012	Heritage Institute of Technology, Kolkata

\*\*Organized jointly with IIST Shibpur

\* Outstanding participants:

Prof. (Dr.) Sukumar Ghosh, University of Iowa, USA

Mr. Arjun Katoch, former Chief, UN Disaster Assessment and Coordination team

Prof. Ramesh R. Rao, University of California, San Diego

Prof. Sajal Das, Missouri University of Science and Technology, USA

Prof. Sanjay Madria, Missouri University of Science and Technology, USA



21. Student profile course-wise:

■ Admission process

Name of the Course	Year	Application Received	Selected		Pass Percentage	
			Male	Female	Male	Female
MCA	2012-13	Admissions are made from candidates qualified in the Joint Entrance Examination (JECA) conducted and recommended by the West Bengal Joint Entrance Examinations Board	38	22	100	100
	2013-14		22	35	97.22	100
	2014-15		29	26	96.87	100
	2015-16		26	26	95.59	100

NB: Admissions are made from candidates who have passed Bachelor's Degree in any discipline under (10+2+3) system with Mathematics as one of the compulsory subjects at Degree level and having at least 50% marks on an average in the graduation level. Such candidates will have to be qualified in the Joint Entrance Examination (JECA) conducted and recommended by the West Bengal Joint Entrance Examinations Board.

## 22. Diversity of students

Name of the course	Year	% of students from the College*	% of students from the State	% of students from the other State	% of students from the other Countries
MCA	2012-13	6.66	96.67	3.33	0
	2013-14	17.54	98.25	1.75	0
	2014-15	14.28	96.43	3.57	0
	2015-16	5.76	98.08	1.92	0

\* Students are from The Heritage Academy

23. How many students have cleared Civil Service, Defense Services, NET, SLET, GATE and any other competitive examinations? Civil Services – 10, Defense Services – 4, NET - 2, GATE – 14

## 24. Student progression

Student Progression	Percentage against enrolled
UG to PG	NA
PG to M.Phil.	Nil
PG to Ph.D.	8
Ph.D. to Post-Doctoral	Nil
Employed	
• Campus Selection	55
• Other than campus selection	10
Entrepreneurs	2

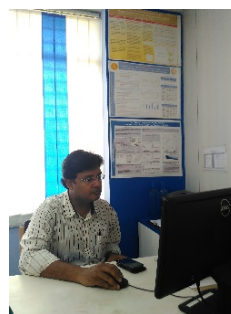
## 25. Diversity of staff

Percentage of faculty who are graduates	
of the same parent university	33.33
from other universities within the State	58.33
from other universities from other States	8.33

26. Number of faculty who were awarded Ph.D., D.Sc., and D.Litt during the assessment period : 1 (one)

## 27. Present details about infrastructural facilities

- Library: Yes, Books Title – 753, volume – 7024, Back volumes – 35 (Journals)
- Internet facilities for staff and students: Yes All PC in Laboratories have broadband internet connection.
- Total number of class rooms: 3
- Class rooms withy ICT facility: 2
- Students' laboratories: :Yes, The department has the 3 laboratories with the required instruments and software as prescribed by the university.
- Research laboratories: 1



Research Laboratory



Library

28. Number of students of the department getting financial assistance from college:

Year	Semester	Full free ship	Partial Freeship
2012-13	ODD	2	6
	EVEN	2	5
2013-14	ODD	7	5
	EVEN	3	7
2014-15	ODD	3	7
	EVEN	3	13
2015-16	ODD	11	10
	EVEN	---	---

29. Was any need assessment exercise undertaken before the development of new program(s)? If so, give the methodology.

No new program was introduced.

30. Does the department obtain feedback from

- faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize it?

Yes, suggestions are obtained from faculty members regarding need for change in curriculum. The results are compiled so that they can be forwarded to the University at the time of their meeting for curriculum update.

- students on staff, curriculum as well as teaching-learning-evaluation and what is the response of the department to the same?

Yes. This feedback is used by teachers to strengthen pedagogical practices.

- Alumni and employers on the programmes and what is the response of the department to the same?

Yes. Based on suggestions from alumni and existing staff special classes are taken during summer recess to help the existing students in their recruitment process and also special lectures on ongoing trends in industry are organized by industry expert.

31. List the distinguished alumni of the department (maximum 10)

- i) Snehasish Mukherjee (2007-2010 Batch): GATE 2010: AIR 556, Percentile 99.48, Admitted to ISI, Kolkata. JEST 2010 - AIR 26, Offered direct Admission to Chennai Mathematical Institute (CMI), Invited for PhD. interviews at Institute of Mathematical Sciences (IMSc).

Competence in Software Technology (CST) exam, 2010, conducted by CDAC: AIR 6. Merit certificate and cash award for being in the top 1% of students. Offered position of Software Developer at CDAC, Mumbai.

M.Tech (CS) [ISI] results: 82%, First division with distinction, 3rd rank in class. Awarded by ISI teacher's committee in all 4 semesters for good results.

Currently working in the elite@Labs team of WalmartLabs as a Senior Software Engineer in Big Data mining, Information Retrieval, Natural Language Processing and Machine Learning domain.

- ii) Purnendu Banerjee (2007-2010 Batch): Worked as the Technical Lead of R&D Team at ARC Document Solution Company. Presently enrolled and pursuing Ph.D with 9 publications in National and International Conferences.
- iii) Soumen Ghosh (2010-2013 Batch): GATE 2014: AIR = 5592, Percentile = 96.35 AICTE-GATE Scholarship for pursuing M.Tech (2014-1016) from University of Hyderabad, India
- iv) Neha Jain (2007-2010 Batch): MS from IIT Kharagpur. Currently pursuing research in "Embedded Systems and Robotics" under Prof. Rajib Mall.
- v) Sumon Ghosh (2008-2010 Batch): Serving as a faculty member of the dept. of Computer Application. Pursuing research in Machine Learning and already published several papers in National & International Conferences.

32. Give details of student enrichment programmes (special lectures/ workshops/ seminar) with external experts.

Invited lecture series by a few distinguished industry experts under IIPC (Industry Institute Partnership

Date	Topic	Speaker	Duration
12.02.2013	Software as a Service	Mr. Chinmoy Bose, Vice President, Descon Limited	2 hrs, 03:00 pm to 05:00 pm
14.02.2013	Making sense of Business – A learners perspective	Mr. Sushanta Sinha, Head, Learning & Development, TCS	2 hrs, 02:00 pm to 04:00 pm

33. List the teaching methods adopted by the faculty for different programmes

Chalk and talk, LCD projectors, role play, Brain Storming – Problem Solving, Model Making, Seminar – Presentation by Learner and Facilitator, Learner Led Group Discussion, Group Discussion – Panel Discussions..

34. How doe the department ensure that programme objectives are constantly met and learning outcomes monitored?

### **Programme Educational Objectives: MCA**

Post Graduate students of the MCA programme are expected to:

1. Establish themselves as successful professionals in industry, government, academia, research and development, entrepreneurship and consultation.
2. Achieve peer-recognition; as an individual or in a team; through demonstration of good analytical, design and implementation skills.
3. Be innovative in research and development activities through sustained learning.
4. Thrive to pursue life-long learning to fulfill their goals.

### Programme Outcomes: MCA

On successful completion of the programme the post graduate students of MCA, Heritage Institute of Technology, Kolkata, will acquire:

1. An ability to identify, critically analyze, formulate and develop computer applications for solving practical problems.
2. An ability to apply knowledge of mathematics, computer science and management in practice.
3. Expertise in software project development by in-depth review of problem domain, comprehensive analysis of solution concerned, and implementing the same for achieving the project goal in a successful manner.
4. An ability to excel in oral and written communication as well as presentation skills which are required for documenting and delivering the project artifacts effectively.
5. An ability to adapt professional ethics and cyber regulations in computing practices.
6. An ability to design & conduct experiments, as well as to analyze & interpret data.
7. An ability to work on multidisciplinary tasks using new and emerging technologies.
8. An ability to develop confidence for self-learning and to pursue lifelong learning.

Continuous assessment of the students using periodic class tests are conducted twice in a semester.

#### 35. Highlights the participation of students and faculty in extension activities.

- On 25th April, 2015 a devastating earthquake of magnitude 7.8 rocked Nepal and killed more than 9000 people. A major aftershock occurred on 12th May, 2015 with a magnitude 7.3. The extent of devastation is so vast that more than 23,000 people were injured. The massive disaster was followed by several aftershocks of moderate to high magnitude. As a part of ITRA DiSARM Project field visit, Prof. Souvik Basu, Assistant Professor, CAC, HIT and Mr. Suman Bhattacharjee, Research Scholar along with research scholars from IIM Calcutta and KGEK Kalyani visited Nepal on 9th June to 11th June, 2015 to accumulate information required for post disaster situational analysis and needs assessment.
- As a part of ITRA DiSARM project, students and research scholar of CAC, HITK conducted a field trial during December 28 – 30, 2015 at Namkhana region of West Bengal, India, namely, North Chandanpiri, South Chandanpiri, and Haripur to test an Interactive Information Crowdsourcing System using SMS and Twitter. The field trial took place six months after the said region was affected by a flood in mid- 2015, and was aimed to assess the post disaster situation analysis. The field trial was conducted in collaboration with IIM Calcutta, IEST Shibpur and an NGO called SPADE that operates in Sunderbans.



36. Give details of “beyond syllabus scholarly activities” of the department.

- Special lectures are arranged to motivate research activities in the Department.
- Number of invited lectures from industries are arranged for the benefit of students.

Topic	Duration
In house summer training for campus preparedness by the faculties of the department	7. 29.06.2015 to 17.07.2015
A seminar entitled “A Prelude of Modern Cryptography: From Ancient to Enigma by Mr. SandipanGanguly	8. 16 Jan, 2015
In house summer training for campus preparedness by the faculties of the department	9. 09.06.2014 to 27.06.2014

37. State whether the programme/ department is accredited / graded by other agencies. Give details.

AICTE Details:

Permanent Institute Id	1-4847141
Current Application Number	1-2451692700
Application Number of 2014-2015	1-2012975560
AICTE File No.	PG/MCA/WB/2003/003
Application Type	Extension-Expansion-Closure
Organization Registration number	5085 OF 2005

38. Detail any five Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department

#### STRENGTH:

Sr. No.	Strengths
1	<b>Strong Faculty:</b> The Computer Application Centre has qualified Faculty members with strong theoretical background as well as exposure to industry applications.
2	<b>Well Endowed Infrastructure:</b> The Department possesses a model classroom furnished with laptop and LCD projector.
3	<b>Planned Approach Towards Teaching:</b> Faculty members of the Department meticulously prepare lesson plans for every subject before the commencement of the semester and adhere to the plan as far as possible. The class tests and their syllabus are planned much ahead. Students who seek special attention are mentored with individual care.
4	<p><b>Innovative Teaching-Learning:</b> The Faculty members of the Department use innovative teaching-learning practices in class. Learning becomes enjoyable and effective with this. Following are some of the practices:</p> <ul style="list-style-type: none"> <li>• Brain Storming – Problem Solving, Model Making</li> <li>• Role Play – Skits</li> <li>• Puzzles – Crossword, Maze, Jigsaw</li> <li>• Quiz – Pick-n-Learn, Fill in the blanks, True-False</li> <li>• Seminar – Presentation by Learner and Facilitator, Learner Led Group Discussion</li> <li>• Case Study – Problem Based Application, Concept/ Theory Application, Resolving Conflicts</li> <li>• Demonstration – Demonstration by Learner, Demonstration by facilitator</li> <li>• Games – Board games involving individual and team</li> <li>• Group Discussion – Panel Discussions</li> </ul>
5	<b>Research and Higher Studies:</b> Some Faculty members are engaged in high quality research and are associated with premier institutes like IIMC, IIST, IIT KGP and many others. Many of our students have cleared all India examinations for higher studies and have also joined research projects in some esteemed Institutes.



**WEAKNESS:**

Sr. No.	Weaknesses
1	<b>Fall in Infrastructure:</b> The Department do not have a dedicated Seminar Room where weekly or monthly seminars could be conducted. There is a need for an up-to-date seminar hall with state of the art facility.
2	<b>Processes and Systems, etc:</b> The University syllabus for MCA needs improvement. It has not been reviewed since its inception. Also, the course lacks laboratories for different subjects, without which the subjects cannot be taught well.
3	Non availability of senior faculty members.
4	Lacking collaboration with external funding agencies.

**OPPOURTUNITY:**

Sr. No.	Opportunities
1	<b>Market Advantage:</b> Since there is ample number of students pursuing BCA course, there should not be any dearth of students in the Department.
2	<b>Promoting Research Activities:</b> A couple of more senior Faculty members need to be appointed who can drive and guide more research projects in the Department. This will be beneficial for the Faculty members as well as for the students of the Department and at the same time will enhance the prestige of the Department.
3	<b>Alumni Relationships:</b> Establishing contacts with alumni and forming an active alumni association could be beneficial for the placement and job opportunities of the present students.
4	<b>Arranging Training Programs:</b> Training programs, workshops, seminars, summer & winter schools could be arranged for the benefit of faculty members, staff members, school teachers and IT related professionals.
5	<b>Training to IT Schools:</b> The Department can impart training to the faculty members of the proposed IT schools.

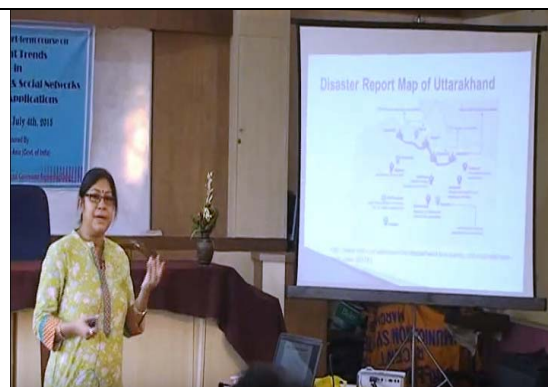
**CHALLENGES:**

Sr. No.	Challenges
1	<b>Market Demand:</b> Since MCA is an IT related course and almost all students aim towards IT and IT enabled services, job prospect of the students is highly dependent upon the condition of IT industry.
2	<b>New Technologies:</b> Unless the new technologies that are coming up in the IT industry are incorporated in the course curriculum, our students will not get the competitive edge over students of other Universities.
3	<b>Research Activities:</b> Increase the involvement of faculty members and also the students in research activities and increase the number of Ph.D. among faculty members.
4	Creating leadership qualities and Entrepreneurship in students
5	To create a 'Centre of excellence' that will be the perfect embodiment of the best of Industry and Academia.

## 39. Future plan of the department

- To establish a full fletched Research & Development Cell to handle different Govt. and Non-Govt. projects those are outsourced to the industry.
- To aware and educate the students with the upcoming Technologies.
- To inculcate a research culture among students and young members of the faculty.
- To focus on interdisciplinary research on the local problems with the help of other departments. The department will identify the areas in which investigation is required and to establish research programmes encompassing both group and individual projects.

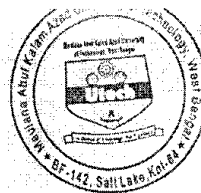




# Annexures

## Annexure - B

## Enclosure-B1

**MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WEST BENGAL**

(Formerly West Bengal University of Technology)

Office of the Inspector of Colleges

BF-142, Salt Lake City, Kolkata – 700 064

Tel. No. : (033)2321-7588, (033) 2334-1014/1021/1025/1028/1031, Fax : (033) 2321-8776

No. 126 / B.TECH / Affiliation / 2015-16

Date : 01/07/2015

The affiliation is hereby accorded for the academic year 2015-16 under Section 5(4) of the West Bengal University of Technology Act, 2000 (West Bengal Act XV of 2000) to

**HERITAGE INSTITUTE OF TECHNOLOGY**

994, MADURDAHA, CHOWBAGA ROAD, ANANDAPUR P.O. EAST KOLKATA TOWNSHIP, KOLKATA WEST BENGAL 700107

[ College Code : 126 ]

for conducting the following course(s) with the intake indicated below :

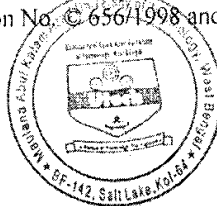
PROGRAM	LEVEL OF COURSE	NAME OF COURSE	INTAKE FOR 2015-16
ENGINEERING AND TECHNOLOGY	UNDER GRADUATE	APPLIED ELECTRONICS AND INSTRUMENTATION ENGINEERING	60
ENGINEERING AND TECHNOLOGY	UNDER GRADUATE	BIOTECHNOLOGY	60
ENGINEERING AND TECHNOLOGY	UNDER GRADUATE	CHEMICAL ENGINEERING	60
ENGINEERING AND TECHNOLOGY	UNDER GRADUATE	CIVIL ENGINEERING	120
ENGINEERING AND TECHNOLOGY	UNDER GRADUATE	COMPUTER SCIENCE AND ENGINEERING	180 *
ENGINEERING AND TECHNOLOGY	UNDER GRADUATE	MECHANICAL ENGINEERING	120
ENGINEERING AND TECHNOLOGY	UNDER GRADUATE	INFORMATION TECHNOLOGY	60
ENGINEERING AND TECHNOLOGY	UNDER GRADUATE	ELECTRONICS AND COMMUNICATIONS ENGINEERING	180
ENGINEERING AND TECHNOLOGY	UNDER GRADUATE	ELECTRICAL ENGINEERING	60

The above affiliation is issued subject to fulfillment of the following terms and conditions :

1. That this Affiliation/Renewal Affiliation is being granted based on the (i) The hard copy of the computer generated report containing 115 Pages of the AICTE approved College list for the Academic Year 2015-2016 duly authenticated by the Hon'ble Vice Chancellor dated 11.06.2015 which had been received by him through email, (ii) \*Inspection report dated 16.05.2015 and (iii) \*Decision dated 29.05.2015 of the Hon'ble Vice Chancellor, MAKAUT, WB in the File No. IC-169/2015.
2. That the sponsoring Society / Trust/Company established under Section 25 of Companies Act 1956 shall provide adequate funds for development of land and for providing related infrastructural, instructional and other facilities as per norms and standards laid down by the MAKAUT, WB and AICTE from time to time and for meeting recurring expenditure.
3. That the admission and conduct of courses shall be made in accordance with the regulations notified by the State Govt., MAKAUT, WB and AICTE from time to time.
4. That the curriculum of the course, the procedure for evaluation/assessment of students and infrastructure in the classes, laboratories & library shall be in accordance with the norms prescribed by the MAKAUT, WB and AICTE.



5. That the Institution shall not allow closure of the Institution or discontinuation of the course(s) or start any new course(s) of after intake capacity of seats without the prior approval of the MAKAUT, WB and AICTE.
6. That no excess admission shall be made by the Institution over and above the approval intake under any circumstances. In case any excess admission is reported to / founded by the MAKAUT, WB, appropriate penal action including withdrawal of affiliation shall be initiated against the Institution.
7. That the Institution shall not conduct any course(s) in the field of technical education in the same premises / campus and / or in the name of the Institution without prior permission / approval of MAKAUT, WB and AICTE. In case any violation is reported to / founded by the MAKAUT, WB, appropriate penal action including withdrawal of affiliation shall be initiated against the Institution.
8. That the Institution shall not conduct any non-technical course(s) in the same premises / campus under any circumstances. In case any violation is found by the MAKAUT, WB, appropriate penal action including withdrawal of affiliation shall be initiated against the Institution.
9. That the Institution shall operate only from the approved location, and that the Institution shall not open any off campus study centres / extension centres directly or in collaboration with any other Institution / University / Organisation for the purpose of imparting technical education without obtaining prior approval from the MAKAUT, WB and AICTE.
10. That the accounts of the Institution shall be audited annually by a certified Chartered Accountant and shall be open for inspection by the MAKAUT, WB.
11. That the Institution shall furnish requisite returns & reports as desired by MAKAUT, WB in order to ensure proper maintenance of administrative & academic standards
12. That the Director / Principal and the teaching staff, Technical Assistants and other staff shall be selected according to procedures, qualifications and experience prescribed by the MAKAUT, WB / AICTE / UGC from time to time and pay scales and other allowances & benefits shall be as per the norms prescribed by the Govt. of W.B. / UGC / AICTE from time to time.
13. That if the Institution fails to disclose the information or suppress and/or misrepresent the information, appropriate action could be initiated including withdrawal of MAKAUT, WB affiliation.
14. MAKAUT, WB may carry out random inspections round the year for verifying the status of the Institutions to ensure maintenance of norms and standards prescribed by MAKAUT, WB/AICTE. Deficiencies / Shortcomings if any (in respect of built-up area requirement, instructional area requirement, laboratories requirement, computer requirement, library requirement, full-time faculty members requirement and other desirable requirements etc. in accordance with the AICTE / MAKAUT, WB norms) as were/will be pointed out shall have to be removed within a reasonable time to be prescribed by MAKAUT, WB failing which penal action including withdrawal of affiliation shall be initiated against the Institution.
15. That the MAKAUT, WB may also conduct inspections with or without notifying the dates to verify specific complaints of mis-representation, violation of norms and standards, mal-practices etc. Adverse findings will lead appropriate penal action including withdrawal of affiliation.
16. The Institute shall take appropriate measures for prevention of ragging in any form, in the light of directions of Supreme Court of India in Writ Petition No. C 656/1998 and norms as stipulated by the UGC & AICTE.





17. The Institution shall remain bound by the norms, rules and regulations formulated by the University in respect of the conditions of affiliation, course & fee structure, syllabi content and academic regulations governing the conduct of the course(s) and shall pay fees / charges to be fixed by the University in respect of inspection, affiliation, registration of students, examination fees, etc. including any subsequent changes therein introduced by the University from time to time.

In the event of closure of the institution, the Organizing Society / Trust will not close Institution till the last batch of students admitted in the academic programmes complete the total duration of their respective academic programmes (i.e. 2 years, 3 years, 4 years etc. as the case may be).

18. The University will have no financial liability whatsoever for conducting the course(s).

Any infringement / contravention / non-compliance of the conditions mentioned above lead to withdrawal of affiliation. All liabilities arising out of such withdrawal would solely rest upon to that of organizing Trust / Society. After completion of the academic year (2015 – 2016), the Institute will seek renewal of affiliation course-wise for the year (2016 – 2017).

Checked & Verified

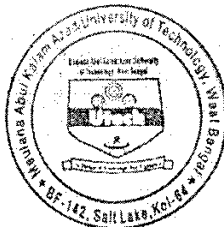
*S. Saha*

( Sujit Kumar Saha )

*[Signature]*  
Inspector of Colleges

Copy forwarded for information and necessary action to :

- ✓ The Principal / Director,  
**HERITAGE INSTITUTE OF TECHNOLOGY**  
994, MADURDAHA, CHOWBAGA ROAD, ANANDAPUR P.O. EAST KOLKATA TOWNSHIP, KOLKATA  
WEST BENGAL 700107
2. The Chairman, West Bengal Joint Entrance Examinations Board, AQ 13/1, Sector V, Salt Lake, Kol – 91.
3. The Principal Secretary to the Govt. of West Bengal, Higher Education Dept., Bikash Bhavan, Salt Lake, Kolkata – 700 091.
4. The Regional Officer, Eastern Regional Office, AICTE, Block LB, Sector III, Salt Lake, Kolkata - 98.
5. The Vice Chancellor's Unit.
6. The Registrar's Unit.
7. The Controller of Examinations' Unit.
8. The Finance Officer's Unit.
9. The Inspector of Colleges' Unit.
10. GENERAL Guard File.
11. AFFILIATION GUARD FILE.
12. College File.



*[Signature]*  
Inspector of Colleges





# MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WEST BENGAL

(Formerly West Bengal University of Technology)

Office of the Inspector of Colleges

BF-142, Salt Lake City, Kolkata – 700 064

Tel No. : (033)2321-7588, (033) 2334-1014/1021/1025/1028/1031; Fax : (033) 2321-8776

No. 126 / M.TECH / Affiliation / 2015-16

Date : 01/07/2015

The RENEWAL affiliation is hereby accorded for the academic year 2015-16 under Section 5(4) of the West Bengal University of Technology Act, 2000 (West Bengal Act XV of 2000) to

## HERITAGE INSTITUTE OF TECHNOLOGY

994, MADURDAH, CHOWBAGA ROAD, ANANDAPUR P.O. EAST KOLKATA TOWN SHIP, KOLKATA SOUTH 24 PARGANAS, WEST BENGAL 700107

[ College Code : 126 ]

for conducting the following course(s) with the intake indicated below :

PROGRAM	LEVEL OF COURSE	NAME OF COURSE	INTAKE FOR 2015-16
ENGINEERING AND TECHNOLOGY	POST GRADUATE	VLSI	18
ENGINEERING AND TECHNOLOGY	POST GRADUATE	INFORMATION TECHNOLOGY	18
ENGINEERING AND TECHNOLOGY	POST GRADUATE	ELECTRONICS AND COMMUNICATIONS ENGINEERING	18
ENGINEERING AND TECHNOLOGY	POST GRADUATE	BIOTECHNOLOGY	18
ENGINEERING AND TECHNOLOGY	POST GRADUATE	COMPUTER SCIENCE AND ENGINEERING	36
ENGINEERING AND TECHNOLOGY	POST GRADUATE	APPLIED ELECTRONICS AND INSTRUMENTATION ENGINEERING	18

The above affiliation is issued subject to fulfillment of the following terms and conditions :

1. That this Affiliation/Renewal Affiliation is being granted based on the (i) The hard copy of the computer generated report containing 115 Pages of the AICTE approved College list for the Academic Year 2015-2016 duly authenticated by the Hon'ble Vice Chancellor dated 11.06.2015 which had been received by him through email, (ii) Inspection report dated 16.05.2015 and (iii) Decision dated 10.06.2015 of the Hon'ble Vice Chancellor, MAKAUT, WB in the File No. IC-171/2015.
2. That the sponsoring Society / Trust/Company established under Section 25 of Companies Act 1956 shall provide adequate funds for development of land and for providing related infrastructural, instructional and other facilities as per norms and standards laid down by the MAKAUT, WB and AICTE from time to time and for meeting recurring expenditure.
3. That the admission and conduct of courses shall be made in accordance with the regulations notified by the State Govt., MAKAUT, WB and AICTE from time to time.
4. That the curriculum of the course, the procedure for evaluation/assessment of students and infrastructure in the classes, laboratories & library shall be in accordance with the norms prescribed by the MAKAUT, WB and AICTE.
5. That the Institution shall not allow closure of the Institution or discontinuation of the course(s) or start any new course(s) of after intake capacity of seats without the prior approval of the MAKAUT, WB and AICTE.



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11. That the Institution shall furnish requisite returns & reports as desired by MAKAUT, WB in order to ensure proper maintenance of administrative & academic standards
12. That the Director / Principal and the teaching staff, Technical Assistants and other staff shall be selected according to procedures, qualifications and experience prescribed by the MAKAUT, WB / AICTE / UGC from time to time and pay scales and other allowances & benefits shall be as per the norms prescribed by the Govt. of W.B. / UGC / AICTE from time to time.
13. That if the Institution fails to disclose the information or suppress and/or misrepresent the information, appropriate action could be initiated including withdrawal of MAKAUT, WB affiliation.
14. MAKAUT, WB may carry out random inspections round the year for verifying the status of the Institutions to ensure maintenance of norms and standards prescribed by MAKAUT, WB/AICTE. Deficiencies / Shortcomings if any (in respect of built-up area requirement, instructional area requirement, laboratories requirement, computer requirement, library requirement, full-time faculty members requirement and other desirable requirements etc. in accordance with the AICTE / MAKAUT, WB norms) as were/will be pointed out shall have to be removed within a reasonable time to be prescribed by MAKAUT, WB failing which penal action including withdrawal of affiliation shall be initiated against the Institution.
15. That the MAKAUT, WB may also conduct inspections with or without notifying the dates to verify specific complaints of mis-representation, violation of norms and standards, mal-practices etc. Adverse findings will lead appropriate penal action including withdrawal of affiliation.
16. The Institute shall take appropriate measures for prevention of ragging in any form, in the light of directions of Supreme Court of India in Writ Petition No. © 656/1998 and norms as stipulated by the UGC & AICTE.
17. The Institution shall remain bound by the norms, rules and regulations formulated by the University in respect of the conditions of affiliation, course & fee structure, syllabi content and academic regulations governing the conduct of the course(s) and shall pay fees / charges to be fixed by the University in respect of inspection, affiliation, registration of students, examination fees, etc. including any subsequent changes therein introduced by the University from time to time.





In the event of closure of the institution, the Organizing Society / Trust will not close Institution till the last batch of students admitted in the academic programmes complete the total duration of their respective academic programmes (i.e. 2 years, 3 years, 4 years etc. as the case may be).

18. The University will have no financial liability whatsoever for conducting the course(s).

Any infringement / contravention / non-compliance of the conditions mentioned above lead to withdrawal of affiliation. All liabilities arising out of such withdrawal would solely rest upon to that of organizing Trust / Society. After completion of the academic year (2015 – 2016), the Institute will seek renewal of affiliation course-wise for the year (2016 – 2017).

Checked & Verified

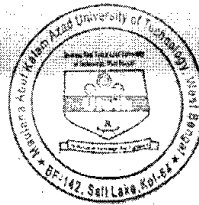
*S. Saha*

( Sujit Kumar Saha )

*[Signature]*  
Inspector of Colleges

Copy forwarded for information and necessary action to :

- ✓ The Principal / Director,  
**HERITAGE INSTITUTE OF TECHNOLOGY**  
994, MADURDAHA, CHOWBAGA ROAD, ANANDAPUR P.O. EAST KOLKATA TOWN SHIP, KOLKATA  
SOUTH 24 PARGANAS, WEST BENGAL 700107.
2. The Chairman, PGET Examination.
3. The Principal Secretary to the Govt. of West Bengal, Higher Education Dept., Bikash Bhavan, Salt Lake, Kolkata – 700 091.
4. The Regional Officer, Eastern Regional Office, AICTE, Block LB, Sector III, Salt Lake, Kolkata - 98.
5. The Vice Chancellor's Unit.
6. The Registrar's Unit.
7. The Controller of Examinations' Unit.
8. The Finance Officer's Unit.
9. The Inspector of Colleges' Unit.
10. GENERAL Guard File.
11. AFFILIATION GUARD FILE.
12. College File.



*[Signature]*  
Inspector of Colleges



## Enclosure-B1A



# MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WEST BENGAL

(Formerly West Bengal University of Technology)

Office of the Inspector of Colleges

BF-142, Salt Lake City, Kolkata – 700 064

Tel. No. : (033)2321-7588, (033) 2334-1014/1021/1025/1028/1031, Fax : (033) 2321-8776

No. 303 / MCA / Affiliation / 2015-16

Date : 01/07/2015

The **RENEWAL** affiliation is hereby accorded for the academic year **2015-16** under Section 5(4) of the West Bengal University of Technology Act, 2000 (West Bengal Act XV of 2000) to

## COMPUTER APPLICATION CENTRE, HERITAGE INSTITUTE OF TECHNOLOGY

994, MADURDAHA, CHOWBAGA ROAD, ANANDAPUR P.O. – EAST KOLKATA TOWNSHIP, KOLKATA, SOUTH 24 PARGANAS, WEST BENGAL, 700107.

(College Code : 303)

for conducting the following course(s) with the intake indicated below :

PROGRAM	LEVEL OF COURSE	NAME OF COURSE	INTAKE FOR 2015-16
MCA	POST GRADUATE	MASTERS IN COMPUTER APPLICATIONS	60

The above affiliation is issued subject to fulfillment of the following terms and conditions :

1. That this Affiliation/Renewal Affiliation is being granted based on the (i) The hard copy of the computer generated report containing 115 Pages of the AICTE approved College list for the Academic Year 2015–2016 duly authenticated by the Hon'ble Vice Chancellor dated 11.06.2015 which had been received by him through email and (iii) Decision dated 10.06.2015 of the Hon'ble Vice Chancellor, MAKAUT, WB in the File No. IC-171/2015.
2. That the sponsoring Society / Trust/Company established under Section 25 of Companies Act 1956 shall provide adequate funds for development of land and for providing related infrastructural, instructional and other facilities as per norms and standards laid down by the MAKAUT, WB and AICTE from time to time and for meeting recurring expenditure.
3. That the admission and conduct of courses shall be made in accordance with the regulations notified by the State Govt., MAKAUT, WB and AICTE from time to time.
4. That the curriculum of the course, the procedure for evaluation/assessment of students and infrastructure in the classes, laboratories & library shall be in accordance with the norms prescribed by the MAKAUT, WB and AICTE.
5. That the Institution shall not allow closure of the Institution or discontinuation of the course(s) or start any new course(s) of after intake capacity of seats without the prior approval of the MAKAUT, WB and AICTE.
6. That no excess admission shall be made by the Institution over and above the approval intake under any circumstances. In case any excess admission is reported to / founded by the MAKAUT, WB, appropriate penal action including withdrawal of affiliation shall be initiated against the Institution.



7. That the Institution shall not conduct any course(s) in the field of technical education in the same premises / campus and / or in the name of the Institution without prior permission / approval of MAKAUT, WB and AICTE. In case any violation is reported to / founded by the MAKAUT, WB, appropriate penal action including withdrawal of affiliation shall be initiated against the Institution.
8. That the Institution shall not conduct any non-technical course(s) in the same premises / campus under any circumstances. In case any violation is found by the MAKAUT, WB, appropriate penal action including withdrawal of affiliation shall be initiated against the Institution.
9. That the Institution shall operate only from the approved location, and that the Institution shall not open any off campus study centres / extension centres directly or in collaboration with any other Institution / University / Organisation for the purpose of imparting technical education without obtaining prior approval from the MAKAUT, WB and AICTE.
10. That the accounts of the Institution shall be audited annually by a certified Chartered Accountant and shall be open for inspection by the MAKAUT, WB.
11. That the Institution shall furnish requisite returns & reports as desired by MAKAUT, WB in order to ensure proper maintenance of administrative & academic standards
12. That the Director / Principal and the teaching staff, Technical Assistants and other staff shall be selected according to procedures, qualifications and experience prescribed by the MAKAUT, WB / AICTE / UGC from time to time and pay scales and other allowances & benefits shall be as per the norms prescribed by the Govt. of W.B. / UGC / AICTE from time to time.
13. That if the Institution fails to disclose the information or suppress and/or misrepresent the information, appropriate action could be initiated including withdrawal of MAKAUT, WB affiliation.
14. MAKAUT, WB may carry out random inspections round the year for verifying the status of the Institutions to ensure maintenance of norms and standards prescribed by MAKAUT, WB/AICTE. Deficiencies / Shortcomings if any (in respect of built-up area requirement, instructional area requirement, laboratories requirement, computer requirement, library requirement, full-time faculty members requirement and other desirable requirements etc. in accordance with the AICTE / MAKAUT, WB norms) as were/will be pointed out shall have to be removed within a reasonable time to be prescribed by MAKAUT, WB failing which penal action including withdrawal of affiliation shall be initiated against the Institution.
15. That the MAKAUT, WB may also conduct inspections with or without notifying the dates to verify specific complaints of mis-representation, violation of norms and standards, mal-practices etc. Adverse findings will lead appropriate penal action including withdrawal of affiliation.
16. The Institute shall take appropriate measures for prevention of ragging in any form, in the light of directions of Supreme Court of India in Writ Petition No. © 656/1998 and norms as stipulated by the UGC & AICTE.
17. The Institution shall remain bound by the norms, rules and regulations formulated by the University in respect of the conditions of affiliation, course & fee structure, syllabi content and academic regulations governing the conduct of the course(s) and shall pay fees / charges to be fixed by the University in respect of inspection, affiliation, registration of students, examination fees, etc. including any subsequent changes therein introduced by the University from time to time.





In the event of closure of the institution, the Organizing Society / Trust will not close Institution till the last batch of students admitted in the academic programmes complete the total duration of their respective academic programmes (i.e. 2 years, 3 years, 4 years etc. as the case may be).

18. The University will have no financial liability whatsoever for conducting the course(s).

Any infringement / contravention / non-compliance of the conditions mentioned above lead to withdrawal of affiliation. All liabilities arising out of such withdrawal would solely rest upon to that of organizing Trust / Society. After completion of the academic year (2015 – 2016), the Institute will seek renewal of affiliation course-wise for the year (2016 – 2017).

Checked & Verified

*S. Saha*

( Sujit Kumar Saha )

*[Signature]*  
Inspector of Colleges

Copy forwarded for information and necessary action to :

- ✓ 1. The Principal / Director,  
**COMPUTER APPLICATION CENTRE, HERITAGE INSTITUTE OF TECHNOLOGY**  
994, MADURDAHA, CHOWBAGA ROAD, ANANDAPUR P.O. – EAST KOLKATA TOWNSHIP,  
KOLKATA, SOUTH 24 PARGANAS, WEST BENGAL, 700107.
2. The Chairman, West Bengal Joint Entrance Examinations Board, AQ 13/1, Sector V, Salt Lake, Kol – 91.
3. The Principal Secretary to the Govt. of West Bengal, Higher Education Dept., Bikash Bhavan, Salt Lake, Kolkata – 700 091.
4. The Regional Officer, Eastern Regional Office, AICTE, Block LB, Sector III, Salt Lake, Kolkata - 98.
5. The Vice Chancellor's Unit.
6. The Registrar's Unit.
7. The Controller of Examinations' Unit.
8. The Finance Officer's Unit.
9. The Inspector of Colleges' Unit.
10. GENERAL Guard File.
11. AFFILIATION GUARD FILE.
12. College File.



*[Signature]*  
Inspector of Colleges

## Enclosure-B2

FRI, 29-JUN-01 16:04

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FRI



**अखिल भारतीय तकनीकी शिक्षा परिषद्**  
**ALL INDIA COUNCIL FOR TECHNICAL EDUCATION**  
 (भारत सरकार का एक सांविधिक संस्थान) (A STATUTORY BODY OF THE GOVERNMENT OF INDIA)

F No.: 750-80-008(NDEG)/ET/2001

Date: 28.06.2001

Secretary

Deptt. of Tech. Edu. &amp; Trg.

Govt. of West Bengal,

Pikesh Bhawan, 6<sup>th</sup> Floor, East Block.

Sub: AICTE approval to Kalyan Bharati Trust, Tobacco House, 1&2 Old Court House Corner, Kolkata - 700001, WB. for establishment of Heritage Institute of Tech., 994, Mouza, Madurdha, Chowdhaga RD., Ward No. 108, Kolkata - 700 039, WB.

Sir,

I am directed to state that based on the consultations with the concerned State Govt., the concerned affiliating body and on recommendations of the Regional Committee, the Expert Committee constituted by the Council and as per the provisions of AICTE Act and Regulations, the All India Council for Technical Education hereby approves the establishment of Kalyan Bharati Trust, Tobacco House, 1&2 Old Court House Corner, Kolkata - 700001, WB. for establishment of Heritage Institute of Tech., 994, Mouza, Madurdha, Chowdhaga RD., Ward No. 108, Kolkata - 700 039, WB. for the academic year 2001-2002, for course(s) and intake as given below with specific condition that admission shall be made through the Central Counseling by the Government of West Bengal only. This approval is valid only for the academic years 2001-2002 and cannot be extended for the next year 2002-2003. In the event the establishment of the institutions having not been operationalised, this approval is not valid unless AICTE specifically revalidates.

COURSE(S)	INTAKE	LEVEL	DURATION (YEARS)	PERIOD OF
Comp. Sc. & Engg.	60	Degree	4 YEARS	2001-2002
Information Technology	60	Degree	4 YEARS	2001-2002
Electronics & Telecomm. Engg.	60	Degree	4 YEARS	2001-2002
Electronics & Electrical Engg.	60	Degree	4 YEARS	2001-2002
Total	240			

This approval has been accorded subject to fulfillment of general conditions and as per the Norms and Standards of the AICTE and also specific conditions (if any, given).

The attention of the management is drawn to the fact that the approval given now is only for one academic session before the end of which an expert committee shall visit to assess if the norms and standards as stipulated by AICTE are fulfilled, and only then will the continuation or otherwise shall be intimated.

The admission will be made in accordance with Regulations notified by the AICTE vide GSR 476(E) dated 20.05.1994 based on the Hon'ble Supreme Court Judgment dated 04.02.1993 with regard to WP(C) No. 607 of 1992 in the case of Umi Krishnan JP and other etc. V/s. State Government of Andhra Pradesh and others etc. and later judgments. No Management/Institute/Trust or Society shall announce admissions directly under any circumstances. Any action by the institute contrary to any provisions laid down by the Council and concerned State Government shall make it liable for actions.

Contd.



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P. 0.

F. No.. 750-80-008(NDEG)/E1/2001


- 2 -

In the event of infringement/contravention or non-compliance of the provisions of AICTE Regulations, Guidelines or the norms and standards as prescribed by the AICTE, the Council shall take further action to withdraw approval, and the liability arising out of such withdrawal of approval will be solely that of Management/Trust/Society and/or Institution.

The Council may inspect/ visit the Institution any time it may deem fit to verify the progress/ compliance.

You are requested to kindly monitor the progress made by this institution towards fulfilling the norms and standards prescribed by the Council and keep the concerned Regional Office and AICTE, New Delhi informed.

Yours faithfully,



(Prof. R.S. Gaud)

Copy to .

1. The Regional Officer, AICTE, Eastern Regional Office, A.I.C.T.E, Institute of Leather Technology Campus, Salt Lake City, Sector - III, Kolkata - 700 091.

He is requested to monitor compliance with the Norms and Standards and conditions stipulated by the Council and keep the concerned Regional Committee and the AICTE informed of the same.

He is also requested to ensure the receipt of notarized undertaking as specified by the Council from the institution/management concerned within the stipulated time frame.

2. The Director of Technical Education, Govt. of West Bengal, Bikash Bhavan, 10<sup>th</sup> Floor, East Block, Salt Lake City Kolkata - 700 091.

6. The Registrar, University of Kalyani, P.O. Kalyani, Distt. Nadia - 741 235. WB  
He is requested to complete the process of affiliation for facilitating admissions.

4. The Principal, Heritage Institute of Tech., 994, Mouza, Madurdha, Chowdhaga RD., Ward No. 108, Kolkata - 700 039. WB.

(i) The institution should submit a notarized undertaking on non-judicial stamp paper as per format given in Appendix I to the concerned Regional Office, AICTE with a copy to the Headquarters, AICTE, New Delhi within one month from the date of receipt of this approval letter.

(ii) The institution/management should also submit a notarized undertaking from the Governing Body to the concerned Regional Office, AICTE with a copy to Headquarters, AICTE, New Delhi and to the concerned State Government, that all the infrastructural and instructional facilities shall be in place as per the norms of AICTE prior to the admissions of any student for the academic year 2001-2002.

5. Guard File

FRI, 29-JUN-01 16:06

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P. 03

File No.: 750-80/008(NDEG)/ET/2001

**Specific Conditions:**

1. The construction to be completed immediately
2. Library books to be procured and library space to be separated.
3. Space earmark for the first year classes to be made ready immediately.

The deficiencies mentioned above should be complied by 15<sup>th</sup> July 2001 and same to be intimated to Regional Office, AICTE, Kolkata.

R. Chowdhury



**अखिल भारतीय तकनीकी शिक्षा परिषद्**  
**ALL INDIA COUNCIL FOR TECHNICAL EDUCATION**  
 (भारत सरकार का एक सांविधिक संस्थान) (A STATUTORY BODY OF THE GOVERNMENT OF INDIA)

F.No. 750-80-008(NDEG)/ET/2001

Date: 05/07/2002

CORRIGENDUM

To  
 Secretary,  
 Dept of Tech. Edu. & Trg.,  
 Govt. of West Bengal,  
 Bikas Bhawan, 6<sup>th</sup> Floor, East Block,  
 Salt Lake City, Kolkata – 700 091

**Subject:** Increase in Intake/ Additional Courses / Extension of Approval to **HERITAGE INSTITUTE OF TECHNOLOGY, 994, MOUZA, MADURDHA, CHOWDHAGA RD., WARD NO. 108, KOLKATA – 700 039**, for conduct of DEGREE (ENGG.) programmes.

Sir,

This is in partial modification of the council's earlier letter no. 750-80-008(NDEG)/ET/2001 dated 03/6/2002, the course mentioned as Electrical & Electronics Engineering may kindly be read as **Electrical Engineering**.

This is for your kind information and necessary action please. All other contents in the earlier letter will remain same.

Inconvenience caused to you is regretted.

Yours faithfully

/   
 (P.N. Razdan)

copy to:

1. The Regional Officer, Eastern Regional Office, A.I.C.T.E. Institute of Leather Technology Campus, Salt Lake City, Sector – III, Kolkata – 700 091.
2. The Director of Technical Education, Govt. of West Bengal, Bikash Bhawan, 10<sup>th</sup> Floor, East Block Lake City, Kolkata – 700 091.
3. Registrar, W.B. University of Tech., BF-142, Salt Lake, Kolkata – 700 064.
4. The Principal, **HERITAGE INSTITUTE OF TECHNOLOGY, 994, MOUZA, MADURDHA, CHOWDHAGA RD., WARD NO. 108, KOLKATA – 700 039**.
5. Guard File.

/   
 ( P.N. Razdan )   
 Adviser (UG)



**अखिल भारतीय तकनीकी शिक्षा परिषद्**  
**ALL INDIA COUNCIL FOR TECHNICAL EDUCATION**  
 (भारत सरकार का एक सांविधिक संस्थान) (A STATUTORY BODY OF THE GOVERNMENT OF INDIA)

F.No. 750-80-008(NDEG)/ET/2001

Date: 29/08/2002

**CORRIGENDUM**

To

The Principal Secretary,  
 Department of Higher Education,  
 Govt of West Bengal,  
 Bikas Bhawan,  
 Salt lake City,, Kolkata- 700091.

**Subject:** Increase in Intake/ Additional Courses / Extension of Approval to **HERITAGE INSTITUTE OF TECHNOLOGY, 994, MOUZA, MADURDHA, CHOWDHAGA RD, WARD NO 108, KOLKATA- 70039** for conduct of DEGREE (ENGG.) programmes.

Sir,

This is in partial modification of the Council's Corrigendum dated 05/07/2002, the, course mentioned as **Electrical Engg** may kindly be read as **Applied Electronics & Instrumentation Engg..**

This is for your kind information and necessary action please. All other contents in the letter no 750-80-008(NDEG)/ET/2001 dated 03/06/2002 will remain same.

Inconvenience caused to you is regretted.

Yours faithfully

(P.N. Razdan)  
 Adviser (UG)


copy to:

1. The Regional officer , Eastern Regional Office, AICTE, Institute of Leather Technology Campus, Salt Lake City, Sector-III, Kolkata- 700091.
2. Director of Technical Education , Govt of WestBengal, Bikas Bhawan, 10<sup>th</sup> Floor, East Block Lake City, Kolkata- 700091
3. Registrar , West Bengal University Technology.
- ✓ 4. The Principal, **HERITAGE INSTITUTE OF TECHNOLOGY, 994, MOUZA, MADURDHA, CHOWDHAGA RD, WARD NO 108, KOLKATA- 70039**
5. Guard File.

*Razdan*  
 ( P.N. Razdan)  
 Adviser (UG)



## Enclosure-B3

  
 डॉ. मंजू सिंह  
 संयुक्त सचिव  
 Dr. Manju Singh  
 Joint Secretary



विश्वविद्यालय अनुदान आयोग  
**University Grants Commission**  
 (मानव संसाधन विकास मंत्रालय, भारत सरकार)  
 (Ministry of Human Resource Development, Govt. of India)  
 बहादुरशाह ज़फ़र मार्ग, नई दिल्ली-110002  
 Bahadur Shah Zafar Marg, New Delhi-110002  
 दूरभाष Phone : कार्यालय Off : 011-23238876  
 फैक्स Fax : 011-23232297

BY SPEED POST

No.F. 22-1/2014(AC)

June, 2014

✓ The Registrar,  
 West Bengal University of Technology,  
 BF-142, Salt Lake,  
 Sector-1, Bidhannagar  
 Kolkata-700 064

19 JUN 2014

Sub:- Conferment of Fresh Autonomous Status to Heritage Institute of Technology, Chowbaga Road, Anandapur P.O. East Kolkata, Township, Kolkata – 700 107 affiliated to West Bengal University of Technology, Kolkata.

Sir/Madam,

This has reference to the proposal dated 14.12.2011 submitted by Heritage Institute of Technology, Chowbaga Road, Anandapur P.O. East Kolkata, Township, Kolkata – 700 107 affiliated to West Bengal University of Technology, Kolkata under the UGC scheme for conferment of fresh autonomous status and subsequent visit of the UGC Expert committee to consider the proposal on 19<sup>th</sup> & 20<sup>th</sup> February, 2014.

The report of the aforesaid Joint UGC Expert Committee was placed before the Standing Committee constituted for the purposes by the Commission to look into the Expert Committee reports for conferment of fresh autonomous status and extension of autonomy to colleges before its recommendations are placed before the Commission for its final approval.

The recommendations of the Standing Committee were placed before the Commission at its meeting held on 13.06.2014. The Commission, after taking due consideration of the recommendations of the Standing Committee, agreed to grant autonomous status to Heritage Institute of Technology, Chowbaga Road, Anandapur P.O. East Kolkata, Township, Kolkata – 700 107 under the UGC autonomous colleges scheme for a period of six year w.e.f. the academic year i.e. 2014-2015 to 2019-2020.

The West Bengal University of Technology, Kolkata may now go ahead and issue necessary orders in this regard by endorsing a copy of the same to this office for our records. The admissible grant under this scheme will be released to the College as per its eligibility, according to the norms as laid down in the XII Plan Guidelines for Autonomous Colleges by the Joint Secretary, (ERO) University Grants Commission, LB-8, Sector-III, Salt Lake, Kolkata – 700 098 (West Bengal).

Yours faithfully,

Manju Singh  
 (MANJU SINGH)

60

19/6/14

## Enclosure-B4



# WEST BENGAL UNIVERSITY OF TECHNOLOGY

BF-142, SALT LAKE, SECTOR-I, KOLKATA-700 064, INDIA

Web Site : [www.wbut.net](http://www.wbut.net) / [www.wbut.ac.in](http://www.wbut.ac.in)

**Dr. Syed Rafiqul Islam**  
Registrar

Ref. No. :

Date :

No. 7.7/Regis./Auto(HIT)/2014

Dated: 21.07.2014

To  
The Principal,  
Heritage Institute of Technology,  
Chowbaga Road, Anandapur P.O. East Kolkata Township,  
Kolkata-700107.

**Sub: Conferment of Autonomous Status**

Dear Sir,

In terms of letter No. F.22-1/2014(AC) dated 19 June, 2014 of the Joint Secretary, University Grants Commission, New Delhi, it is a matter of great pleasure to inform you that West Bengal University of Technology is hereby pleased to Confer your college the Status of an Autonomous College conducting presently the following courses mentioning against each the intake for the period 2014-2015 to 2019-2020 subject to the compliance of the Notification No. 01/WBUT/Regis.(Ntf)/2012 dated 31.07.2012 of the University and also receipt of the AICTE approval issued year after year in respect of your college:

UG Applied Electronics & Instrumentation Engineering : 60  
UG Computer Science & Engineering - 120  
UG Information Technology - 60  
UG Electronics & Communication Engineer -180  
UG Biotechnology - 60  
UG Chemical Engineering - 60  
UG Mechanical Engineering - 120  
UG Civil Engineering - 120  
UG Electrical Engineering - 60  
PG VLSI - 18  
PG Applied Electronics & Instrumentation Engineering : 18  
PG Electronics & Communication Engineering : 18  
PG Biotechnology : 18  
PG Computer Science Engineering : 36  
PG Information Technology : 18



## WEST BENGAL UNIVERSITY OF TECHNOLOGY

BF-1 42, SALT LAKE, SECTOR-I, KOLKATA-700 064, INDIA

Web Site: [www.wbut.net](http://www.wbut.net) / [www.wbut.ac.in](http://www.wbut.ac.in)

**Dr. Syed Rafiqul Islam**  
Registrar

Ref. No. :

Date :

In case of non-compliance resulting sharp decline in standards or quality in an autonomous college, it shall be open to the University to revoke the autonomous status of that college and accordingly UGC would be informed.

With regards,

(Syed Rafiqul Islam)

Registrar

Copy forwarded for information and necessary action to:

1. The Chairman, University Grants Commission, Bahadurshah Zafar Marg, New Delhi 110002
2. The Principal Secretary, Department of Higher Education, Govt. of West Bengal, Bikash Bhavan, Bidhannagar, Kolkata 700091
3. The Director of Technical Education, Department of Higher Education, Govt. of West Bengal, Bikash Bhavan, Bidhannagar, Kolkata 700091
4. The Joint Secretary & Incharge, University Grants Commission, Eastern Regional Office, LB-8, Sector-III, Salt Lake, Kolkata 700098
5. The Controller of Examinations/Inspector of Colleges/Finance Officer, WBUT





# WEST BENGAL UNIVERSITY OF TECHNOLOGY

BF-142, Sector-I, Salt Lake, Kolkata 700064  
Tel.No. 033 2321-7588, 2334-1014/1021/1028/1031, Fax: 033 2321 8776

No. 01/HOUT/Regis.(Ntf)/2012

Date: July 31, 2012

## NOTIFICATION

The externally aided Technical Education Quality Improvement Programme (TEQIP) has been launched by the Government of India to improve quality of technical education and enhance the existing capacity of the institutions across the country to become dynamic, demand driven, quality conscious, efficient, responsive to rapid economic and technological development occurring at national and international level. The concept of establishing autonomous institutions with an objective to allow them to exercise autonomy towards achieving academic excellence, had also been envisaged in the national policy on education. Moreover, the Education Commission (1964-66) recommended the college autonomy, which, in essence, is the instrument for promoting academic excellence. In order to achieve this goal, the Government of India and the State Government had taken joint initiative to establish autonomous engineering institutes in the State through implementation of Technical Education Quality Improvement Programme (Phase-II). The Department of Higher Education had already communicated its 'no objection' for establishment of autonomous institutions vide their letter under memo No. 258-Eds/HED/2010 dated 11.03.2010.

As per directive laid down in the guidelines of TEQIP-II as well as the communication made under memo No. 435-Edn(T) dated 21.09.2011 of the Higher Education Department, Govt. Of West Bengal, the Institutes selected under sub-component 1.1 are required to obtain the status of autonomous Institutions from UGC within 2<sup>nd</sup> year of the project.

In terms of letter No.435-Edn(T) dated 21.09.2011 of Higher Education Department, Govt. Of West Bengal, it has come to the notice of the University that the non-autonomous institutions numbering NINE in total as stated below, had been selected from this State under sub-component 1.1 of TEQIP-II:

1. Govt. College of Engg. & Leather Technology, Kolkata
2. Calcutta Institute of Engg. & Management, Tollygunge
3. College of Engg. & Management, Kolaghat
4. RCC Institute of Information Technology, Kolkata
5. Bankura Unnayani Institute of Engineering, Bankura
6. Birbhum Institute of Engg. & Tech., Birbhum
7. Heritage Institute of Technology, Kolkata
8. MCKV Institute of Engineering, Howrah
9. Narula Institute of Technology, North 24 Parganas

After careful consideration of the matter regarding granting of autonomy in critical and depth, the University is in the opinion that the grant of academic autonomy needs rigorous exercise. The essence is to make each teacher as well as the department attached to the said college autonomous and also the college autonomous from its public or private fund provider. It is pertinent to mention here that the Education Commission (1964-66) had emphasised the exercise of academic freedom by teachers, which is a crucial requirement for development of the intellectual climate of our country. Unless such a climate prevails, it is difficult to achieve excellence in our higher education system. It is needless to mention that this process is an elaborate one.

In view of the above, the University referred the issue to different forums like academic council of this University, the Committee comprising of academic luminaries of our State in order to derive a mechanism to ensure the implementation of academic autonomy in true sense and spirit. After long deliberations in different forums, the University is in the opinion that the autonomy may be extended if advised by the UGC in a guided manner, in the hand holding mode, constantly assisting the college to develop the faculty for the exercise of autonomy in all its forms – financial, administrative and academic. As and when the capability is developed, the University will allow the college to run on its own performing along with the AICTE its supervisory activities.

The said hand holding mode in regard to autonomous status had rightly been pointed out by the Department of Higher Education, Govt. Of West Bengal vide their letter under memo No. 435/2-Edn(T) dated 21.09.2011.

The University is hereby communicating its no-objection for autonomous status in respect of the above mentioned nine colleges subject to the receipt of the concurrence of UGC provided the



colleges comply with the guidelines for autonomous college of UGC as well as guidelines for evaluation of autonomous status for institutions under WBUT (enclosed) as derived after long deliberations in different forums mentioned above. It is obligatory on the part of the colleges to earn 750 points out of 1000 points as mentioned in the enclosed "Guidelines for evaluation of autonomous status for institutions under WBUT" as well as compliance of UGC guidelines for autonomous colleges. The applications in question of nine colleges in UGC format will be forwarded to the UGC, as and when the undertaking from the sponsoring trust/society of the nine colleges and the Director/Principal of the college expressing to comply the aforesaid Guidelines of WBUT & UGC and this Notification, will be received. In case of non-compliance resulting sharp decline in standards or quality in an autonomous college, it shall be open to the University to revoke the autonomous status of that college and accordingly UGC would be informed.

As envisaged in the guidelines of UGC for autonomous colleges, the University is required to help the colleges to develop their academic programme, to improve the faculty and to provide necessary guidelines by participating in the deliberations to the different bodies of the colleges (in a nutshell to do everything possible to foster the spirit of autonomy) as well as evaluation of autonomous status as per guidelines of WBUT at least twice in a year in order to promote academic excellence of the said college. In order to carry out such activities by the University, the college is required to pay an amount of Rs.45,000/- per UG course and Rs.50,000/- per PG course per annum and the said amount is required to be remitted in the beginning of its academic session not later than 14<sup>th</sup> August each year. However, the Government institutions/colleges shall be exempted from paying such fees.

Moreover, the University is required to create separate wings to facilitate the smooth working of the autonomous colleges as per UGC guidelines for autonomous college. In order to facilitate the same, the processing fees in regard to different activities is prescribed hereunder :

#### Processing Fees

- |  |   |  |
|--|---|--|
| 1. For Registration  | - | Rs.400/- per student (one time)                |
| 2. For examination <sup>Data base</sup> related activities - | - | Rs.450/- per student (with late fine)          |
|  |   | Rs.1000/- per student per semester             |
|  |   | Rs.1200/- per student per sem (with late fine) |
| 3. For Certificate   | - | Rs.400/-                                       |
|  |   | Rs.500/- for urgent                            |
| 4. For duplicate certificate                                 | - | Rs.300/-                                       |
| 5. For Migration Certificate                                 | - | Rs.300/-                                       |
|  |   | Rs.500/- for urgent                            |

As and when the activities will be initiated by the college, the processing fees are required to be paid. At the time of depositing the processing fee for registration, the University development fee @ Rs.550/- per year per student (one time collection at the time of processing the registration i.e. Rs.550 x no. of years) is required to be deposited as done at present by the colleges. The rates as prescribed now may be modified by the University time to time.

The modalities regarding issuance of registration certificate, migration certificate and degree certificate in respect of students as well as any new syllabus of the programme/courses or modification of syllabus of the existing programme/courses to be adopted by the colleges, will be notified in due course.

All concerned are to note and act accordingly.

Copy forwarded for information and necessary action to:

1. The Chairman, University Grants Commission, New Delhi
2. The Principal Secretary, Higher Education Department, Govt. Of West Bengal, Bikash Bhavan, Salt Lake, Kolkata 700091
3. The Principal/Director (of above nine colleges)

## Enclosure-B4/1



**MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WEST BENGAL**  
 (FORMERLY KNOWN AS WEST BENGAL UNIVERSITY OF TECHNOLOGY)  
 BF-142, SALT LAKE, SECTOR-I, KOLKATA-700 064 (INDIA)  
 Website : [www.wbut.ac.in](http://www.wbut.ac.in)

**Dr. Syed Rafikul Islam**  
 Registrar

Ref. No. : REG/2015/35  
 Date : 23/11/2015  
 29/03/2016

From : Dr. Syed Rafikul Islam,  
 Registrar

To : The Principal,  
 Heritage Institute of Technology,  
 Chowbaga Road, Anandapur, P.O. East Kolkata Township,  
 Kolkata – 700 107.

Ref. : 1) Our earlier No. 7.7/Regis./Auto(HIT)/2014 dated 21/07/2014  
 2) UGC letter No. F.22-1/2014(AC) dated 19/06/2014

Dear Sir,

Our university has already conferred your Colleges the Status of an Autonomous College. In partial modification of our earlier letter as cited above that following Course(s) will be added in Autonomous Status of your College for the period 2016 – 2017 to 2019 – 2020 :

MCA [ intake : 60]

Yours faithfully

REGISTRAR

**Copy forwarded for information and necessary action to :**

1. The Chairman, University Grants Commission, Bahadurshah Zafar Marg, New Delhi – 110002.
2. The Principal Secretary, Department of Higher Education, Govt. of West Bengal, Bikash Bhavan, Bidhannagar, Kolkata – 700091.
3. The Director of Technical Education, West Bengal, Bikash Bhavan, Bidhannagar, Kolkata – 700091.
4. The Joint Secretary & In-Charge, University of Grants Commission, Eastern Regional Office, LB – 8, Sector – III, Salt Lake, Kolkata – 700098.
5. The Finance Officer, MAKAUT, WB.
6. The Inspector of Colleges, MAKAUT, WB.
7. The Controller of Examinations (Actg.), MAKAUT, WB.

REGISTRAR



## Enclosure-B5

Ph. 23236351, 23232701, 23237721  
23234116, 23235733, 23232317  
23236735, 23239437, 23239627

Extension No. 413 (CPP-I Colleges)  
UGC Website: [www.ugc.ac.in](http://www.ugc.ac.in)

F. No. 8-349/2006 (CPP-I)

The Registrar,  
West Bengal University of Technology,  
**West Bengal.**



SPEED POST

बहादुरशाह जफर मार्ग  
नई दिल्ली 110 002  
UNIVERSITY GRANTS COMMISSION  
BAHADURSHAH ZAFAR MARG  
NEW DELHI-110 002

January, 2010

21 JAN 2010

**Sub. - Recognition of College under Section 2(f) of the UGC Act, 1956.**

Sir,

I am directed to refer to your letter No. HRIT/0306/4900 dated 31-08-2009 received from the Principal, Heritage Institute of Technology, Chowbaga Road, Anandapur, P.O. East Kolkata Township, Kolkata – 700 107, West Bengal on the subject cited above and to say that the name of the following College has been included in the list of Colleges prepared under Section 2 (f) of the UGC Act, 1956 under the head Non Government Colleges teaching upto Master's Degree:-

Name of the College	Year of Establishment	Remarks
Heritage Institute of Technology, Chowbaga Road, Anandapur, P.O. East Kolkata Township, Kolkata – 700 107, West Bengal.  (On Temporary affiliation)	2001	The College is <b>not</b> eligible to receive Central assistance in terms of the rules framed under Section 12 (B) of the UGC Act, 1956.

The Indemnity Bond and other supporting documents submitted in respect of the above College have been accepted by the Commission.

Yours faithfully,

(S.C. Chadha)  
Deputy Secretary

**Copy forwarded to:-**

1. The Principal, Heritage Institute of Technology, Chowbaga Road, Anandapur, P.O. East Kolkata Township, Kolkata – 700 107, West Bengal.
2. The Secretary, Government of India, Ministry of Human Resource Development, Department of Secondary Education & Higher Education, Shastri Bhawan, New Delhi
3. The Principal Secretary (Higher Education), Government of West Bengal, Bikas Bhawan, Salt Lake, Calcutta - 700 091.
4. Joint Secretary, UGC, Eastern Regional Office, LB-8 Sector-III, Kolkata-700 091.
5. Publication Officer (Website-UGC), New Delhi.
6. Section Officer (F.D.-III Section) U.G.C., New Delhi
7. All Sections, U.G.C., New Delhi.
8. Guard file.

(Sunita Gulati)  
Section Officer

copy has been made  
P. 188 S.NO-1

ok  
12/1/10

## Enclosure-B6



All India Council for Technical Education  
(A Statutory body under Ministry of HRD, Govt. of India)

7th Floor, Chandralok Building, Janpath, New Delhi- 110 001  
PHONE: 23724151/52/53/54/55/56/57 FAX: 011-23724183 www.aicte-india.org

F.No. Eastern/1-2811681310/2016/EOA

Date: 25-Apr-2016

To,

The Secretary (Technical education)  
Govt. of West Bengal,  
Bikash Bhawan, Room No. 602,  
6th Floor Salt Lake, Kolkata-700091

**Sub: Extension of approval for the academic year 2016-17**

Ref: Application of the Institution for Extension of approval for the academic year 2016-17

Sir/Madam,

In terms of the provisions under the All India Council for Technical Education (Grant of Approvals for Technical Institutions) Regulations 2012 notified by the Council vide notification number F-No.37-3/Legal/2012 dated 27/09/2012 and norms standards, procedures and conditions prescribed by the Council from time to time, I am directed to convey the approval to

Regional Office	Eastern	Application Id	1-2811681310
Name of the Institute	HERITAGE INSTITUTE OF TECHNOLOGY	Permanent Id	1-3281431
Name of the Society/Trust	KALYAN BHARTI TRUST	Institute Address	994, MADURDAHA, CHOWBAGA ROAD, ANANDAPUR, P.O. EAST KOLKATA TOWNSHIP, KOLKATA, SOUTH 24 PARGANAS, West Bengal, 700107
Institute Type	Unaided - Private	Society/Trust Address	994, MADURDAHA, CHOWBAGA ROAD, ANANDAPUR, P.O.-EAST KOLKATA TOWNSHIP, KOLKATA, West Bengal, 700107

Opted for change from Women to Co-ed and Vice versa	No	Opted for change of name	No	Opted for change of site	No
Change from Women to Co-ed approved and Vice versa	Not Applicable	Change of name Approved	Not Applicable	Change of site Approved	Not Applicable

To conduct following courses with the intake indicated below for the academic year 2016-17

Application Id: 1-2811681310			Course	Full/Part Time	Affiliating Body	Intake 2015-16	Intake Approved for 2016-17	NRI Approval status	PIO / FN / Gulf quota Approval status	Foreign Collaboration/Twinning Program Approval status
Program	Shift	Level								
ENGINEERING AND TECHNOLOGY	1st Shift	POST GRADUATE	APPLIED ELECTRONICS AND INSTRUMENTATION	FULL TIME	West Bengal University of Technology, Kolkata	18	18	NA	NA	NA

Application Number: 1-2811681310

Note: This is a Computer generated Report.No signature is required.

Printed By : AE040491

Page 1 of 4  
Letter Printed On: 26 April 2016



All India Council for Technical Education  
(A Statutory body under Ministry of HRD, Govt. of India)

7th Floor, Chandralok Building, Janpath, New Delhi- 110 001  
PHONE: 23724151/52/53/54/55/56/57 FAX: 011-23724183 [www.aicte-india.org](http://www.aicte-india.org)

GY		TE	TION	ENGINEERING						
ENGINEERING AND TECHNOLOGY	1st Shift	POST GRADUATE	BIOTECHNOLOGY	FULL TIME	West Bengal University of Technology, Kolkata	18	18	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	POST GRADUATE	COMPUTER SCIENCE AND ENGINEERING	FULL TIME	West Bengal University of Technology, Kolkata	36	36	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	POST GRADUATE	ELECTRONICS AND COMMUNICATIONS ENGINEERING	FULL TIME	West Bengal University of Technology, Kolkata	18	18	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	POST GRADUATE	INFORMATION TECHNOLOGY	FULL TIME	West Bengal University of Technology, Kolkata	18	18	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	POST GRADUATE	RENEWABLE ENERGY	FULL TIME	West Bengal University of Technology, Kolkata	0	18	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	POST GRADUATE	VLSI	FULL TIME	West Bengal University of Technology, Kolkata	18	18	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	APPLIED ELECTRONICS AND INSTRUMENTATION ENGINEERING	FULL TIME	West Bengal University of Technology, Kolkata	60	60	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	BIOTECHNOLOGY	FULL TIME	West Bengal University of Technology, Kolkata	60	60	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	CHEMICAL ENGINEERING	FULL TIME	West Bengal University of Technology, Kolkata	60	60	NA	NA	NA

Application Number: 1-2811681310

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Page 2 of 4  
Letter Printed On:26 April 2016





All India Council for Technical Education  
(A Statutory body under Ministry of HRD, Govt. of India)

7th Floor, Chandralok Building, Janpath, New Delhi- 110 001  
PHONE: 23724151/52/53/54/55/56/57 FAX: 011-23724183 [www.aicte-india.org](http://www.aicte-india.org)

ENGINEERING AND TECHNOLOGY	1st Shift	UNDERGRADUATE	CIVIL ENGINEERING	FULL TIME	West Bengal University of Technology, Kolkata	120	120	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	UNDERGRADUATE	COMPUTER SCIENCE AND ENGINEERING	FULL TIME	West Bengal University of Technology, Kolkata	180	180	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	UNDERGRADUATE	ELECTRICAL ENGINEERING	FULL TIME	West Bengal University of Technology, Kolkata	60	60	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	UNDERGRADUATE	ELECTRONICS AND COMMUNICATIONS ENGINEERING	FULL TIME	West Bengal University of Technology, Kolkata	180	180	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	UNDERGRADUATE	INFORMATION TECHNOLOGY	FULL TIME	West Bengal University of Technology, Kolkata	60	60	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	UNDERGRADUATE	MECHANICAL ENGINEERING	FULL TIME	West Bengal University of Technology, Kolkata	120	120	NA	NA	NA

The above mentioned approval is subject to the condition that HERITAGE INSTITUTE OF TECHNOLOGY shall follow and adhere to the Regulations, guidelines and directions issued by AICTE from time to time and the undertaking / affidavit given by the institution along with the application submitted by the institution on portal.

In case of any differences in content in this Computer generated Extension of Approval Letter, the content/information as approved by the Executive Council / General Council as available on the record of AICTE shall be final and binding.

Strict compliance of Anti-Ragging Regulation:- Approval is subject to strict compliance of provisions made in AICTE Regulation notified vide F. No. 37-3/Legal/AICTE/2009 dated July 1, 2009 for Prevention and Prohibition of Ragging in Technical Institutions. In case Institution fails to take adequate steps to Prevent Ragging or fails to act in accordance with AICTE Regulation or fails to punish perpetrators or incidents of Ragging, it will be liable to take any action as defined under clause 9(4) of the said Regulation.

**Note: Validity of the course details may be verified at [www.aicte-india.org](http://www.aicte-india.org)**

**Dr. Avinash S Pant**  
Vice - Chairman, AICTE

Copy to:

Application Number: 1-2811681310  
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Page 3 of 4  
Letter Printed On:26 April 2016



All India Council for Technical Education  
(A Statutory body under Ministry of HRD, Govt. of India)

7th Floor, Chandralok Building, Janpath, New Delhi- 110 001  
PHONE: 23724151/52/53/54/55/56/57 FAX: 011-23724183 [www.aicte-india.org](http://www.aicte-india.org)

1. **The Regional Officer,**  
All India Council for Technical Education  
College of Leather Technology Campus  
Block LB, Sector III, Salt Lake City  
Kolkata - 700 098, West Bengal
2. **The Director Of Technical Education,**  
West Bengal
3. **The Registrar,**  
West Bengal University of Technology, Kolkata
4. **The Principal / Director,**  
HERITAGE INSTITUTE OF TECHNOLOGY  
994, MADURDAHA, CHOWBAGA ROAD, ANANDAPUR  
P.O. EAST KOLKATA TOWNSHIP,  
KOLKATA, SOUTH 24 PARGANAS,  
West Bengal, 700107
5. **The Secretary / Chairman,**  
KALYAN BHARTI TRUST  
994, MADURDAHA, CHOWBAGA ROAD, ANANDAPUR, P.O.-EAST KOLKATA TOWNSHIP,  
KOLKATA, KOLKATA,  
West Bengal, 700107
6. **Guard File(AICTE)**

Application Number: 1-2811681310  
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Letter Printed On: 26 April 2016

## Enclosure-B6A



All India Council for Technical Education  
(A Statutory body under Ministry of HRD, Govt. of India)

7th Floor, Chandralok Building, Janpath, New Delhi- 110 001  
PHONE: 23724151/52/53/54/55/56/57 FAX: 011-23724183 [www.aicte-india.org](http://www.aicte-india.org)

F.No. Eastern/1-2811764541/2016/EOA

Date: 05-Apr-2016

To,

The Secretary (Technical education)  
Govt. of West Bengal,  
Bikash Bhawan, Room No. 602,  
6th Floor Salt Lake, Kolkata-700091

**Sub: Extension of approval for the academic year 2016-17**

Ref: Application of the Institution for Extension of approval for the academic year 2016-17

Sir/Madam,

In terms of the provisions under the All India Council for Technical Education (Grant of Approvals for Technical Institutions) Regulations 2012 notified by the Council vide notification number F.No.37-3/Legal/2012 dated 27/09/2012 and norms standards, procedures and conditions prescribed by the Council from time to time, I am directed to convey the approval to

Regional Office	Eastern	Application Id	1-2811764541
Name of the Institute	COMPUTER APPLICATION CENTRE, HERITAGE INSTITUTE OF TECHNOLOGY	Permanent Id	1-4847141
Name of the Society/Trust	KALYAN BHARTI TRUST	Institute Address	994, MADURDAHA, CHOWBAGA ROAD, ANANDAPUR P.O. - EAST KOLKATA TOWNSHIP, KOLKATA, SOUTH 24 PARGANAS, West Bengal, 700107
Institute Type	Unaided - Private	Society/Trust Address	994, MADURDAHA, CHOWBAGA ROAD, ANANDAPUR, P.O.- EAST KOLKATA TOWNSHIP, KOLKATA, KOLKATA, West Bengal, 700107

Opted for change from Women to Co-ed and Vice versa	No	Opted for change of name	No	Opted for change of site	No
Change from Women to Co-ed approved and Vice versa	Not Applicable	Change of name Approved	Not Applicable	Change of site Approved	Not Applicable

To conduct following courses with the intake indicated below for the academic year 2016-17

Application Id: 1-2811764541			Course	Full/Part Time	Affiliating Body	Intake 2015-16	Intake Approved for 2016-17	NRI Approval status	PIO / FN / Gulf quota Approval status	Foreign Collaboration/Twinning Program Approval status
Program	Shift	Level								
MCA	1st Shift	POST	MASTERS IN COMPUTER	FULL TIME	West Bengal University of	60	60	NA	NA	NA

Application Number: 1-2811764541

Note: This is a Computer generated Report.No signature is required.

Page 1 of 2  
Letter Printed On:22 April 2016

Printed By : ae3623151



All India Council for Technical Education  
(A Statutory body under Ministry of HRD, Govt. of India)

7th Floor, Chandralok Building, Janpath, New Delhi- 110 001  
PHONE: 23724151/52/53/54/55/56/57 FAX: 011-23724183 [www.aicte-india.org](http://www.aicte-india.org)

		GRA DUA TE	APPLICATIONS		Technology, Kolkata						
--	--	------------------	--------------	--	------------------------	--	--	--	--	--	--

The above mentioned approval is subject to the condition that COMPUTER APPLICATION CENTRE, HERITAGE INSTITUTE OF TECHNOLOGY shall follow and adhere to the Regulations, guidelines and directions issued by AICTE from time to time and the undertaking / affidavit given by the institution along with the application submitted by the institution on portal.

In case of any differences in content in this Computer generated Extension of Approval Letter, the content/information as approved by the Executive Council / General Council as available on the record of AICTE shall be final and binding.

Strict compliance of Anti-Ragging Regulation:- Approval is subject to strict compliance of provisions made in AICTE Regulation notified vide F. No. 37-3/Legal/AICTE/2009 dated July 1, 2009 for Prevention and Prohibition of Ragging in Technical Institutions. In case Institution fails to take adequate steps to Prevent Ragging or fails to act in accordance with AICTE Regulation or fails to punish perpetrators or incidents of Ragging, it will be liable to take any action as defined under clause 9(4) of the said Regulation.

**Note: Validity of the course details may be verified at [www.aicte-india.org](http://www.aicte-india.org)**

**Dr. Avinash S Pant**  
Vice - Chairman, AICTE

Copy to:

- The Regional Officer,**  
All India Council for Technical Education  
College of Leather Technology Campus  
Block LB, Sector III, Salt Lake City  
Kolkata - 700 098, West Bengal
- The Director Of Technical Education,**  
West Bengal
- The Registrar,**  
West Bengal University of Technology, Kolkata
- The Principal / Director,**  
COMPUTER APPLICATION CENTRE, HERITAGE INSTITUTE OF TECHNOLOGY  
994, MADURDAHA, CHOWBAGA ROAD, ANANDAPUR  
P.O. - EAST KOLKATA TOWNSHIP,  
KOLKATA, SOUTH 24 PARGANAS,  
West Bengal, 700107
- The Secretary / Chairman,**  
KALYAN BHARTI TRUST  
994, MADURDAHA, CHOWBAGA ROAD, ANANDAPUR, P.O.- EAST KOLKATA TOWNSHIP,  
KOLKATA, KOLKATA,  
West Bengal, 700107
- Guard File(AICTE)**

Application Number: 1-2811764541

Note: This is a Computer generated Report.No signature is required.

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Page 2 of 2  
Letter Printed On: 22 April 2016



## Enclosure-B7



डॉ दिनेश  
सलाहकार-II  
(गुणवत्ता आश्वासन ब्यूरो)  
Dr. Dinesh  
ADVISER-II  
(Quality Assurance Bureau)

अखिल भारतीय तकनीकी शिक्षा परिषद्  
ALL INDIA COUNCIL FOR TECHNICAL EDUCATION  
(भारत सरकार का एक सांविधिक निकाय) (A STATUTORY BODY OF THE GOVT. OF INDIA)  
राष्ट्रीय प्रत्यायन मंडल (रा.प्र.मं.)  
NATIONAL BOARD OF ACCREDITATION (NBA)  
(constituted under clause 10(U) of AICTE Act, 1987)  
(अमातशिप अधिनियम 1987 की धारा 10 (प) के अधीन गठित)

F.No. NBA/ACCR-917/2007

March 19, 2009

To

The Principal/Director,  
Heritage Institute of Technology  
Chowbaga Road, Anandapur  
P.O-East Kolkata Township  
Kolkata – 700 107

Sub : Accreditation Status of Programme(s) offered by your Institution.

Dear Sir / Madam:

With reference to your application for accreditation of the following programme (s) and the Expert Committee visit to your institution, the report of the visiting team was considered by the Engineering Accreditation Committees and subsequently by the National Board of Accreditation in its meeting held on 10.02.2009. Based on the recommendations of the Board, I am pleased to communicate the Accreditation Status of the following programme (s) of your Institution.

Sl. No.	Name of UG Programme(s)	Accreditation Status	Period of validity w.e.f.10.02.09
1.	B. Tech. Information Technology	Accredited	3 years ✓
2.	B. Tech. Applied Electronics & Instru. Engg.	Accredited	3 years ✓
3.	B. Tech. Electronics & Communication Engg.	Accredited	3 years ✓
4.	B. Tech. Bio-Technology	Accredited	3 years ✓
5.	B. Tech. Computer Science & Engg.	Not Accredited	✓
6.	MBA	Not Accredited	✓

(Total number of programmes Accredited vide this letter –Four &amp; Not Accredited - Two)

The Accreditation status awarded to the above programmes of your institution does not imply accreditation to the College / Institution as a whole. Complete name of the Programme(s) Accredited and its period of validity, as well as the date from which the award is effective, should be quoted unambiguously whenever it is used. The accreditation status of the above programmes is subject to periodic review by the NBA Secretariat and will be changed if major deficiencies are identified on surveillance. You are also requested to comply with the mandatory disclosure of pertinent information as per the proforma placed in the AICTE website with respect to accredited programmes of your institution. The same information should also appear in the website and information bulletin of your institution clearly indicating the date of publication of the same.

Contd...2

चौथा तल, ईस्ट टावर, एन बी सी सी प्लेस, भीष्म पितामाह मार्ग, प्रगति विहार, लोधी रोड, नई दिल्ली – 110003  
4th Floor, East Tower, NBCC Place, Bhishm Pitahma Marg, Pragati Vihar, Lodhi Road, New Delhi-110003  
Tel: 011-24369633 (D) Fax: 24369624, EPBAX: 24369619 - 22, E-mail: drdynesh@yahoo.com



2

The status awarded to the above programmes of your college / Institution is on the presumption that the programmes would maintain the current standards in future. If there are any changes that would effectively alter the status (such as, major changes in faculty strength or changes in the organizational structure, etc.), the same shall be communicated to the undersigned, with an appropriate explanatory note. A comprehensive report submitted by the Chairman of the expert committee who visited your institution and the distribution of marks/points awarded for each programme against the accreditation parameters are enclosed for further necessary action at your end to overcome the shortcomings observed in each programme. If you are not satisfied with the decision of the Board, you may forward your appeal application with requisite fee within thirty days of receipt of this communication.

Let me also take this opportunity to congratulate all those who have contributed to the quality enhancement of programmes that secured accreditation by NBA.

With best regards,

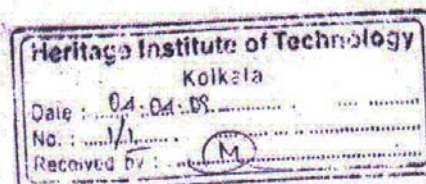
Yours Truly,

*[Signature]*  
19/3/09  
(Dr. Dinesh)

C.C. :

1. The Vice-Chancellor,  
West Bengal University of Technology  
43, Shakespeare Sarani, Kolkata 700 017
2. The Director,  
Directorate of Industrial & Technical Education  
Bikash Bhawan, 10th Floor, North Block, Salt Lake City  
Kolkata -700091
3. The Regional Officer,  
AICTE, LB Block, Sector - III  
College of Leather Technology Campus,  
Salt Lake City, Kolkata
4. Accreditation File
5. Guard File.

(Dr. Dinesh)



## Enclosure-B8

# NATIONAL BOARD OF ACCREDITATION

NBCC Place, East Tower, 4th Floor, Bhisham Pitamah Marg  
Pragati Vihar, New Delhi-110 003  
Tel: +91 11 2436 0620, 2436 0654 Telefax: +91 11 2436 0682



Date : 04.10.2013

F. No. 36-25/2010-NBA

To,

The Principal  
Heritage Institute of Technology  
Tobacco House, Fourth Floor,  
1 Old Court House Corner  
Kolkata – 700 001  
West Bengal

**Subject : Accreditation status of programme(s) applied by Heritage Institute of Technology,  
West Bengal.**

Dear Sir,

This has reference to your application dated 09.02.2012 seeking accreditation of National Board of Accreditation to various Programme offered by your institute.

2. An Expert Committee conducted an on-site evaluation of the programme(s) during 5<sup>th</sup> to 7<sup>th</sup> April, 2013. The report submitted by the Expert Committee was considered by the Engineering Accreditation Evaluation Committee (EAEC). The recommendations of the EAEC were considered by the Sub-Committee of Academic Advisory Committee of NBA at its meeting held on 11.09.2013. The Executive Committee of the National Board of Accreditation considered the recommendations of Sub-Committee at its meeting held on 18.09.2013. The Executive Committee approved the accreditation status of the programme(s) as given in the table below:

Sl. No.	Name of the Programme(s)	Accreditation Status	Period of validity w.e.f. 18.09.2013	Remarks
(1)	(2)	(3)	(4)	(5)
1	B. Tech. Applied Electronics & Instrumentation Engineering	Provisionally Accredited	2 years	Accreditation status granted is valid for the period indicated in Column No. 4 or till the programme(s) has the approval of the competent authority, whichever is earlier.
2	B. Tech. Biotechnology	Provisionally Accredited	2 years	
3	B. Tech. Chemical Engineering	Provisionally Accredited	2 years	
4	B. Tech. Computer Science & Engineering	Provisionally Accredited (776 marks awarded by Expert Team reduced to 743 for deficiency in continuous improvement and PEO)	2 years	
5	B. Tech. Electronics & Computer Engineering	Provisionally Accredited	2 years	
6	B. Tech. Information Technology	Provisionally Accredited	2 years	

*D.K. Bala*

Contd. (2)



(2)

3. The accreditation status awarded to the programme(s) as indicated in the above table does not imply that the accreditation has been granted to Heritage Institute of Technology, West Bengal as a whole. As such the Institution should nowhere along with its name including on its letter head etc., write that it is accredited by NBA because it is programme accreditation and not Institution accreditation. If such an instance comes to NBA's notice, this will be viewed seriously. Complete name of the programme(s) accredited, level of programmes (UG or PG as the case may be) and the period of validity of accreditation, should be mentioned unambiguously whenever and wherever it is required to indicate the status of accreditation by NBA.

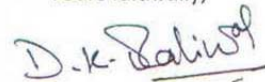
4. The accreditation status of the above programme(s) is subject to change on periodic review, if needed by the NBA. It is desired that the relevant information in respect of accredited programme(s) as indicated in the table in paragraph 2, appears on the website and information bulletin of your Institution.

5. The accreditation status awarded to the programme(s) as indicated in table in paragraph 2 above is subject to maintenance of the current standards during the period of accreditation. If there are any changes in the status (major changes of faculty strength, organizational structure etc.), the same are required to be communicated to the NBA, with an appropriate explanatory note.

6. Copies of the Comprehensive Report submitted by the Chairman of the Expert Committee along with the detailed reports submitted by the Expert Team which visited your Institution for the programme(s) evaluated are enclosed for reference and for taking necessary action to overcome the shortcomings, if any, pointed out by the Expert Team.

7. If the Institution is not satisfied with the decision of NBA, it may appeal within thirty days of receipt of this communication giving reasons for the same and by paying the requisite fee.

Yours faithfully,



(Dr. D. K. Paliwal)  
Member Secretary

**Note :** Under Para 3.4.4 of Chapter 3 of the Manual of Accreditation 2013, it is provided that the application for accreditation received in an academic year will be considered in next academic year. Therefore, the Institute may apply, if it so desired, in the academic year 2014-15 for full accreditation of the provisionally accredited programmes in order to have continuation of accreditation.

**Encls.:** Copies of Comprehensive Report of Chairman and Expert Report of the Visiting Team.

**Copy to :**

1. The Member Secretary  
AICTE, Chanderlok Building,  
Janpath, New Delhi – 110 001
2. Accreditation File
3. Master Accreditation file of the State

## Enclosure-B9

**NATIONAL BOARD OF ACCREDITATION**

NBCC Place, East Tower, 4th Floor, Bhisham Pitamah Marg  
Pragati Vihar, New Delhi-110 003  
Tel: +91 11 2436 0620, 2436 0654 Telefax: +91 11 2436 0682



F. No. 36-25/2010-NBA

Date : 27.01.2014

To,

The Principal

Heritage Institute of Technology  
Tobacco House, Fourth Floor,  
1 Old Court House Corner  
Kolkata – 700 001  
West Bengal

**Subject : Accreditation status of programme(s) applied by Heritage Institute of Technology,  
West Bengal.**

Sir,

**This issues in supersession of NBA letter no. 36-25/2010-NBA dated 04.10.2013.**

2. This has reference to your application dated 09.02.2012 seeking accreditation of National Board of Accreditation to various Programme offered by your institute.

3. The Executive Committee in its meeting held on 18.09.2013 has approved the accreditation status of the programme(s) as given in the table below:

Sl. No.	Name of the Programme(s)	Accreditation Status	Period of validity w.e.f. 18.09.2013	Remarks
(1)	(2)	(3)	(4)	(5)
1	B. Tech. Applied Electronics & Instrumentation Engineering	Provisionally Accredited	2 years	Accreditation status granted is valid for the period indicated in Column No. 4 or till the programme(s) has the approval of the competent authority, whichever is earlier.
2	B. Tech. Biotechnology	Provisionally Accredited	2 years	
3	B. Tech. Chemical Engineering	Provisionally Accredited	2 years	
4	B. Tech. Computer Science & Engineering	Provisionally Accredited (776 marks awarded by Expert Team reduced to 743 for deficiency in continuous improvement and PEO)	2 years	
5	B. Tech. Electronics & Communication Engineering	Provisionally Accredited	2 years	
6	B. Tech. Information Technology	Provisionally Accredited	2 years	

4. The accreditation status awarded to the programme(s) as indicated in the above table does not imply that the accreditation has been granted to Heritage Institute of Technology, West Bengal as a whole. As such the Institution should nowhere along with its name

Contd. 9



(2)

including on its letter head etc., write that it is accredited by NBA because it is programme accreditation and not Institution accreditation. If such an instance comes to NBA's notice, this will be viewed seriously. Complete name of the programme(s) accredited, level of programmes (UG or PG as the case may be) and the period of validity of accreditation, should be mentioned unambiguously whenever and wherever it is required to indicate the status of accreditation by NBA.

5. The accreditation status of the above programme(s) is subject to change on periodic review, if needed by the NBA. It is desired that the relevant information in respect of accredited programme(s) as indicated in the table in paragraph 2, appears on the website and information bulletin of your Institution.

6. The accreditation status awarded to the programme(s) as indicated in table in paragraph 2 above is subject to maintenance of the current standards during the period of accreditation. If there are any changes in the status (major changes of faculty strength, organizational structure etc.), the same are required to be communicated to the NBA, with an appropriate explanatory note.

7. Copies of the Comprehensive Report submitted by the Chairman of the Expert Committee along with the detailed reports submitted by the Expert Team which visited your Institution for the programme(s) evaluated are enclosed for reference and for taking necessary action to overcome the shortcomings, if any, pointed out by the Expert Team.

8. If the Institution is not satisfied with the decision of NBA, it may appeal within thirty days of receipt of this communication giving reasons for the same and by paying the requisite fee.

Yours faithfully,



(Dr. A. K. Nassa)  
Member Secretary

**Note :** Under Para 3.4.4 of Chapter 3 of the Manual of Accreditation 2013, it is provided that the application for accreditation received in an academic year will be considered in next academic year. Therefore, the Institute may apply, if it so desired, in the academic year 2014-15 for full accreditation of the provisionally accredited programmes in order to have continuation of accreditation.

~~Encls. : Copies of Comprehensive Report of Chairman and Expert Report of the Visiting Team.~~

**Copy to :**

1. Registrar, West Bengal University of Technology,  
BF 142, Sector 1, Salt Lake City,  
Kolkata 700064,  
West Bengal
2. Accreditation File

**NATIONAL BOARD OF ACCREDITATION**

NBCC Place, East Tower, 4th Floor, Bhisham Pitamah Marg  
Pragati Vihar, New Delhi-110 003  
Tel: +91 11 2436 0620, 2436 0654 Telefax: +91 11 2436 0682



File No. 36-25/2010-NBA

8<sup>th</sup> February, 2014

To,

The Principal,  
Heritage Institute of Technology  
Chowbaga Road, Anandapur  
P.O. East Kolkata Township  
Kolkata – 700 107  
West Bengal

Subject : Decision on appeal against accreditation status of programmes of Heritage Institute of Technology, West Bengal.

Sir,

This has reference to appeal dated 13<sup>th</sup> November 2013 filed by you in response to NBA's letter of even number dated 04<sup>th</sup> October 2013 conveying accreditation status of 6 UG Engineering Programmes of your college.

2. The Appeal was considered by the Appellate Committee of NBA in its meeting held on 18<sup>th</sup> December 2013. The recommendations of the Appellate Committee were considered by the Sub-Committee of General Council of NBA at its meeting held on 4<sup>th</sup> February 2014. Based on the decision taken by the Sub-Committee, accreditation status of the programmes is given in the Table below :

Sl. No.	Name of the Programme	Accreditation Status	Period of Validity w.e.f. 04.02.2014	Remarks
(1)	(2)	(3)	(4)	(5)
1	B. Tech. Computer Science & Engineering	Accredited	5 years	Accreditation status granted is valid for the period indicated in Col. 4 or till the programme has the approval of the competent authority, whichever is earlier.

3. The accreditation status awarded to the programmes as indicated in the above table does not imply that the accreditation has been granted to Heritage Institute of Technology, West Bengal as a whole. As such the College should nowhere along with its name including on its letter head etc., write that it is accredited by NBA because it is programme accreditation and not institution accreditation. If such an instance comes to NBA's notice, this will be viewed seriously. Complete name of the programme(s) accredited, level of programmes (UG or PG as the case may be) and the period of validity of accreditation, as well as the date from which the accreditation is effective, should be mentioned unambiguously whenever and wherever it is required to indicate the status of accreditation by NBA.

4. The accreditation status of the above programmes is subject to change on periodic review, if needed by the NBA. It is desired that the relevant information in respect of accredited programmes as indicated in the table in paragraph 2, appears on the website and information bulletin of your College.

5. The accreditation status awarded to the programmes as indicated in table in paragraph 2 above is subject to maintenance of the current standards during the period of accreditation. If there are any changes in the status (major changes of faculty strength, organizational structure etc.), the same are required to be communicated to the NBA, with an appropriate explanatory note.

Yours faithfully,



(Dr. A. K. Nassa)  
Member Secretary

**Copy to :**

1. The Vice Chancellor  
West Bengal University of Technology  
Kolkata, West Bengal
2. The Director of Technical Education  
Govt. of West Bengal  
Kolkata, West Bengal
3. Concerned File



## Enclosure-B10

Sanction 2 of 3

F. No. 16- 21 /2011-TS.VII (SC)  
 Government of India  
 Ministry of Human Resource Development  
 Department of Higher Education  
 (Technical Section - VII)

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Room No. 433-C Wing  
 Shastri Bhawan, New Delhi-110001  
 14<sup>th</sup> December, 2011

To

The Principal Accounts Officer  
 Principal Accounts Office, MHRD  
 Department of Higher Education  
 Shastri Bhawan, New Delhi-11001

Sub:- Release of Grants (Plan) to **42 Institutions** under the World Bank Assisted Technical Education Quality Improvement Programme of Government of India (TEQIP)-II for the year 2011-2012 (SC).

Sir,

I am directed to say that Government of India is providing financial assistance to Government/ Govt. Aided/Pvt. Unaided Institutions/SPFUs Rs 6.67 crore ( **Rs. Six crore sixty seven lakh only**) to 42 Institutes i.e 75% of the grant to all the following states and 90% in respect of Uttarakhand state as Central Share as per detailed below under the scheme of Technical Education Quality Improvement Programme of Government of India (TEQIP)-II for the implementation of Technical Education in India. Remaining 25% shares and 10% share in respect of Uttarakhand state will be released by the respective States. In respect of Private Institutions the central share is 60%, State share is 20% and Institutions share is 20%. The amount of Rs. 6.67 Crore is to be released based on progress achieved. The grants under the scheme are to be released through concerned State/UT Governments through book transfer via RBI for further release of the specified amount to the concerned Institute as per the terms contained herein.

2. Accordingly, I am directed to convey the sanction of the President of India to the release of a sum of Rs 6.67 crore ( **RsSix crore sixty seven lakh only**) to the Secretary dealing with their respective States as per the details given below under the World Bank assisted Technical Education Quality Improvement Programme of Government of India (TEQIP) during the year 2011-2012 for meeting the recurring / non recurring expenditure.

S. No.	Name of State	Total No. of Institutions	Centre Share (Rs. in Crore)	Total SPFU Amount	Total (Rs. In Crore)
1	Andhra Pradesh	14	1.32	0.04	1.36
2	Haryana	3	0.50	0.01	0.51
3	Karnataka	4	0.73	0.02	0.75



4	Madhya Pradesh	4	0.73	0.02	0.75
5	Punjab	3	0.50	0.01	0.51
6	Uttarakhand *	2	0.54	0.02	0.56
7	West Bengal	12	2.19	0.04	2.23
	<b>Grand Total</b>	<b>42</b>	<b>6.51</b>	<b>0.16</b>	<b>6.67</b>

2. The above grant is subject to the following terms and conditions:

- I. The Institutions shall implement activities within the framework of Project Implementation Plan (PIP), Development Credit Agreement (DCA) and Project Agreement (PA).
- II. The amount sanctioned will be spent as per the percentage indicated- in the Project implementation Plan (PIP) on Procurement of Goods (Equipments, Furniture, Books & LRs & Software), Minor items, Refurbishment (Minor Civil Works), Consultancy services, Teaching and Research Assistantships, Research and Development, Faculty and Staff Development, Industry Institute Interaction, Institutional Management Capacity enhancement, Institutional reforms, academic Support for weak students and incremental operating cost.
- III. In addition the amount will be spent for salaries and allowances for agreed key additional faculty and staff and travel and supervision cost incurred for the purpose of carrying the project, cost of operation and maintenance of equipment and vehicles, office rental and expenses and hiring of vehicles.
- IV. The amount of grant shall be utilized for the purpose for which it is sanctioned with due regard to economy, efficiency and sustainable achievement of the project's objectives.
- V. No portion of the sanctioned amount shall be diverted for any purpose other than that for which it has been sanctioned;
- VI. The assets acquired wholly or substantially out of the grant shall not, without the prior sanction of the Government of India, be disposed, encumbered or utilized for any purpose other than that for which it is sanctioned;
- VII. The amount of this grant, in so far as the utilization is concerned, will be open to test check by the Comptroller & Auditor General of India or his representative at his discretion. Intimation about the arrangements for such a test will be sent to the

Institution in so far as Central Government funds are concerned. It will also be open to test check by an officer of the Government of India;

- VIII. The requirement of production of Utilization Certificate in respect of the grant of sanction by the Government of India should be fulfilled to the satisfaction of the Government.
- IX. The next instalment of Government of India's grant, if any, will be sanctioned after the amount of the present grant has been utilized and the progress report of expenditure incurred thereon is submitted.
- X. The institution shall submit the Financial Monitoring Report on quarterly basis to NPIU in the proforma given in the Financial Management Manual within 30 days of the completion of each quarter.
- XI. The institution shall conduct the audit of financial statements after the completion of each financial year as per the Terms of Reference (ToR) and Selection Criteria for audit of financial statements as mentioned in the Financial Management Manual.
- XII. The instructions given in the Project Implementation Plan (PIP) as regards to the permissible and non-permissible expenses should be followed.
- XIII. All accounting and financial instructions given in the Financial Management Manual should be followed for TEQIP-II.

3. The amount sanctioned is debited to Demand No. 59, Department of Higher Education, -3604 Major Head – Grants in aid to State Governments -04 –Grants to Central Plan Scheme, 789-Special component plan for Scheduled Castes,- Technical Education- Engineering ,Technical colleges and Institutes, -03- Technical Education Quality Improvement Programme of Government of India, 03.01.31- Grants in aid General ( 3601.04.789.03.01.31) for the year 2011-2012 (Plan).

4. The sanction is issued in exercise of the powers delegated to Ministries under DFPR, 1978, as amended from time to time. Above grants are being released in accordance with the pattern of Assistance approved by the Ministry of finance, Government of India. It is also certified that this Sanction is being issued in conformity with the rules and principles of the scheme.

5. The previous unspent balance of grants under the scheme if any, lying with grantee Institute has been adjusted while preparing release of grants and grantee may utilize the unspent balance if any also along with their grant for the purpose for which it is mentioned. .

6. The Institution has been exempted from execution of bond, etc. in terms of the Ministry of Finance (Department of Expenditure)'s O.M. No.(1)E.II/A dated 23.6.1985.



7. Any future grant will be released to this Institution only after they have satisfied the Ministry that adequate provision for representation of SC/ST has been made in its constitution/rules and these are being followed in actual practice in filling up vacancies reserved for SC/ST candidates every year.
8. The Institute shall fully implement the official language policy of the Union Government i.e. the Institutions shall fully comply with the Official Languages Act, 1963 and Official Languages Use for the Official Purpose of the Union Rules, 1976, etc.
9. On receipt of sanction letter, the Principal Accounts Officer may issue an advice to the Reserve Bank of India ( Central Accounts Section), Nagpur for affording credit to the balance of the State Government. The Principal Accounts Officer may forward a copy of the advice to the Accountant General and Finance Department of the State Government as well as Secretary, Technical Education of the State with a copy to the undersigned.
10. The grantee Institute is situated under the concerned jurisdiction of the Director General of Audit.
11. The Institutions shall furnish to the Government a utilization certificate duly signed by the authorized Auditor of the Institutions and counter signed by the Director of the Institutions to the effect that the grant has been utilized for the purpose for which it was sanctioned supported by the audited Statement of Accounts of the Institutions in respect of grant released under the scheme of Technical Education Quality Improvement Programme Phase II of Government of India. The requirement of production of Utilization Certificate in respect of the grants already sanctioned by the Government of India should be fulfilled to the satisfaction of the Government. The institute shall furnish Utilisation Certificate immediately after the closing of the financial year 2011-12.
12. These Institutions have no Utilization Certificates as due for rendition under the Rules under this programme of the Ministry/Department.
13. Grantee is located in concerned circle of account.
15. The sanction is issued in exercise of delegated powers and in accordance with the Integrated Finance Division vide Dy. No. 5456 IFD dated 8.11.2011 and IF.I Section vide their Dy. No 614 IFI dated 1.12.2011.
16. Necessary Sanction I.D. for above grants have already been generated.
17. The grant mentioned in para 2 above will be released by the concerned State Governments for the implementation of Technical Education under the scheme of Technical Education Quality Improvement Programme of Government of India (TEQIP)-II to the below mentioned indicated institutions mentioned against each State.



Sr. No.	Name of the State/UT	Name of the Institution	Centre Share (Rs. In Crore)
1	ANDHRA PRADESH (1.1)	Aditya Institute of Technology & Management, Tekkali, Srikakulam	0.04
2		Anurag Engineering College, Kodad, Nalgonda	0.04
3		Aurora's Scientific Technological & Research Academy, Bandlaguda, Hyderabad	0.04
4		Chaitanya Bharathi Institute of Technology, Gandipet, Hyderabad	0.04
5		Gokaraju Rangaraju Institute of Engineering & Technology, Kukatpally, Hyderabad	0.04
6		Madanapalle Institute of Technology & Science, Madanapalle	0.04
7		Nizam Institute of Engineering & Technology, Nalgonda	0.04
8		Shri Vishnu Engineering College for women, Vishnupur, Bhimavaram	0.04
9		Sree Vidyanikethan Engineering College, Chittoor	0.04
10		Vasavi College of Engineering, Ibrahimbagh, Hyderabad	0.04
11		ANDHRA PRADESH (1.2)	A U College of Engineering, Andhra University, Visakhapatnam
12	JNTUH College of Engineering, Hyderabad		0.23
13	University College of Engineering, Osmania University, Hyderabad		0.23
14	University College of Technology, Osmania University, Hyderabad		0.23
Total No. of Institute		(14)	1.32
SPFU Expenses			0.04
TOTAL – ANDHRA PRADESH			1.36



1	HARYANA	University Institute of Engineering & Technology (UIET), Kurukshetra University, Kurukshetra	0.23
2		University Institute of Engineering & Technology, MDU, Rohtak	0.23
3		N.C College of Engineering, Panipat	0.04
Total No. of Institute		(3)	0.50
SPFU Expenses			0.01
TOTAL- HARYANA			0.51
1	KARNATAKA	BVB College of Engineering & Technology, Hubli	0.23
2		PES College of Engineering, Mandya	0.23
3		Government Sri Krishnarajendra Silver Jubilee Technological Institute, Bangalore	0.23
4		NITTE Meenakshi Institute of Technology, Bangalore	0.04
Total No. of Institute		(4)	0.73
SPFU Expenses			0.02
TOTAL - KARNATAKA			0.75
1	MADHYA PRADESH	Madhav Institute of Technology & Science, Gwalior	0.23
2		Samrat Ashok Technological Institute (Engineering College), Vidisha	0.23
3		Sagar Institute of Research & Technology, Bhopal	0.04
4		Rajiv Gandhi Proudhyogiki Vishwavidhyalaya, Bhopal	0.23
Total No. of Institute		(4)	0.73
SPFU Expenses			0.02
TOTAL- MADHYA PRADESH			0.75
1	PUNJAB	Guru Nanak Dev Engineering College, Ludhiana	0.23
2		Chandigarh Engineering College, Mohali	0.04
3		Thapar University, Patiala	0.23

Total No. of Institute		(3)	0.50
SPFU Expenses			0.01
TOTAL - PUNJAB			0.51
1	UTTARAKHAND *	VCT Kumaon Engineering College, Dwarahat, Dist-Almora	0.27
2		College of Technology - GB Pant University of Agriculture & Technology, Pantnagar	0.27
Total No. of Institute		(2)	0.54
SPFU Expenses			0.02
TOTAL - UTTARAKHAND			0.56
1	WEST BENGAL (1.1)	RCE Institute of Information Technology, Kolkata	0.23
2		College of Engineering & Management, Kolaghat	0.23
3		Bankura Unnayani Institute of Engineering, Bankura	0.23
4		Calcutta Institute of Engineering & Management, Kolkata	0.23
5		West Bengal University of Technology, Kolkata	0.23
6		Birbhum Institute of Engineering & Technology, Birbhum	0.23
7		Heritage Institute of Technology, Kolkata	0.04
8		M.C.K.V Institute of Engineering, Howrah	0.04
9		Narula Institute of Technology, Pargnas	0.04
10	WEST BENGAL (1.2)	University College of Technology - University of Calcutta, Kolkata	0.23

11		Faculty of Engineering and Technology - Jadavpur University, Kolkata	0.23
12		Bengal Engineering and Science University, Shibpur, Howrah	0.23
Total No. of Institute		(12)	2.19
		SPFU Expenses	0.04
		TOTAL – WEST BENGAL	2.23
GRAND TOTAL		(42)	6.67

Yours faithfully,

(S.K.Mohanty)  
Under Secretary (Mgmt)

Copy to:

1. The Secretary, Technical Education, Andhra Pradesh, Haryana, Karnataka, Madhya Pradesh, Punjab, Uttarakhand, West Bengal with a request to make expenditure of central grants strictly as indicated in the sanction letter and submit the progress report regularly.
2. Secretary, Finance Department of Andhra Pradesh, Haryana, Karnataka, Madhya Pradesh, Punjab, Uttarakhand, West Bengal. It is requested that funds released through this sanction letter may be transferred to the Technical Education Department at the earliest for onward release to the concerned institute as mentioned above.
3. Director, Technical Education, Andhra Pradesh, Haryana, Karnataka, Madhya Pradesh, Punjab, Uttarakhand, West Bengal
4. Prof. A.U.Digraskar, Central Project Adviser, National Project Implementation Unit, EdCIL House, Noida. **With a request to send copy of sanction letter to all the concerned institutes.**
5. The Director General of Audit, Central Revenue, AGCR Building, IP Estate, New Delhi.
6. Internal Audit, Principal Accounts Office, MHRD, Shastri Bhawan, New Delhi.
7. IF-1      8. E.C. Unit      9. IFD      10. Guard file

(S.K.Mohanty)  
Under Secretary (Mgmt)

**CONSTITUTION OF THE  
STUDENTS' COUNCIL OF  
HERITAGE INSTITUTE OF TECHNOLOGY**

**1.0 Introduction**

The basic objective of forming the Students' Council is to create a forum for involvement of students in the matters of student interest. The council would not only organize games, sports, fests and publish magazines, but also discuss academic and placement issues with the faculty and management. Elected Students' Council would create an environment, which will be conducive for improved teaching-learning process and overall development of the students.

**2.0 Name of the Council**

The Title of the council shall be 'Heritage Institute of Technology Students' Council'.

**3.0 Membership & Subscription**

Every bonafide and regular student (B.Tech/M.Tech/MCA) of HIT shall be eligible to be a member of the Council for which he/she would be required to pay a subscription of an amount specified by the Students' Council. Presently the amount per student per year is Rs. 400/- (Rupees Four hundred only), to be paid for the entire studentship period at the time of admission to the Students' Council against a valid receipt.

**4.0 Formation of Executive Committee**

- 4.1 Each B.Tech and MCA class (Department-wise / Year-wise / Section-wise having an approved intake of 60) would have one elected representative in the Students' Council as a Member of Executive Committee. All M.Tech students irrespective of discipline would elect representative(s) in the Executive Committee of the Council and the number of such representatives would be one for 1<sup>st</sup> year and one for 2<sup>nd</sup> year.
- 4.2 Executive Committee of the Council would be elected once in a year by the students of the class/section through secret



ballot, on a scheduled date to be announced by the Principal within the first week of March.

The Election shall be conducted under the supervision of a Returning Officer nominated by the Principal.

- 4.3 **Eligibility for contesting election** : Students having regular attendance are eligible to submit nomination for election. However, students with poor conduct and discipline or having year-lag are not eligible to contest.

Eligible students intending to be Executive Committee member would have to submit a Nomination, in prescribed format, to the Returning Officer, within due date. The nomination should be supported / proposed by at least 5 students of the same department, year and section.

A student is not allowed to nominate more than one candidate. If a student nominates more than one candidates, then that student will (i) lose his / her voting right that year (ii) be required to pay a fine of Rs. 5000/- only to be deposited to the Student Welfare Fund of the Institute and (iii) face the Disciplinary Committee for further action, as appropriate. Final decision on the cancellation / retention of the concerned nominations will be taken by the Returning Officer in consultation with the appropriate higher authorities.

The nomination can be withdrawn within the date notified for the purpose. In case there is no eligible member submitting nomination or being elected from any class, the same is to be nominated by the Principal.

- 4.4 Election in each class shall be conducted by a full-time Member of Faculty to be nominated by the Returning Officer for the purpose.
- 4.5 The ballots shall be counted by the said Polling Officer in the classroom itself after the polling is over and in presence of the contesting candidates or their authorized representatives. In case of a tie, the result would be decided by the toss of coin conducted by the Principal in presence of the contesting candidates or their authorized representatives.
- 4.6 The Polling Officer will thereafter submit the election result to the Returning Officer who shall submit a report to the Principal of the Institute indicating detailed results of the election.

- 4.7 The Students' Council shall have at least two girl members. The Principal would nominate required number of eligible girl students if the number of Executive Committee members elected is found short of two girl members. Such girl members shall enjoy equal rights as those of the elected members.
- 4.8 The Executive Committee of the Students' Council shall be formally constituted only after the approval of the Principal and due notification of the results of the election.
- 4.9 Time Schedule :
- (i) Nomination to be submitted within 7 days from the date of announcement of election.
  - (ii) Scrutiny of the nomination papers shall be done two days after the last date of submitting nominations.
  - (iii) List of valid candidates shall be displayed immediately after the scrutiny of the nomination papers is over.
  - (iv) Election will be held within three days of displaying the list of valid candidates.

## **5.0 Distribution of Portfolios**

- 5.1 The Students' Council is to be headed by the President, a faculty member to be nominated by the Principal. Head, Student Affairs Centre would be an ex-officio member of the Executive Committee of the Council. Principal of the Institute shall convene the first meeting of the Executive Committee of the Students' Council within 7 days from the date of notification and declaration of results of the election. The Principal shall preside over the first meeting.
- 5.2 There will be the following office bearers to the Executive Committee of the Students' Council to be elected by Executive Committee members in its first meeting:
- a) Vice-President - 1 No.
  - b) General Secretary - 1 No.
  - c) Asstt. General Secretary (one from UG) - 1 No.
  - d) Asstt. General Secretary (one from PG) - 1 No.
  - e) Games & Sports Secretary - 1 No.
  - f) Asstt. Games & Sports Secretary - 1 No.
  - g) Literary Secretary - 1 No.
  - h) Secretary, Club Coordination - 1 No.
  - i) Treasurer - 1 No.

- 5.3 General Secretary shall be elected by the elected Executive Committee members from amongst the elected representatives of third year students. The Vice President shall be elected by all elected representatives from amongst the elected representatives of fourth year students.
- 5.4 The General Secretary shall act as the Convener of the Council.
- 5.5 Four sub-committees shall be formed by the Council which are as follows:
- a) Cultural Sub-committee
  - b) Games & Sports Sub-committee
  - c) Student Sub-Committee
  - d) Club Co-ordination Sub-committee
- 5.6 Each Sub-committee shall be chaired by a full-time member of Faculty to be nominated by the Director/Principal. Additional Secretaries shall act as the Convener of the respective Sub-committees. The General Secretary shall be the ex-officio member of all sub-committees.
- 5.7 Each Sub-committee may decide to nominate Permanent Invitees for successful management of their respective function. Such Permanent Invitees may be taken from the regular student members, as well.
- 5.8 Club Co-ordination Sub-Committee shall be formed with the General Secretaries of each club, as members. However, Rotaract Club & NSS are separate entities and are not under the Students' Council.

## **6.0 Fund Management**

- 6.1 The Council shall open a Savings Bank Account with a Nationalized Bank in the name of "Heritage Institute of Technology – Students' Council". All funds of the Council shall be deposited in the Bank account.

All student subscriptions from newly admitted 1<sup>st</sup> year B.Tech/ M. Tech/MCA students are to be collected by the Students' Council within a fortnight of their joining classes.

- 6.2 The Bank Account shall be operated jointly by the Principal and any one of the following Executive Committee Members:

- a) General Secretary
- b) Treasurer

A Finance Committee constituted as follows would look after all incomes and expenditure associated with the activity of the Council

- |                               |   |          |
|-------------------------------|---|----------|
| a) President                  | - | Chairman |
| b) Treasurer                  | - | Convener |
| c) General Secretary          | - | Member   |
| d) Manager F&A or his nominee | - | Member   |

The Finance Committee shall maintain records of all income and expenditure associated with the Council.

All transactions shall normally be made by A/c payee cheque. However, cash withdrawal upto a limit of Rs. 10,000/- (Rupees ten thousand) only can be made to meet incidental expenses.

- 6.3 The Council shall maintain Receipt and Vouchers against all income and expenditure respectively and prepare annual Income-Expenditure statement which will be audited by the Accounts Dept of the Institute

- 6.4 The Council fund shall be generally utilized for the purpose of organizing Annual Fests, Student Seminars, Game & Sports, Publication of Magazines, Students' Aid etc., for which the Institute may provide matching grants. While preparing the budget for different programmes, care should be taken to adhere to the following guidelines regarding upper limits on expenditure as % of annual budget as detailed hereunder:

- |   |   |     |
|---|---|-----|
| i) *Annual Fest & all other cultural activities | - | 35% |
| ii) Student Seminars                            | - | 10% |
| iii) Games & Sports                             | - | 15% |
| iv) Publication of Magazine                     | - | 10% |
| v) Students' Aid                                | - | 10% |
| vi) Club Activities                             | - | 10% |
| vii) Miscellaneous                              | - | 10% |

Each year, however, the Students' Council will be required to submit a detailed budget for all student activities for approval

of the Executive Director, Chief Executive Officer and Principal.

\* Period of all Fests taken together must not be over 4 days.  
(DAKSHH 02 days and ECLECIA 02days).

## **7.0 Meetings**

- 7.1 The Executive Committee shall meet at least once in a month, and the meeting will be presided over by the President. Calendar of activities for the year and budget have to be passed in the first meeting of the council in the month of April.

Sub-committee meetings shall be convened as and when required.

- 7.2 Presence of a minimum of 1/3<sup>rd</sup> of the members in an Executive Committee/Sub-Committee meeting shall constitute the quorum.
- 7.3 In case of a tie, in any Executive Committee / Sub-Committee meeting, Chairman shall use his casting vote for resolution of the issue.
- 7.4 Annual General Meeting of the members of the Students' Council shall be held once in a year in the month of March to discuss and approve the following:
- i) Minutes of the last Annual General Meeting
  - ii) General Secretary's report on the functioning of the Council
  - iii) Audited statement of accounts
- 7.5 Presence of 20% of the members shall constitute a quorum in the General Meeting.

## **8.0 Tenure**

The tenure of the elected Executive Committee shall be for a period of 1 year from 1<sup>st</sup> April to 31<sup>st</sup> March every year.

## **9.0 Powers and functions of the General Secretary and Treasurer**

### **9.1 *General Secretary***

- 9.1.1 The General Secretary shall call meetings of the Executive Committee in consultation with the President once a month.
- 9.1.2 The General Secretary may call a Special General meeting of the Council with the consent of the President.
- 9.1.3 The General Secretary shall convene a Special General Meeting of the Council when a requisition for it from at least one fourth of ordinary members is received in writing.
- 9.1.4 The General Secretary shall record the Proceedings of all the meetings of the Executive Committee and of the Council and shall be responsible for giving effect to all decisions.
- 9.1.5 The General Secretary shall represent the Council in all matters for the promotion of the interests of students and shall act in consultation with the Executive Committee. He/she shall be a link between the HIT-K Management and students.

### **9.2 *Treasurer***

- 9.2.1 The Treasurer shall keep account of the Income and Expenditure of the Council in a manner as may be directed by the Executive Committee.
- 9.2.2 The Treasurer shall act as the Convener of the Finance Committee.

## **10.0 Working of the Council :**

- 10.1 The Executive Committee of the Council to meet officially once in a month. All meetings must have specific Agenda – all Minutes of such meetings to be duly recorded in a specific Register. Copy of each meeting's Minutes must be circulated to all members of the Executive Committee within 3 days of the holding of each meeting with cc to ED, Director, Jt Director, Principal, Registrar, Academic Advisor.

- 10.2 Venue of all monthly Council meetings is to be conducted in the Students' Council Room. This room is to be used only by Core Council members and not as a 'Common Room' for all. Cleanliness & tidiness must be maintained – Genl Secy is to be held responsible for this.
- 10.3 Calendar of Activities for the year must be prepared within a fortnight of the installation of the newly- elected Students' Council. This also is to include a detailed budget with specific allocation of funds for the specified activities.
- 10.4 All Clubs under the Students' Council are to have regular, planned activities – not only at or just before ECLECIA/DAKSHH and are to involve the entire student body of HITK. Club Secretaries to convene and conduct regular Club meetings, with a proper agenda and minutes, records of which are to be maintained by the convener and submitted regularly to the Club Secretary.
- 10.5 College Fests: ECLECIA, DAKSHH are to have separate Organising Committees headed by a Council member, with the addition of other active members of the HITK student body. These Fests are to have separate budgets prepared and adhered to. All payments and receipts must be meticulously accounted for. At least three written quotations for large outlays for the Fest(s) must be obtained. Final choice of vendor/supplier/performer etc must be agreed upon by the Council (not individual) in writing. All contracts made with such vendors/suppliers/performing artists must be by written agreements, duly signed by the official Council member(s) and the parties concerned. All payments for services rendered must be made immediately / within one calendar week of the conclusion of the event/fest. All collections/payments are to be made by A/C payee cheque (TDS norms are to be adhered to). In case any cash transaction is required to be made, prior permission from the Competent Authority is to be obtained. Period of all fests must not be over 4 days (DAKSHH 02 days and ECLECIA 02 days).

10.6 "Freshers' Welcome" is to be held immediately within a week of the 1<sup>st</sup> year Students' joining classes or as a part of the Special programme on 5<sup>th</sup> September of each year.

10.7 10% attendance allowance may be accorded, if deserved, to those Executive Council members (Genl Secy, Treasurer, Games Secy & Club Secys) officially involved in recorded Council activities.

10.8 Guidelines for major events to be executed by the Students' Council

- i) College Foundation Day, Teachers' Day - 5<sup>th</sup> September
- ii) Freshers' Welcome - 5<sup>th</sup> September or within 7 days of 1<sup>st</sup> yr. students joining classes
- iii) Biswakarma Puja - 17<sup>th</sup> Sept (normally)
- iv) Dakshh and Eclecia - preferably any four days during 23 – 31 Jan
- v) Annual Sports - any one day preferably during 23-31 Jan except those under (iv)
- vi) Farewell to outgoing students - preferably by 10<sup>th</sup> June

## **11.0 Amendment of the Constitution**

The Constitution of the Students' Council may be amended if such proposal(s) for amendment is/are passed in a Special General Meeting of the Council convened for the purpose by a majority of the total number of the members present. Such proposal(s) when passed as above shall, in any case, be subject to final approval of the Principal for due ratification.

## **12.0 Dissolution**

In case of emergency, the Principal may declare the Students' Council as defunct / dissolve the same and constitute a Committee for taking over / nominate a new Committee based on academic performance, if circumstances so warrant.



**HERITAGE INSTITUTE OF TECHNOLOGY**  
( A unit of Kalyan Bharti Trust )

**BALANCE SHEET AS AT MARCH 31, 2012**

	Schedule		As at 31.03.2012 (Rs.)		As at 31.03.2011 (Rs.)
<b>SOURCES OF FUNDS</b>					
<b>FUND BALANCES</b>	<b>1</b>				
General Fund		17,546,918		(14,005,771)	
Development Fund		33,872,214		28,136,339	
Reserve Fund		14,455,500	65,874,632	7,452,500	21,583,068
Deposits and Advances from Students			127,090,917		109,005,407
Kalyan Bharti Trust			29,023,171		88,670,521
			<b>221,988,720</b>		<b>219,258,996</b>
<b>APPLICATION OF FUNDS</b>					
<b>Fixed Assets</b>	<b>2</b>				
Gross Block		340,933,300		306,486,349	
Less : Depreciation		134,859,453		109,525,259	
Net Block		206,073,847		196,961,090	
Capital Work-in-Progress		280,000	206,353,847	3,497,580	200,458,670
<b>Current Assets and Advances</b>					
Stock of Spares & Stationery Items		1,090,738		742,630	
Cash and Bank Balances	<b>3</b>	11,203,387		3,663,539	
Fixed Deposits		20,381,970		18,862,753	
Advances	<b>4</b>	12,351,895		10,948,595	
		45,027,990		34,217,517	
<b>Less: Current Liabilities &amp; Provisions</b>					
Current Liabilities	<b>5</b>	30,864,350	14,163,640	18,359,657	15,857,860
<b>Deferred Revenue Expenditure</b> (to the extent not written off)			1,471,233		2,942,466
			<b>221,988,720</b>		<b>219,258,996</b>
<b>Significant Accounting Policies and Notes on Accounts</b>	<b>10</b>				

AS PER OUR AUDIT REPORT OF EVEN DATE

**FOR RUSTAGI & COMPANY**  
CHARTERED ACCOUNTANTS

*R. N. Rustagi*  
**R. N. RUSTAGI**  
(PARTNER)  
Membership No.10467



**ON BEHALF OF**  
**HERITAGE INSTITUTE OF TECHNOLOGY**

*[Signature]*  
*[Signature]*

**PLACE : KOLKATA**

**DATED : THE 22ND DAY OF SEPTEMBER 2012**

**HERITAGE INSTITUTE OF TECHNOLOGY**  
( A unit of Kalyan Bharti Trust )

**INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED MARCH 31, 2012**

	Schedule	2011-12 (Rs.)	2010-11 (Rs.)
<b>INCOME</b>			
Fee & Charges	6	215,173,011	169,164,725
Other Receipts	7	7,693,487	1,976,219
		<b>222,866,498</b>	<b>171,140,944</b>
<b>EXPENDITURE</b>			
Personnel Expenses	8	128,743,392	105,692,649
Educational, Administrative and Other Expenses	9	32,773,493	29,537,347
Interest		787,718	9,797,490
Depreciation		30,528,423	26,976,364
		<b>192,833,026</b>	<b>172,003,850</b>
<b>Surplus transferred to General Fund</b>		<b>30,033,472</b>	<b>(862,906)</b>
<b>Significant Accounting Policies and Notes on Accounts</b>	10		

AS PER OUR AUDIT REPORT OF EVEN DATE

**FOR RUSTAGI & COMPANY**  
CHARTERED ACCOUNTANTS

*(Signature)*  
**M. N. RUSTAGI**  
(PARTNER)

**Membership No.10467**



**PLACE : KOLKATA**

**DATED : THE 22ND DAY OF SEPTEMBER 2012**

**ON BEHALF OF**  
**HERITAGE INSTITUTE OF TECHNOLOGY**

*(Signature)*  
*(Signature)*

**HERITAGE INSTITUTE OF TECHNOLOGY**

( A unit of Kalyan Bharti Trust )

**SCHEDULES 1 TO 5 ANNEXED TO AND FORMING PART OF BALANCE SHEET**

		<b>As at 31.03.2012 (Rs.)</b>		<b>As at 31.03.2011 (Rs.)</b>
<b>SCHEDULE - 1</b>				
<b>FUND BALANCES</b>				
<b>General Fund</b>				
As per Last Account	(14,005,771)		(14,511,795)	
Add: Interest accrued on Fixed Deposits	1,519,217		1,368,930	
Add: Transferred from Income & Expenditure A/c	30,033,472	17,546,918	(862,906)	(14,005,771)
<b>Development Fund</b>				
As per Last Account	28,136,339		21,155,239	
Add: Development Fee	5,735,875	33,872,214	6,981,100	28,136,339
<b>Reserve Fund</b>				
As per Last Account	7,452,500		2,242,500	
Add: Admission Fee	7,003,000	14,455,500	5,210,000	7,452,500
		<b>65,874,632</b>		<b>21,583,068</b>
<b>SCHEDULE - 3</b>				
<b>CASH AND BANK BALANCES</b>				
Cash in Hand		361,083		252,855
(As certified by the Management)				
Cheques in Hand		816,227		-
(As certified by the Management)				
Balance with Scheduled Banks				
In Savings Accounts	10,026,077		3,410,684	
In Fixed Deposit Account	20,381,970	30,408,047	18,862,753	22,273,437
		<b>31,585,357</b>		<b>22,526,292</b>
<b>SCHEDULE - 4</b>				
<b>ADVANCES</b>				
Advances recoverable in cash or kind or value to be received		10,152,506		8,977,734
Security Deposits		2,098,877		1,893,385
Tax Deducted at Source		100,512		77,476
		<b>12,351,895</b>		<b>10,948,595</b>
<b>SCHEDULE - 5</b>				
<b>CURRENT LIABILITIES</b>				
Sundry Creditors				
For Capital Expenditure		1,084,400		4,609,424
For Expenses & Other Finances		29,779,950		13,750,233
		<b>30,864,350</b>		<b>18,359,657</b>

## HERITAGE INSTITUTE OF TECHNOLOGY

( A unit of Kalyan Bharti Trust )

## SCHEDULE ANNEXED TO AND FORMING PART OF BALANCE SHEET

## SCHEDULE - 2

## FIXED ASSETS

Particulars	Amount (Rs.)									
	Gross Block				Depreciation				Net Block	
	As on 01.04.2011	For the year	Sale/Adjustm ent during the year	As on 31.03.2012	Upto 31.03.2011	For the year	Sale/Adjustm ent during the year	Upto 31.03.2012	As on 31.03.2012	As on 31.03.2011
Land & Site Development	19,720,081	-		19,720,081				-	19,720,081	19,720,081
Building	114,456,529	-		114,456,529		5,722,826		5,722,826	108,733,703	114,456,529
Computer & Other Peripherals	45,765,526	15,870,571		61,636,097	36,043,460	7,639,062		43,682,522	17,953,575	9,722,066
Electrical Installation & Fittings	10,958,915	2,752,460		13,711,375	4,544,034	1,083,717		5,627,751	8,083,624	6,414,881
Furniture & Fixtures	47,510,036	8,353,724		55,863,760	29,755,171	5,843,648		35,598,819	20,264,941	17,754,865
Laboratory Equipments	29,997,234	4,017,160	404,912	33,609,482	16,483,763	2,134,313	271,648	18,346,428	15,263,054	13,513,471
Library Books	12,419,442	978,798		13,398,240	12,211,993	696,848		12,908,841	489,399	207,449
Air Conditioners	9,480,546	1,120,071		10,600,617	4,266,428	820,696		5,087,124	5,513,493	5,214,118
Other Equipments	13,300,149	784,077		14,084,226	4,902,016	1,226,494		6,128,510	7,955,716	8,398,133
Vehicle	2,877,891	975,002		3,852,893	1,318,394	438,238		1,756,632	2,096,261	1,559,497
Allocation of depreciation on assets of Trust used exclusively by College						4,922,581				
	306,486,349	34,851,863	404,912	340,933,300	109,525,259	30,528,423	271,648	134,859,453	206,073,847	196,961,090
Previous Year	179,814,425	127,281,515	609,591	306,486,349	92,585,937	16,988,993	49,671	109,525,259	196,961,090	-

# HERITAGE INSTITUTE OF TECHNOLOGY

( A unit of Kalyan Bharti Trust )

## SCHEDULES 6 TO 9 FORMING PART OF INCOME AND EXPENDITURE ACCOUNT

	2011-12 (Rs.)	2010-11 (Rs.)
<b>SCHEDULE - 6</b>		
<b>FEE &amp; CHARGES</b>		
Tuition Fee	192,198,234	148,790,102
Development Fee	5,735,875	6,981,100
Library Fee	12,642,663	12,274,812
Students' Welfare & Games & Sports	3,289,600	-
Miscellaneous	1,306,639	1,118,711
	<b>215,173,011</b>	<b>169,164,725</b>
<b>SCHEDULE - 7</b>		
<b>OTHER RECEIPTS</b>		
Bank Interest	316,627	260,679
Educational & Soft Skill Development Charges (Net)	7,044,979	-
Miscellaneous Receipts	272,812	187,721
Interest on Security Deposit	59,069	52,739
Surplus on Sale of Assets	-	1,475,080
	<b>7,693,487</b>	<b>1,976,219</b>
<b>SCHEDULE - 8</b>		
<b>PERSONNEL EXPENSES</b>		
Salaries & Allowances	101,750,242	80,557,035
Employer's Contribution to Provident Fund	10,833,233	8,156,212
Staff Welfare	444,718	604,260
Group Gratuity Premium	2,568,662	4,396,283
Professional Charges to Guest Faculty	2,607,682	3,623,234
Security & Facility Staff	10,538,855	8,355,625
	<b>128,743,392</b>	<b>105,692,649</b>

**HERITAGE INSTITUTE OF TECHNOLOGY**

( A unit of Kalyan Bharti Trust )

**SCHEDULES 6 TO 9 FORMING PART OF INCOME AND EXPENDITURE ACCOUNT**

	<b>2011-12</b>	<b>2010-11</b>
	<b>(Rs.)</b>	<b>(Rs.)</b>
<b>SCHEDULE - 9</b>		
<b>EDUCATIONAL, ADMINISTRATIVE &amp; OTHER EXPENSES</b>		
Advertisement & Recruitment	2,347,090	1,777,928
Application, Renewal, Affiliation & Exam Registration Charges	2,637,000	1,456,300
Auditor's Remuneration	61,592	63,423
Bank charges	112,738	84,336
Books & Periodicals	812,258	666,908
Consultancy Charges	734,221	466,900
Contribution to TEQIP - II Grant	800,000	-
Educational & Soft Skill Development Charges (Net)	-	733,807
Electricity Charges	7,449,788	6,500,845
Extra Curricular Activities	1,897,737	1,488,918
General Expenses	58,541	5,875
Insurance Premium	169,719	153,764
Laboratory Expenses	1,125,809	1,438,171
Loss on Sale / Impairment of Assets	133,264	-
Other Facilities to Students (Net)	78,999	936,708
Postage & Stamps	31,518	54,152
Printing & Stationery	1,341,377	1,207,466
Rates, Taxes & Fee	1,602,853	1,470,396
Repairs & Maintenance	5,142,580	4,906,446
Seminar & Workshop Expenses	1,047,207	586,639
Telephone & Lease Line Charges	1,285,705	1,330,343
Training & Placement Expenses	352,501	732,113
Travelling & Conveyance	1,275,120	1,284,881
Vehicle Running & Maintenance	792,535	701,091
Website Expenses	12,108	18,704
Deferred Revenue Expenditure W/o	1,471,233	1,471,233
	<b>32,773,493</b>	<b>29,537,347</b>

# HERITAGE INSTITUTE OF TECHNOLOGY

(A Unit of Kalyan Bharti Trust)

## SCHEDULE – 10

### Significant Accounting Policies and Notes on Accounts

#### A. Significant Accounting Policies:

##### 1 Accounting Concept

The financial statements are prepared under historical cost convention in accordance with the generally accepted accounting principles.

##### 2 Recognition of Income & Expenditure

The College follows mercantile system of accounting and recognizes income and expenditure on accrual basis and as a going concern accounting policies are consistent with the generally accepted accounting principles.

##### 3 Fixed Assets and Depreciation

Fixed Assets are stated at their original cost of acquisition and / or construction and cost of improvements thereon inclusive of inward freight, duties and taxes, cost of installation, pre-operational expenses including finance charges and other incidental expenses in relation to such acquisition / construction / improvements.

Depreciation on fixed assets is charged on written down value method at the rates prescribed in schedule XIV under the Companies Act, 1956 except on library books where it is charged at the rate of 50 per cent.

In respect of additions and sale of fixed assets during the year, depreciation is provided on pro-rata basis.

##### 4 Inventories are valued at cost

##### 5 Retirement Benefits

The liability towards gratuity is covered by Group Gratuity Policy with Life Insurance Corporation of India. Contribution to the fund is based on actuarial valuation carried out at the end of the year. Leave encashment is done on cash basis.

##### 6 Contingent Liability

There is no contingent liability.

**B. Notes on Accounts:**

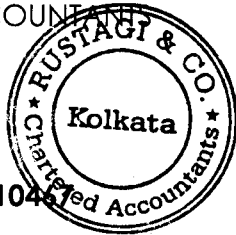
- 1 As per the norms of All India Council for Technical Education (AICTE), fifty per cent of the Development Fee received from students has been transferred to the Development Fund.
- 2 Admission Fee received from the students has been transferred to the Reserve Fund.
- 3 Fixed Deposits includes a sum of Rs.90 lacs held jointly in the name of All India Council for Technical Education (AICTE) and the Trust.
- 4 Government Grants amounting to Rs.102.72 lacs had been received during the financial year 2011-12 under various schemes. Interest accrued on such receipts amounts to Rs.0.94 lacs. As per terms of grants Rs.24.21 lacs has been utilized during the financial year and the balance amount of Rs.79.45 lacs will be utilized subsequently. The same is shown under the head Current Liabilities.
- 5 In the opinion of the Management; Current Assets, Loan and Advances have a value on realization at least equal to the amount at which they are stated.
- 6 Deferred Revenue Expenditure has been written off over a period of four years.
- 7 Figures for the previous year have been re-grouped and / or re-arranged wherever considered necessary.

AS PER OUR REPORT OF EVEN DATE

**FOR RUSTAGI & COMPANY**  
CHARTERED ACCOUNTANTS

*R. N. Rustagi*  
**R. N. RUSTAGI**  
(PARTNER)

Membership No.10467



**ON BEHALF OF**  
**HERITAGE INSTITUTE OF TECHNOLOGY**

*[Signature]*  
*[Signature]*  
*[Signature]*

**PLACE: KOLKATA**

**DATED: THE 22<sup>ND</sup> DAY OF SEPTEMBER 2012**



**HERITAGE INSTITUTE OF TECHNOLOGY**  
( A unit of Kalyan Bharti Trust )

**BALANCE SHEET AS AT MARCH 31, 2013**

	Schedule		As at 31.03.2013 (Rs.)		As at 31.03.2012 (Rs.)
<b>SOURCES OF FUNDS</b>					
<b>FUND BALANCES</b>	<b>1</b>				
General Fund		43,797,930		17,546,918	
Development Fund		38,172,664		33,872,214	
Reserve Fund		21,331,500	103,302,094	14,455,500	65,874,632
Deposits and Advances from Students			149,325,219		127,090,917
Kalyan Bharti Trust			143,806,276		29,023,171
			<b>396,433,589</b>		<b>221,988,720</b>
<b>APPLICATION OF FUNDS</b>					
<b>Fixed Assets</b>	<b>2</b>				
Gross Block		561,151,509		340,933,300	
Less : Depreciation		159,697,798		134,859,453	
Net Block		401,453,711		206,073,847	
Capital Work-in-Progress		3,333,855	404,787,566	280,000	206,353,847
<b>Current Assets and Advances</b>					
Stock of Spares & Stationery Items		1,177,891		1,090,738	
Cash and Bank Balances	<b>3</b>	5,570,237		11,203,387	
Fixed Deposits		7,193,344		20,381,970	
Advances	<b>4</b>	13,024,773		12,351,895	
		26,966,245		45,027,990	
<b>Less: Current Liabilities &amp; Provisions</b>					
Current Liabilities	<b>5</b>	35,320,222	(8,353,977)	30,864,350	14,163,640
<b>Deferred Revenue Expenditure</b> (to the extent not written off)					1,471,233
			<b>396,433,589</b>		<b>221,988,720</b>
<b>Significant Accounting Policies and Notes on Accounts</b>	<b>10</b>				

AS PER OUR AUDIT REPORT OF EVEN DATE

**FOR RUSTAGI & COMPANY**  
CHARTERED ACCOUNTANTS

*R. N. Rustagi*  
**R. N. RUSTAGI**  
(PARTNER)  
Membership No.10467

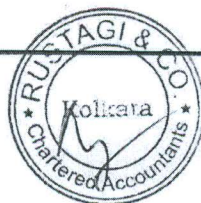
PLACE : KOLKATA  
DATED : THE 20TH DAY OF JULY 2013

**FOR HERITAGE INSTITUTE OF TECHNOLOGY**

*Chairman*  
**CHAIRMAN**

*Secretary*  
**SECRETARY, KALYAN BHARTI TRUST**

*Treasurer*  
**TREASURER, KALYAN BHARTI TRUST**



# INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED MARCH 31, 2013

	Schedule	2012-13 (Rs.)	2011-12 (Rs.)
<b>INCOME</b>			
Fee & Charges	6	261,952,430	215,173,011
Other Receipts	7	6,984,469	7,693,487
		<b>268,936,899</b>	<b>222,866,498</b>
<b>EXPENDITURE</b>			
Personnel Expenses	8	170,632,802	128,743,392
Educational, Administrative and Other Expenses	9	40,712,762	32,773,493
Interest		810,554	787,718
Depreciation		31,578,069	30,528,423
		<b>243,734,187</b>	<b>192,833,026</b>
Surplus transferred to General Fund		<b>25,202,712</b>	<b>30,033,472</b>
Significant Accounting Policies and Notes on Accounts	10		

AS PER OUR AUDIT REPORT OF EVEN DATE

**FOR RUSTAGI & COMPANY**  
CHARTERED ACCOUNTANTS

*R. N. Rustagi*  
**R. N. RUSTAGI**  
(PARTNER)  
Membership No.10467

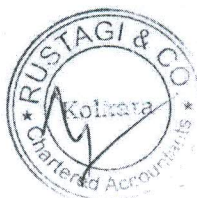
PLACE : KOLKATA  
DATED : THE 20TH DAY OF JULY 2013

**FOR HERITAGE INSTITUTE OF TECHNOLOGY**

*Paran*  
CHAIRMAN

*Sai*  
SECRETARY, KALYAN BHARTI TRUST

*Suma*  
TREASURER, KALYAN BHARTI TRUST





**HERITAGE INSTITUTE OF TECHNOLOGY**

( A unit of Kalyan Bharti Trust )

**SCHEDULES 1 TO 5 ANNEXED TO AND FORMING PART OF BALANCE SHEET**

		As at 31.03.2013 (Rs.)		As at 31.03.2012 (Rs.)
<b>SCHEDULE - 1</b>				
<b>FUND BALANCES</b>				
<b>General Fund</b>				
As per Last Account	17,546,918		(14,005,771)	
Add: Interest on Fixed Deposits	1,048,300		1,519,217	
Add: Transferred from Income & Expenditure A/c	25,202,712	43,797,930	30,033,472	17,546,918
<b>Development Fund</b>				
As per Last Account	33,872,214		28,136,339	
Add: Development Fee	4,300,450	38,172,664	5,735,875	33,872,214
<b>Reserve Fund</b>				
As per Last Account	14,455,500		7,452,500	
Add: Admission Fee	6,876,000	21,331,500	7,003,000	14,455,500
		<b>103,302,094</b>		<b>65,874,632</b>
<b>SCHEDULE - 3</b>				
<b>CASH AND BANK BALANCES</b>				
Cash in Hand		136,066		361,083
(As certified by the Management)				
Cheques in Hand		-		816,227
(As certified by the Management)				
Balance with Scheduled Banks				
In Savings Accounts	5,434,171		10,026,077	
In Fixed Deposit Account	7,193,344	12,627,515	20,381,970	30,408,047
		<b>12,763,581</b>		<b>31,585,357</b>
<b>SCHEDULE - 4</b>				
<b>ADVANCES</b>				
Advances recoverable in cash or kind or value to be received		10,096,414		10,152,506
Security Deposits		2,928,359		2,098,877
Tax Deducted at Source		-		100,512
		<b>13,024,773</b>		<b>12,351,895</b>
<b>SCHEDULE - 5</b>				
<b>CURRENT LIABILITIES</b>				
Sundry Creditors				
For Capital Expenditure		9,219,654		1,084,400
For Expenses & Other Finances		26,100,568		29,779,950
		<b>35,320,222</b>		<b>30,864,350</b>



**SCHEDULE - 2**  
**FIXED ASSETS**

**HERITAGE INSTITUTE OF TECHNOLOGY**  
( A Unit of Kalyan Bharti Trust )  
**SCHEDULE ANNEXED TO AND FORMING PART OF BALANCE SHEET**

Particulars	Gross Block				Depreciation				Net Block		Amount (Rs.)	
	As on 01.04.2012	For the year	Sale/Adjustm ent during the year	As on 31.03.2013	Upto 31.03.2012	For the year	Sale/Adjustm ent during the year	Upto 31.03.2013	As on 31.03.2013	As on 31.03.2012		
Land & Site Development	19,720,081			19,720,081	-	-	-	-	19,720,081	19,720,081		
Building	114,456,529	185,959,920		300,416,449	5,722,826	5,436,685		11,159,511	289,256,938	108,733,703		
Computer & Other Peripherals	61,636,097	17,947,277	7,478,344	72,105,030	43,682,522	8,079,597	1,845,954	49,916,165	22,188,865	17,953,575		
Electrical Installation & Fittings	13,711,375	897,993		14,609,368	5,627,751	1,216,958		6,844,709	7,764,659	8,083,624		
Furniture & Fixtures	55,863,760	12,856,127		68,719,887	35,598,819	6,501,562		42,100,381	26,619,506	20,264,941		
Laboratory Equipments	33,609,482	6,657,913	580,505	39,686,890	18,346,428	2,490,418	430,406	20,406,440	19,280,450	15,263,054		
Library Books	13,398,240	690,466		14,088,706	12,908,841	834,632		13,743,473	345,233	489,399		
Air Conditioners	10,600,617	822,666		11,423,283	5,087,124	827,579		5,914,703	5,508,580	5,513,493		
Other Equipments	14,084,226	2,024,912	55,800	16,053,338	6,128,510	1,196,075	31,763	7,292,822	8,760,516	7,955,716		
Vehicle	3,852,893	475,584		4,328,477	1,756,632	562,962		2,319,594	2,008,883	2,096,261		
Allocation of depreciation on assets of trust used exclusively by College						4,431,601						
	340,933,300	228,332,858	8,114,649	561,151,509	134,859,453	31,578,069	2,308,123	159,697,798	401,453,711	206,073,847		
Previous Year	306,486,349	34,851,863	404,912	340,933,300	109,525,259	25,605,842	271,648	134,859,453	206,073,847	-		



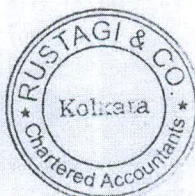


# HERITAGE INSTITUTE OF TECHNOLOGY

( A unit of Kalyan Bharti Trust )

## SCHEDULES 6 TO 9 FORMING PART OF INCOME AND EXPENDITURE ACCOUNT

	2012-13 (Rs.)	2011-12 (Rs.)
<b>SCHEDULE - 6</b>		
<b>FEE &amp; CHARGES</b>		
Tuition Fee	243,480,563	192,198,234
Development Fee	4,300,450	5,735,875
Library Fee	8,975,900	12,642,663
Students' Welfare & Games & Sports	3,783,000	3,289,600
Miscellaneous	1,412,517	1,306,639
	<b>261,952,430</b>	<b>215,173,011</b>
<b>SCHEDULE - 7</b>		
<b>OTHER RECEIPTS</b>		
Bank Interest	413,769	316,627
Educational & Soft Skill Development Charges (Net)	5,558,799	7,044,979
Miscellaneous Receipts	285,839	272,812
Interest on Security Deposit	67,457	59,069
Sundry Balances written back	658,605	-
	<b>6,984,469</b>	<b>7,693,487</b>
<b>SCHEDULE - 8</b>		
<b>PERSONNEL EXPENSES</b>		
Salaries & Allowances	138,297,382	101,750,242
Professional Charges to Guest Faculty	1,636,506	2,607,682
Security & Facility Staff	12,291,172	10,538,855
Employer's Contribution to Provident Fund, ESI etc.	14,284,116	10,833,233
Group Gratuity Premium	3,502,211	2,568,662
Staff Welfare	621,415	444,718
	<b>170,632,802</b>	<b>128,743,392</b>



# HERITAGE INSTITUTE OF TECHNOLOGY

( A unit of Kalyan Bharti Trust )

## SCHEDULES 6 TO 9 FORMING PART OF INCOME AND EXPENDITURE ACCOUNT

	2012-13 (Rs.)	2011-12 (Rs.)
<b>SCHEDULE - 9</b>		
<b>EDUCATIONAL, ADMINISTRATIVE &amp; OTHER EXPENSES</b>		
Advertisement & Recruitment	3,065,673	2,347,090
Application, Renewal, Affiliation & Exam Registration Charges	1,744,500	2,637,000
Auditor's Remuneration	84,270	61,592
Bank charges	125,194	112,738
Books & Periodicals	1,172,601	812,258
Consultancy Charges	475,170	734,221
Contribution to TEQIP - II Grant	-	800,000
Electricity Charges	10,983,651	7,449,788
Extra Curricular Activities	2,542,634	1,897,737
General Expenses	65,206	58,541
Insurance Premium	174,909	169,719
Laboratory Expenses	1,582,128	1,125,809
Loss on Sale / Impairment of Assets	61,636	133,264
Other Facilities to Students (Net)	212,810	78,999
Postage & Stamps	40,806	31,518
Printing & Stationery	1,905,536	1,341,377
Rates, Taxes & Fee	1,222,247	1,602,853
Repairs & Maintenance	8,941,953	5,142,580
Seminar & Workshop Expenses	883,918	1,047,207
Telephone & Lease Line Charges	1,441,607	1,285,705
Training & Placement Expenses	531,531	352,501
Travelling & Conveyance	1,164,928	1,275,120
Vehicle Running & Maintenance	806,177	792,535
Website Expenses	12,444	12,108
Deferred Revenue Expenditure W/o	1,471,233	1,471,233
	<b>40,712,762</b>	<b>32,773,493</b>





**HERITAGE INSTITUTE OF TECHNOLOGY**  
(A Unit of Kalyan Bharti Trust)

**SCHEDULE – 10**

**Significant Accounting Policies and Notes on Accounts**

**A. Significant Accounting Policies:**

**1 Accounting Concept**

The financial statements are prepared under historical cost convention in accordance with the generally accepted accounting principles.

**2 Recognition of Income & Expenditure**

The College follows mercantile system of accounting and recognizes income and expenditure on accrual basis and as a going concern accounting policies are consistent with the generally accepted accounting principles.

**3 Fixed Assets and Depreciation**

Fixed Assets are stated at their original cost of acquisition and / or construction and cost of improvements thereon inclusive of inward freight, duties and taxes, cost of installation, pre-operational expenses including finance charges and other incidental expenses in relation to such acquisition / construction / improvements.

Depreciation on fixed assets is charged on written down value method at the rates prescribed in schedule XIV under the Companies Act, 1956 except on library books where it is charged at the rate of 50 per cent.

In respect of additions and sale of fixed assets during the year, depreciation is provided on pro-rata basis.

**4 Inventories are valued at cost**

**5 Retirement Benefits**

- a) The liability towards gratuity is covered by Group Gratuity Policy with Life Insurance Corporation of India. Contribution to the fund is based on actuarial valuation carried out at the end of the year.
- b) Leave Encashment is done on cash basis
- c) Contribution to Provident Fund, Employee State Insurance and other funds are determined under the relevant statute and charged to revenue account.

**6 Contingent Liability**

There is no contingent liability.



**B. Notes on Accounts:**

- 1 As per the norms of All India Council for Technical Education (AICTE), fifty per cent of the Development Fee received from students has been transferred to the Development Fund.
- 2 Admission Fee received from the students has been transferred to the Reserve Fund.
- 3 Fixed Deposits includes a sum of Rs.40 lacs held jointly in the name of All India Council for Technical Education (AICTE) and the Trust.
- 4 Government Grants amounting to Rs.19 lacs had been received during the financial year 2012-13 under various schemes. Interest accrued on such receipts amounts to Rs.0.68 lacs. As per terms of grants Rs.4.92 lacs has been utilized during the financial year and the balance amount of Rs.14.76 lacs will be utilized subsequently. The same is shown under the head Current Liabilities.
- 5 In the opinion of the Management, Current Assets, Loan and Advances have a value on realization at least equal to the amount at which they are stated.
- 6 The Institution is a unit of Public Charitable Trust and is not carrying out any commercial or business activity with a profit motive and has complied with the Accounting Standards as applicable to it.
- 7 The College has reviewed its liabilities in respect of retention money and other expenses for which cheques issued have become stale. During the year under review the College has written off liabilities amounting to Rs.6.59 lacs.
- 8 Deferred Revenue Expenditure has been written off over a period of four years.
- 9 Figures for the previous year have been re-grouped and / or re-arranged wherever considered necessary.

AS PER OUR REPORT OF EVEN DATE

**FOR RUSTAGI & COMPANY**  
CHARTERED ACCOUNTANTS

*R.N. Rustagi*  
**R. N. RUSTAGI**  
(PARTNER)  
Membership No.10467

PLACE: KOLKATA  
DATED: THE 20<sup>TH</sup> DAY OF JULY 2013

**FOR HERITAGE INSTITUTE OF TECHNOLOGY**

*Paran*  
CHAIRMAN

*Soni*  
**SECRETARY, KALYAN BHARTI TRUST**

*Quilume*  
**TREASURER, KALYAN BHARTI TRUST**





**HERITAGE INSTITUTE OF TECHNOLOGY**  
( A unit of Kalyan Bharti Trust )

**BALANCE SHEET AS AT MARCH 31, 2014**

	Schedule		As at 31.03.2014 (Rs.)		As at 31.03.2013 (Rs.)
<b>SOURCES OF FUNDS</b>					
<b>FUND BALANCES</b>	1				
General Fund		35,852,681		43,797,930	
Development Fund		32,609,164		38,172,664	
Reserve Fund		27,105,500	95,567,345	21,331,500	103,302,094
<b>Deposits and Advances from Students</b>			143,150,550		149,325,219
<b>Kalyan Bharti Trust</b>			118,037,626		143,806,276
			<b>356,755,521</b>		<b>396,433,589</b>
<b>APPLICATION OF FUNDS</b>					
<b>Fixed Assets</b>	2				
Gross Block		567,572,730		561,151,509	
Less : Depreciation		182,987,983		159,697,798	
Net Block		384,584,747		401,453,711	
Capital Work-in-Progress		10,467,126	395,051,873	3,333,855	404,787,566
<b>Current Assets and Advances</b>					
Stock of Spares & Stationery Items		1,136,837		1,177,891	
Cash and Bank Balances	3	11,685,841		5,570,237	
Fixed Deposits		7,824,546		7,193,344	
Advances	4	20,501,014		13,024,773	
		41,148,238		26,966,245	
<b>Less: Current Liabilities &amp; Provisions</b>					
Current Liabilities	5	79,444,590	(38,296,352)	35,320,222	(8,353,977)
			<b>356,755,521</b>		<b>396,433,589</b>
<b>Significant Accounting Policies and Notes on Accounts</b>	10				

AS PER OUR AUDIT REPORT OF EVEN DATE

**FOR RUSTAGI & COMPANY**  
CHARTERED ACCOUNTANTS

*R. N. Rustagi*  
**R. N. RUSTAGI**  
(PARTNER)  
Membership No.10467



PLACE : KOLKATA  
DATED : THE 26TH DAY OF JULY 2014

**FOR HERITAGE INSTITUTE OF TECHNOLOGY**

*P. R. Aggarwal*  
**CHAIRMAN**

*Siri-*  
**SECRETARY, KALYAN BHARTI TRUST**

*Shilpa*  
**TREASURER, KALYAN BHARTI TRUST**

# HERITAGE INSTITUTE OF TECHNOLOGY

( A unit of Kalyan Bharti Trust )

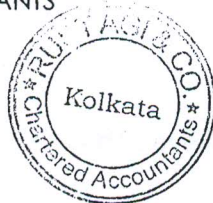
## INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED MARCH 31, 2014

	Schedule	2013-14 (Rs.)	2012-13 (Rs.)
<b>INCOME</b>			
Fee & Charges	6	248,216,521	261,952,430
Other Receipts	7	5,134,214	6,984,469
		<b>253,350,735</b>	<b>268,936,899</b>
<b>EXPENDITURE</b>			
Personnel Expenses	8	188,740,849	170,632,802
Educational, Administrative and Other Expenses	9	32,058,717	40,712,762
Interest		423,298	810,554
Depreciation		40,976,508	31,578,069
		<b>262,199,372</b>	<b>243,734,187</b>
<b>Surplus transferred to General Fund</b>		<b>(8,848,637)</b>	<b>25,202,712</b>
<b>Significant Accounting Policies and Notes on Accounts</b>	10		

AS PER OUR AUDIT REPORT OF EVEN DATE

**FOR RUSTAGI & COMPANY**  
CHARTERED ACCOUNTANTS

*R. N. Rustagi*  
**R. N. RUSTAGI**  
(PARTNER)  
Membership No.10467



**PLACE : KOLKATA**  
**DATED : THE 26TH DAY OF JULY 2014**

**FOR HERITAGE INSTITUTE OF TECHNOLOGY**

*P. R. Aggarwal*  
**CHAIRMAN**

*S. M. -*  
**SECRETARY, KALYAN BHARTI TRUST**

*Quilb...*  
**TREASURER, KALYAN BHARTI TRUST**



**HERITAGE INSTITUTE OF TECHNOLOGY**

( A unit of Kalyan Bharti Trust )

**SCHEDULES 1 TO 5 ANNEXED TO AND FORMING PART OF BALANCE SHEET**

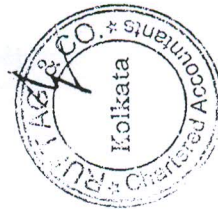
		<b>As at 31.03.2014 (Rs.)</b>		<b>As at 31.03.2013 (Rs.)</b>
<b>SCHEDULE - 1 FUND BALANCES</b>				
<b>General Fund</b>				
As per Last Account	43,797,930		17,546,918	
Add: Interest on Fixed Deposits	708,973		1,048,300	
Add: Transfer from Caution Deposit	194,415		-	
Add: Transferred from Income & Expenditure A/c	(8,848,637)	35,852,681	25,202,712	43,797,930
<b>Development Fund</b>				
As per Last Account	38,172,664		33,872,214	
Add: Development Fee	286,500		4,300,450	
Less: Contribution to TEQIP II	5,850,000	32,609,164	-	38,172,664
<b>Reserve Fund</b>				
As per Last Account	21,331,500		14,455,500	
Add: Admission Fee	5,774,000	27,105,500	6,876,000	21,331,500
		<b>95,567,345</b>		<b>103,302,094</b>
<b>SCHEDULE - 3 CASH AND BANK BALANCES</b>				
Cash in Hand		128,111		136,066
(As certified by the Management)				
Balance with Scheduled Banks				
In Savings Accounts	11,557,730		5,434,171	
In Fixed Deposit Account (F.V.- Rs.40 lacs)	7,824,546	19,382,276	7,193,344	12,627,515
		<b>19,510,387</b>		<b>12,763,581</b>
<b>SCHEDULE - 4 ADVANCES</b>				
Advances recoverable in cash or kind or value to be received		16,438,958		10,096,414
Security Deposits		4,062,056		2,928,359
		<b>20,501,014</b>		<b>13,024,773</b>
<b>SCHEDULE - 5 CURRENT LIABILITIES</b>				
Sundry Creditors				
For Capital Expenditure		12,106,163		9,219,654
For Expenses & Other Finances		35,542,279		26,100,568
Heritage Business School		31,796,148		-
		<b>79,444,590</b>		<b>35,320,222</b>



**HERITAGE INSTITUTE OF TECHNOLOGY**  
( A unit of Kalyan Bharti Trust )  
**SCHEDULE ANNEXED TO AND FORMING PART OF BALANCE SHEET**

**SCHEDULE - 2  
FIXED ASSETS**

FIXED ASSETS												
Particulars	Gross Block					Depreciation				Net Block		
	As on 01.04.2013	For the year	Sale/Adjusm ent during the year	Transferred to Heritage Business School	As on 31.03.2014	Upto 31.03.2013	For the year	Sale/Adjusm ent during the year	Transferred to Heritage Business School	Upto 31.03.2014	As on 31.03.2014	As on 31.03.2013
Land & Site Development	19,720,081	-	-	-	19,720,081	-	-	-	-	-	19,720,081	19,720,081
Building	300,416,449	-	-	-	300,416,449	11,159,511	14,462,847	-	-	25,622,358	274,794,091	289,256,938
Computer & Other Peripherals	72,105,030	4,469,534	7,277,645	3,807,442	65,489,477	49,916,165	7,535,767	2,128,710	2,779,153	52,544,069	12,945,408	22,188,865
Electrical Installation & Fittings	14,609,368	1,794,828	-	831,995	15,572,201	6,844,709	1,205,858	-	609,731	7,440,836	8,131,365	7,764,659
Furniture & Fixtures	68,719,887	14,810,272	-	5,332,699	78,197,460	42,100,381	7,605,236	-	3,675,833	46,029,784	32,167,676	26,619,506
Laboratory Equipments	39,686,890	6,800,533	-	-	46,487,423	20,406,440	3,083,668	-	-	23,490,108	22,997,315	19,280,450
Library Books	14,088,706	1,113,294	-	-	15,202,000	13,743,473	901,880	-	-	14,645,353	556,647	345,233
Air Conditioners	11,423,283	274,753	-	4,515,873	7,182,163	5,914,703	498,318	-	2,494,335	3,918,686	3,263,477	5,508,580
Other Equipments	16,053,338	3,144,689	39,900	4,181,128	14,976,999	7,292,822	1,210,939	14,154	2,032,512	6,457,095	8,519,904	8,760,516
Vehicle	4,328,477	-	-	-	4,328,477	2,319,594	520,100	-	-	2,839,694	1,488,783	2,008,883
Allocation of depreciation on assets of Trust used exclusively by College							3,951,895					
	561,151,509	32,407,903	7,317,545	18,669,137	567,572,730	159,697,798	40,976,508	2,142,864	11,591,564	182,987,983	384,584,747	401,453,711
Previous Year	340,933,300	228,332,858	8,114,649	-	561,151,509	134,859,453	27,146,468	2,308,123	-	159,697,798	401,453,711	-



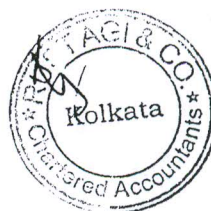


**HERITAGE INSTITUTE OF TECHNOLOGY**

( A unit of Kalyan Bharti Trust )

**SCHEDULES 6 TO 9 FORMING PART OF INCOME AND EXPENDITURE ACCOUNT**

	<b>2013-14</b> <b>(Rs.)</b>	<b>2012-13</b> <b>(Rs.)</b>
<b>SCHEDULE - 6</b>		
<b>FEE &amp; CHARGES</b>		
Tuition Fee	238,581,464	243,480,563
Development Fee	286,500	4,300,450
Library Fee	4,469,500	8,975,900
Students' Welfare & Games & Sports	3,799,000	3,783,000
Miscellaneous	1,080,057	1,412,517
	<b>248,216,521</b>	<b>261,952,430</b>
<b>SCHEDULE - 7</b>		
<b>OTHER RECEIPTS</b>		
Interest	372,708	413,769
Educational & Soft Skill Development Charges (Net)	3,870,038	5,558,799
Miscellaneous Receipts	766,668	285,839
Surplus on Sale of Asset	33,254	-
Interest on Security Deposit	88,042	67,457
Sundry Balances written back	3,504	658,605
	<b>5,134,214</b>	<b>6,984,469</b>
<b>SCHEDULE - 8</b>		
<b>PERSONNEL EXPENSES</b>		
Salaries & Allowances	153,202,828	138,297,382
Professional Charges to Guest Faculty	1,278,300	1,636,506
Security & Facility Staff	12,954,187	12,291,172
Employer's Contribution to Provident Fund, ESI etc.	16,168,029	14,284,116
Group Gratuity Premium	4,284,868	3,502,211
Staff Welfare	852,637	621,415
	<b>188,740,849</b>	<b>170,632,802</b>

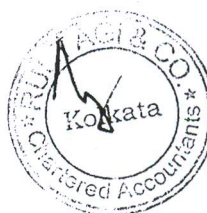


**HERITAGE INSTITUTE OF TECHNOLOGY**

( A unit of Kalyan Bharti Trust )

**SCHEDULES 6 TO 9 FORMING PART OF INCOME AND EXPENDITURE ACCOUNT**

	<b>2013-14</b>	<b>2012-13</b>
	<b>(Rs.)</b>	<b>(Rs.)</b>
<b>SCHEDULE - 9</b>		
<b>EDUCATIONAL, ADMINISTRATIVE &amp; OTHER EXPENSES</b>		
Advertisement & Recruitment	745,162	3,065,673
Application, Renewal, Affiliation & Exam Registration Charges	641,500	1,744,500
Auditor's Remuneration	73,034	84,270
Bank charges	26,947	125,194
Books & Periodicals	1,045,558	1,172,601
Consultancy Charges	467,447	475,170
Electricity Charges	7,442,687	10,983,651
Extra Curricular Activities	3,010,093	2,542,634
General Expenses	62,513	65,206
Insurance Premium	189,112	174,909
Laboratory Expenses	1,294,234	1,582,128
Loss on Sale / Impairment of Assets	39,412	61,636
Other Facilities to Students (Net)	367,571	212,810
Postage & Stamps	52,694	40,806
Printing & Stationery	1,414,515	1,905,536
Rates, Taxes & Fee	1,030,407	1,222,247
Repairs & Maintenance	9,257,593	8,941,953
Seminar & Workshop Expenses	531,379	883,918
Telephone & Lease Line Charges	1,183,149	1,441,607
Training & Placement Expenses	705,364	531,531
Travelling & Conveyance	1,051,750	1,164,928
Vehicle Running & Maintenance	724,504	806,177
Website Expenses	702,092	12,444
Deferred Revenue Expenditure W/o	-	1,471,233
	<b>32,058,717</b>	<b>40,712,762</b>



**HERITAGE INSTITUTE OF TECHNOLOGY**  
(A Unit of Kalyan Bharti Trust)

**SCHEDULE – 10**

**Significant Accounting Policies and Notes on Accounts**

**A. Significant Accounting Policies:**

**1 Accounting Concept**

The financial statements are prepared under historical cost convention in accordance with the generally accepted accounting principles.

**2 Recognition of Income & Expenditure**

The College follows mercantile system of accounting and recognizes income and expenditure on accrual basis and as a going concern accounting policies are consistent with the generally accepted accounting principles.

**3 Fixed Assets and Depreciation**

Fixed Assets are stated at their original cost of acquisition and / or construction and cost of improvements thereon inclusive of inward freight, duties and taxes, cost of installation, pre-operational expenses including finance charges and other incidental expenses in relation to such acquisition / construction / improvements. The College carries out physical verification of all assets in phased manner which is reasonable having regards to the size of the College and nature of its Assets.

Depreciation on fixed assets is charged on written down value method at the rates prescribed in schedule XIV under the Companies Act, 1956 except on library books where it is charged at the rate of 50 per cent.

In respect of additions and sale of fixed assets during the year, depreciation is provided on pro-rata basis.

**4 Inventories are valued at cost**

**5 Retirement Benefits**

- a) The liability towards gratuity is covered by Group Gratuity Policy with Life Insurance Corporation of India. Contribution to the fund is based on actuarial valuation carried out at the end of the year.
- b) Leave Encashment is done on cash basis
- c) Contribution to Provident Fund, Employee State Insurance and other funds are determined under the relevant statute and charged to revenue account.

**6 Contingent Liability**

There is no contingent liability.





## B. Notes on Accounts:

- 1 As per the norms of All India Council for Technical Education (AICTE), fifty per cent of the Development Fee received from students has been transferred to the Development Fund.
- 2 Admission Fee received from the students has been transferred to the Reserve Fund.
- 3 Fixed Deposits includes a sum of Rs.40 lacs held jointly in the name of All India Council for Technical Education (AICTE) and the Trust.
- 4 The Institute has received Government Grants under various schemes. An amount of Rs.31.63 lacs has been utilized during the year out of the available balance of Rs.44.65 lacs (Rs.25.73 lacs received during the year). The balance amount of Rs.13.02 lacs will be utilized subsequently. The same is shown under the head Current Liabilities.
- 5 The Institute has been awarded grant amounting to Rs.400 lacs (including Institute's share of Rs.80 lacs), under the World Bank assisted Technical Education Quality Improvement Programme of Government of India (TEQIP) Phase – II to be utilized over a period of four years. As per the scheme of arrangement during the year the Institute has received 160 lacs and has made its share of contribution to the tune of Rs.40 lacs. An amount of Rs.148.71 lacs has been utilized during the year out of the available balance of Rs.205.20 lacs. The balance amount of Rs.56.50 lacs will be utilized subsequently. Further as per the terms of scheme the Institute has also earmarked Rs.18.50 lacs during the year as reserve fund.
- 6 In the opinion of the Management, Current Assets, Loan and Advances have a value on realization at least equal to the amount at which they are stated.
- 7 The Institution is a unit of Public Charitable Trust and is not carrying out any commercial or business activity with a profit motive and has complied with the Accounting Standards as applicable to it.
- 8 The College has reviewed its liabilities in respect of caution money, retention money and other expenses for which cheques issued have become stale. During the year under review the College has written off liabilities amounting to Rs.1.98 lacs.
- 9 The Trust had made an application to All India Council for Technical Education (AICTE), New Delhi seeking approval for creation of a separate entity for running MBA Programmes currently being run under Management Education Centre of the Institute. All India Council for Technical Education (AICTE), New Delhi, as per the notification dated 19<sup>th</sup> March 2013 granted approval for incorporation of a separate entity in the name & style of Heritage Business School under Trust for running the MBA Programmes from the year 2013-14. Accordingly all the Assets and Liabilities relating to Management Education Centre (MEC), Heritage Institute of Technology has been transferred to Heritage Business School and duly accounted for in the books of accounts.
- 10 Figures for the previous year have been re-grouped and / or re-arranged wherever considered necessary.

AS PER OUR REPORT OF EVEN DATE

**FOR RUSTAGI & COMPANY**  
CHARTERED ACCOUNTANTS

*R. N. Rustagi*  
**R. N. RUSTAGI**  
(PARTNER)

**Membership No.10467**

**PLACE: KOLKATA**

**DATED: THE 26<sup>TH</sup> DAY OF JULY 2014**



**FOR HERITAGE INSTITUTE OF TECHNOLOGY**

*P. R. Azam*  
**CHAIRMAN**

*S. M. S.*  
**SECRETARY, KALYAN BHARTI TRUST**

*[Signature]*  
**TREASURER, KALYAN BHARTI TRUST**



# HERITAGE INSTITUTE OF TECHNOLOGY

( A unit of Kalyan Bharti Trust )

## BALANCE SHEET AS AT MARCH 31, 2015

	Schedule		As at 31.03.2015 (Rs.)		As at 31.03.2014 (Rs.)
<b>SOURCES OF FUNDS</b>					
<b>FUND BALANCES</b>	1				
General Fund		23,475,514		35,852,681	
Development Fund		27,409,164		32,609,164	
Reserve Fund		33,633,400	84,518,078	27,105,500	95,567,345
<b>Deposits and Advances from Students</b>					
Caution Deposit		54,034,800		53,874,800	
Advance Fee		104,376,345	158,411,145	89,275,750	143,150,550
<b>Kalyan Bharti Trust</b>			373,769,841		118,037,626
			<b>616,699,064</b>		<b>356,755,521</b>
<b>APPLICATION OF FUNDS</b>					
<b>Fixed Assets</b>	2				
Gross Block		846,892,853		567,572,730	
Less : Depreciation		204,729,142		182,987,983	
Net Block		642,163,711		384,584,747	
Capital Work-in-Progress		12,067,800	654,231,511	10,467,126	395,051,873
<b>Current Assets and Advances</b>					
Stock of Spares & Stationery Items		1,126,656		1,136,837	
Cash and Bank Balances	3	16,105,020		11,685,841	
Fixed Deposits		8,484,585		7,824,546	
Advances	4	12,418,132		20,501,014	
		38,134,393		41,148,238	
<b>Less: Current Liabilities &amp; Provisions</b>					
Current Liabilities	5	75,666,840	(37,532,447)	79,444,590	(38,296,352)
			<b>616,699,064</b>		<b>356,755,521</b>
<b>Significant Accounting Policies and Notes on Accounts</b>	10				

AS PER OUR AUDIT REPORT OF EVEN DATE


**FOR RUSTAGI & COMPANY**  
CHARTERED ACCOUNTANTS

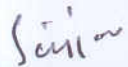
  
**R. N. RUSTAGI**  
(PARTNER)  
Membership No.10467




PLACE : KOLKATA  
DATED : THE 22ND DAY OF AUGUST 2015

**FOR HERITAGE INSTITUTE OF TECHNOLOGY**

  
**CHAIRMAN**

  
**SECRETARY, KALYAN BHARTI TRUST**

  
**TREASURER, KALYAN BHARTI TRUST**

**HERITAGE INSTITUTE OF TECHNOLOGY**

( A unit of Kalyan Bharti Trust )

**INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED MARCH 31,2015**

	Schedule	2014-15 (Rs.)	2013-14 (Rs.)
<b>INCOME</b>			
Fee & Charges	6	294,642,850	248,216,521
Other Receipts	7	2,784,614	5,134,214
		<b>297,427,464</b>	<b>253,350,735</b>
<b>EXPENDITURE</b>			
Personnel Expenses	8	219,398,361	188,740,849
Educational, Administrative and Other Expenses	9	41,358,339	32,058,717
Interest		3,347,680	423,298
Depreciation		45,700,251	40,976,508
		<b>309,804,631</b>	<b>262,199,372</b>
<b>Surplus transferred to General Fund</b>		<b>(12,377,167)</b>	<b>(8,848,637)</b>
<b>Significant Accounting Policies and Notes on Accounts</b>	10		

AS PER OUR AUDIT REPORT OF EVEN DATE

**FOR RUSTAGI & COMPANY**  
CHARTERED ACCOUNTANTS

*R. N. Rustagi*

**R. N. RUSTAGI**  
(PARTNER)

Membership No.10467

PLACE : KOLKATA

DATED : THE 22ND DAY OF AUGUST 2015

**FOR HERITAGE INSTITUTE OF TECHNOLOGY**

*P. R. Aggarwal*

**CHAIRMAN**

*S. K. Sinha*

**SECRETARY, KALYAN BHARTI TRUST**

*Chill curve*  
**TREASURER, KALYAN BHARTI TRUST**



**HERITAGE INSTITUTE OF TECHNOLOGY**

( A unit of Kalyan Bharti Trust )

**SCHEDULES 1 TO 5 ANNEXED TO AND FORMING PART OF BALANCE SHEET**

		<b>As at 31.03.2015 (Rs.)</b>		<b>As at 31.03.2014 (Rs.)</b>
<b>SCHEDULE - 1</b>				
<b>FUND BALANCES</b>				
<b>General Fund</b>				
As per Last Account	35,852,681		43,797,930	
Add: Interest on Fixed Deposits	-		708,973	
Add: Transfer from Caution Deposit	-		194,415	
Add: Transferred from Income & Expenditure A/c	(12,377,167)	23,475,514	(8,848,637)	35,852,681
<b>Development Fund</b>				
As per Last Account	32,609,164		38,172,664	
Add: Development Fee	-		286,500	
Less: Contribution to TEQIP II	5,200,000	27,409,164	5,850,000	32,609,164
<b>Reserve Fund</b>				
As per Last Account	27,105,500		21,331,500	
Add: Admission Fee	6,527,900	33,633,400	5,774,000	27,105,500
		<b>84,518,078</b>		<b>95,567,345</b>
<b>SCHEDULE - 3</b>				
<b>CASH AND BANK BALANCES</b>				
Cash in Hand		163,621		128,111
(As certified by the Management)				
Balance with Scheduled Banks				
In Savings Accounts	904,202		2,088,787	
In Savings Accounts - Earmarked for Grants	15,037,197		9,468,943	
In Fixed Deposit Account (F.V.- Rs.40 lacs)	8,484,585	24,425,984	7,824,546	19,382,276
		<b>24,589,605</b>		<b>19,510,387</b>
<b>SCHEDULE - 4</b>				
<b>ADVANCES</b>				
Advances recoverable in cash or kind or value to be received		7,859,799		16,438,958
Security Deposits		4,558,333		4,062,056
		<b>12,418,132</b>		<b>20,501,014</b>
<b>SCHEDULE - 5</b>				
<b>CURRENT LIABILITIES</b>				
Sundry Creditors				
For Capital Expenditure		2,128,617		12,106,163
For Expenses & Other Finances		40,372,369		35,542,279
Heritage Business School		33,165,854		31,796,148
		<b>75,666,840</b>		<b>79,444,590</b>





**HERITAGE INSTITUTE OF TECHNOLOGY**

( A unit of Kalyan Bharti Trust )

**SCHEDULE ANNEXED TO AND FORMING PART OF BALANCE SHEET**

**SCHEDULE - 2**

**FIXED ASSETS**

Particulars	Amount (Rs.)									
	Gross Block				Depreciation				Net Block	
	As on 01.04.2014	For the year	Sale/Adjustm ent during the year	As on 31.03.2015	Upto 31.03.2014	For the year	Sale/Adjustm ent during the year	Upto 31.03.2015	As on 31.03.2015	As on 31.03.2014
Land & Site Development	19,720,081			19,720,081	-	-	-	-	19,720,081	19,720,081
Building	300,416,449	260,427,483		560,843,932	25,622,358	13,739,705		39,362,063	521,481,869	274,794,091
Computer & Other Peripherals	65,489,477	12,674,667	6,527,309	71,636,835	52,544,069	8,772,596	6,511,746	54,804,919	16,831,916	12,945,408
Electrical Installation & Fittings	15,572,201	190,985	23,060	15,740,126	7,440,836	1,149,431	21,813	8,568,454	7,171,672	8,131,365
Furniture & Fixtures	78,197,460	9,758,561	9,053,938	78,902,083	46,029,784	9,605,312	8,821,925	46,813,171	32,088,912	32,167,676
Laboratory Equipments	46,487,423	11,315,749	1,143,522	56,659,650	23,490,108	3,833,786	953,548	26,370,346	30,289,304	22,997,315
Library Books	15,202,000	968,719	2,026,725	14,143,994	14,645,353	1,041,007	2,026,725	13,659,635	484,359	556,647
Air Conditioners	7,182,163	40,605		7,222,768	3,918,686	457,710		4,376,396	2,846,372	3,263,477
Other Equipments	14,976,999	3,244,536	526,628	17,694,907	6,457,095	1,426,418	334,495	7,549,018	10,145,889	8,519,904
Vehicle	4,328,477			4,328,477	2,839,694	385,446		3,225,140	1,103,337	1,488,783
Allocation of depreciation on assets of Trust used exclusively by College						5,288,840				
	<b>567,572,730</b>	<b>298,621,305</b>	<b>19,301,182</b>	<b>846,892,853</b>	<b>182,987,983</b>	<b>45,700,251</b>	<b>18,670,252</b>	<b>204,729,142</b>	<b>642,163,711</b>	<b>384,584,747</b>
<b>Previous Year</b>	<b>561,151,509</b>	<b>32,407,903</b>	<b>25,986,682</b>	<b>567,572,730</b>	<b>159,697,798</b>	<b>37,024,613</b>	<b>13,734,428</b>	<b>182,987,983</b>	<b>384,584,747</b>	<b>-</b>



**HERITAGE INSTITUTE OF TECHNOLOGY**

( A unit of Kalyan Bharti Trust )

**SCHEDULES 6 TO 9 FORMING PART OF INCOME AND EXPENDITURE ACCOUNT**

	<b>2014-15</b> <b>(Rs.)</b>	<b>2013-14</b> <b>(Rs.)</b>
<b>SCHEDULE - 6</b>		
<b>FEE &amp; CHARGES</b>		
Tuition Fee	282,837,469	238,581,464
Development Fee	-	286,500
Library Fee	4,202,000	4,469,500
Students' Welfare & Games & Sports	4,202,000	3,799,000
Miscellaneous	3,401,381	1,080,057
	<b>294,642,850</b>	<b>248,216,521</b>
<b>SCHEDULE - 7</b>		
<b>OTHER RECEIPTS</b>		
Interest	1,095,793	372,708
Educational & Soft Skill Development Charges (Net)	-	3,870,038
Research & Development	620,000	-
Miscellaneous Receipts	950,664	766,668
Surplus on Sale of Asset	-	33,254
Interest on Security Deposit	109,013	88,042
Sundry Balances written back	9,144	3,504
	<b>2,784,614</b>	<b>5,134,214</b>
<b>SCHEDULE - 8</b>		
<b>PERSONNEL EXPENSES</b>		
Salaries & Allowances	175,920,231	153,202,828
Professional Charges to Guest Faculty	2,736,134	1,278,300
Security & Facility Staff	17,549,197	12,954,187
Employer's Contribution to Provident Fund, ESI etc.	18,258,833	16,168,029
Group Gratuity Premium	3,834,798	4,284,868
Staff Welfare	1,099,168	852,637
	<b>219,398,361</b>	<b>188,740,849</b>



**HERITAGE INSTITUTE OF TECHNOLOGY**

( A unit of Kalyan Bharti Trust )

**SCHEDULES 6 TO 9 FORMING PART OF INCOME AND EXPENDITURE ACCOUNT**

	<b>2014-15</b>	<b>2013-14</b>
	<b>(Rs.)</b>	<b>(Rs.)</b>
<b>SCHEDULE - 9</b>		
<b>EDUCATIONAL, ADMINISTRATIVE &amp; OTHER EXPENSES</b>		
Advertisement & Recruitment	1,496,588	745,162
Application, Renewal, Affiliation & Exam Registration Charges	1,184,500	641,500
Auditor's Remuneration	95,507	73,034
Bank charges	67,424	26,947
Books & Periodicals	500,207	1,045,558
Consultancy Charges	577,178	467,447
Educational Project Work	3,428,683	-
Electricity Charges	9,395,297	7,442,687
Extra Curricular Activities	2,651,576	3,010,093
General Expenses	74,253	62,513
Insurance Premium	266,154	189,112
Laboratory Expenses	1,726,116	1,294,234
Loss on Sale / Impairment of Assets	592,285	39,412
Other Facilities to Students (Net)	482,952	367,571
Postage & Stamps	36,690	52,694
Printing & Stationery	1,658,095	1,414,515
Rates, Taxes & Fee	1,104,918	1,030,407
Repairs & Maintenance	11,775,288	9,257,593
Seminar & Workshop Expenses	866,720	531,379
Telephone & Lease Line Charges	1,363,214	1,183,149
Training & Placement Expenses	308,313	705,364
Travelling & Conveyance	841,280	1,051,750
Vehicle Running & Maintenance	857,551	724,504
Website Expenses	7,550	702,092
	<b>41,358,339</b>	<b>32,058,717</b>





**HERITAGE INSTITUTE OF TECHNOLOGY**  
(A Unit of Kalyan Bharti Trust)

**SCHEDULE – 10**

**Significant Accounting Policies and Notes on Accounts**

**A. Significant Accounting Policies:**

**1 Accounting Concept**

The financial statements are prepared under historical cost convention in accordance with the generally accepted accounting principles.

**2 Recognition of Income & Expenditure**

The College follows mercantile system of accounting and recognizes income and expenditure on accrual basis and as a going concern accounting policies are consistent with the generally accepted accounting principles.

**3 Fixed Assets and Depreciation**

Fixed Assets are stated at their original cost of acquisition and / or construction and cost of improvements thereon inclusive of inward freight, duties and taxes, cost of installation, pre-operational expenses including finance charges and other incidental expenses in relation to such acquisition / construction / improvements. The College carries out physical verification of all assets in phased manner which is reasonable having regards to the size of the College and nature of its Assets.

Depreciation on fixed assets is charged on written down value method at the rates prescribed in schedule XIV under the Companies Act, 1956 except on library books where it is charged at the rate of 50 per cent.

In respect of additions and sale of fixed assets during the year, depreciation is provided on pro-rata basis.

**4 Inventories are valued at cost**

**5 Retirement Benefits**

- a) The liability towards gratuity is covered by Group Gratuity Policy with Life Insurance Corporation of India. Contribution to the fund is based on actuarial valuation carried out at the end of the year.
- b) Leave Encashment is done on cash basis
- c) Contribution to Provident Fund, Employee State Insurance and other funds are determined under the relevant statute and charged to revenue account.

**6 Contingent Liability**

There is no contingent liability.



## B. Notes on Accounts:

- 1 Admission Fee received from the students has been transferred to the Reserve Fund.
- 2 Fixed Deposits includes a sum of Rs.40 lacs held jointly in the name of All India Council for Technical Education (AICTE) and the Trust.
- 3 The Institute has received Government Grants under various schemes. An amount of Rs.19.37 lacs has been utilized during the year out of the available balance of Rs.31.57 lacs (Rs.17.98 lacs received during the year). The balance amount of Rs.12.20 lacs will be utilized subsequently. The same is shown under the head Current Liabilities.
- 4 The Institute has been awarded grant amounting to Rs.400 lacs (including Institute's share of Rs.80 lacs), under the World Bank assisted Technical Education Quality Improvement Programme of Government of India (TEQIP) Phase – II to be utilized over a period of four years. As per the scheme of arrangement during the year the Institute has received 128 lacs and has made its share of contribution to the tune of Rs.32 lacs. An amount of Rs.127.48 lacs has been utilized during the year out of the available balance of Rs.218.98 lacs. The balance amount of Rs.91.50 lacs will be utilized subsequently. Further as per the terms of scheme the Institute has also earmarked Rs.20 lacs during the year as reserve fund.
- 5 In the opinion of the Management, Current Assets, Loan and Advances have a value on realization at least equal to the amount at which they are stated.
- 6 The Institution is a unit of Public Charitable Trust and is not carrying out any commercial or business activity with a profit motive and has complied with the Accounting Standards as applicable to it.
- 7 The College has reviewed its liabilities in respect of retention money and other expenses for which cheques issued have become stale. During the year under review the College has written off liabilities amounting to Rs.0.09 lacs.
- 8 During the year under review the Institute has written off assets having written down value of Rs.5.85 lacs.
- 9 Figures for the previous year have been re-grouped and / or re-arranged wherever considered necessary.

AS PER OUR REPORT OF EVEN DATE

**FOR RUSTAGI & COMPANY**  
CHARTERED ACCOUNTANTS

*R. N. Rustagi*

**R. N. RUSTAGI**

(PARTNER)

Membership No.10467

PLACE: KOLKATA

DATED: THE 22<sup>ND</sup> DAY OF AUGUST 2015

**FOR HERITAGE INSTITUTE OF TECHNOLOGY**

*A. R. G. G. G.*

**CHAIRMAN**

*S. S. S.*

**SECRETARY, KALYAN BHARTI TRUST**

*Q. S. S.*

**TREASURER, KALYAN BHARTI TRUST**







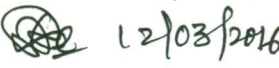
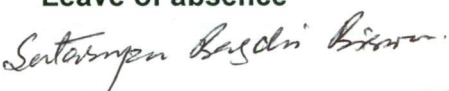

# HERITAGE INSTITUTE OF TECHNOLOGY, KOLKATA

43<sup>rd</sup> Meeting of the Board of Governors

Date : Saturday, 12<sup>th</sup> March, 2016. Time : 11.00 a.m.



Venue: Conference Room of the Institute


## ATTENDANCE SHEET

Name		Signature
1. Shri P. R. Agarwala	Chairman	
2. Shri Vikram Swarup	Vice-Chairman	Leave of absence
3. Shri V. Saran	Member	Leave of absence
4. Shri N. P. Dalmia	Member	Leave of absence
5. Shri H. P. Budhia	Member	Leave of absence
6. Shri Siddharth Swarup	Member	
7. Swami Atmapriyananda	Member	Leave of absence
8. Smt. Madhumita Ray	Member	
9. Prof. (Dr.) Parameswar De	Member	
10. Regional Officer (ERO), AICTE	Member	
11. Prof. (Dr.) N. P. Nayak	Member	Leave of absence
12. Ms. Satarupa Bagchi Biswas	Member	
13. Prof. (Dr.) Pranay Chaudhuri,	Member Secretary	

### Invitees:

14. Shri H. K. Chaudhary
15. Shri Sajjan Bhajanka
16. Shri Jaydeep Chitlangia
17. Prof. (Dr.) Sajal Dasgupta
18. Shri Probir Roy
19. Shri P. K. Agarwal
20. Prof. B. B. Paira
21. Prof. K. K. Chaudhuri
22. Prof. (Dr.) D. C. Ray
23. Prof. Bimalendu B Bhattacharya
24. Prof. (Dr.) S. Biswas
25. Prof. (Dr.) B. R. Saha
26. Prof (Dr.) Ratul Kumar Majumdar
27. Shri R. P. Sinha
28. Shri Manoj Saraogi
29. Shri Arvind Srivastava


**MINUTES OF THE FORTY-THIRD MEETING OF THE BOARD OF GOVERNORS  
HELD ON SATURDAY, THE 12<sup>TH</sup> March, 2016 IN THE CME CONFERENCE  
ROOM OF THE INSTITUTE**

**Members Present:**

*Shri Prahlad Rai Agarwala*                      *in the Chair*  
*Smt. Madhumita Ray*  
*Prof. (Dr.) Parameshwar De*  
*Ms. Satarupa Bagchi Biswas*  
*Prof. (Dr.) Pranay Chaudhuri*              *Member-Secretary*

**Leave of Absence was granted to:**

*Shri Vikram Swarup*  
*Shri H.P. Budhia*  
*Shri Siddharth Swarup*  
*Shri V. Saran*  
*Shri N. P. Dalmia*  
*Prof. (Dr.) N.P. Nayak*

**Special Invitees:**

*Prof. (Dr.) D. C. Ray*  
*Prof. (Dr.) R.K. Majumdar*  
*Shri Arvind Srivastava*

After granting leave of absence as mentioned above, the Chairman welcomed all the members and invitees present in the meeting.

'OM' was chanted for three times before starting the meeting.

**Agenda Item No. 1: Confirmation of the Minutes of the 42nd Meeting of the  
BOG held on Saturday, 5<sup>th</sup> December, 2015**

Minutes of the 42<sup>nd</sup> Meeting of the BOG held on 5<sup>th</sup> December, 2015 were duly circulated and since no comments were received, it was confirmed.

**Agenda Item No. 2: Action taken report on the resolutions/decisions made in  
the last meeting**

The BOG noted and approved the ATR in respect of decisions taken in the previous meeting.

PC

Agenda Item No. 3: **To consider a report on TEQIP-II**

The BOG approved utilization of funds till 12.03.2016 as under:

Sl. No.	Head	Rs. (in Lakhs)
1.	Total sanctioned fund	400.00
2.	Bank interest earned as on 12.03.2016	6.65
3.	Cumulative Expenditure incurred in the project as on 12.03.2016	386.27
4	Balance in hand as on today (12.03.2016)	20.38

BOG noted and approved that the Institute contributed Rs. 13.00 lacs (0.5% of the total annual expenditure) on 28.01.2016 as per TEQIP-II norms to each of the following 4 (four) funds:

1. TEQIP-II Corpus A/c
2. TEQIP-II Faculty Development A/c
3. TEQIP-II Equipment Replacement A/c
4. TEQIP-II Maintenance A/c

The BOG also noted that the accumulated balance in all four funds as on 28.01.2016 is Rs. 177.20 lacs.

The BOG further approved the following:

- As per advice of SPFU, package wise procurement plan (25% additional fund in our case) was finalized in a meeting convened by the TEQIP Coordinator on 10.02.2016. This meeting was chaired by Principal & TEQIP Head.
- An expenditure of Rs.2,56,000 incurred in connection with Teaching Assistantship being provided to 8 (eight) 2<sup>nd</sup> year M.Tech. students for the period September to December 2015.
- An expenditure of Rs.2,47,259 incurred in connection with FDP organized outside the Institute in respect of 27 members of faculty and staff.
- An expenditure of Rs.10,00,161 (approx) would be incurred in connection with International Conference on "Advances in Bioprocess Engineering & Technology" organized within the Institute.
- An expenditure of Rs.79,337 incurred in connection with organizing 2 (two) FDPs within the Institute.

PC



- An expenditure of Rs.6,033 incurred in connection with printing charges of Ph.D. thesis in respect of 1 (one) member of faculty.
- An expenditure of Rs.1,697 incurred in respect of 1 (one) member of faculty for publication in an International Journal of Cardiology and Angiology.
- An expenditure of Rs.1,500 incurred in respect of 1 (one) member of faculty for publication in World Journal of Engineering Research and Technology.
- An expenditure of Rs.1,60,542 incurred in connection with attending 12 (twelve) conferences / workshops / seminars / training programs.
- An expenditure of Rs.48,266 would be incurred in connection with attending 2 (two) International Conferences.
- An expenditure of Rs.30,729 incurred in connection with industrial visits in respect of CE and ChE students under the supervision of I-I-I Cell.
- An expenditure of Rs.43,400 incurred in connection with hospitality for campus recruitment drive (2016 graduates).
- An expenditure of Rs.50,000 would be incurred in connection with programmes organized by different departments under the supervision of I-I-I Cell.
- Mr. Pradip Agarwal, CEO, KBT attended the workshop "Leading People in Organization" conducted by Wharton, University of Pennsylvania as a representative of the BOG from 4th November to 7th November 2015. An expenditure of Rs.3,33,342 has been incurred for the same.
- Budgetary expenditure of Rs.72,000 was approved by Principal and TEQIP Head for holding workshops for framing syllabus of 3<sup>rd</sup> year B.Tech. programmes of the Institute. Till date Rs.23,000 was incurred for the same.
- An expenditure of Rs.50,050 incurred in connection with conducting remedial classes and workshops by different departments under the Equity Assurance and Finishing School activities.

- An expenditure of Rs.9,380 incurred in connection with presenting a paper in an International Conference on Communication, Control and Computing 2015 (IEEEICC 2015) by Ms. Ashmi Banerjee, 4<sup>th</sup> year CSE student.
- Service of Mr. Subhajyoti Dutta, Office Assistant, TEQIP-II project has been extended for a further period of 6 months w.e.f. 22.1.2016.

Agenda Item No. 4: **To consider the recommendations of the Academic Council**

7<sup>th</sup> meeting of Academic Council was held on 11.02.2016 in which following salient recommendations were made:

- Revision of the Syllabus for the Paper HMTS2002 [Indian Culture and Heritage]
- Introduction of a new clause and amendment of an existing clause in the Examination Rules
- Amendment of Clause-5.4.2.2 (Ref: Statutes, Rules & Regulations, p. 25): The portion "There shall be no separate supplementary examinations under normal condition for I / II / IIIrd year B.Tech., I/IIrd year MCA, 1st year M.Tech. However, for final year students, supplementary examinations only in respect of 7th & 8th semester for B.Tech., 5th & 6th semester for MCA and 3rd and 4th semester for M.Tech. shall be held within one month from the date of publication of final semester results."

is to be replaced by

- *"There shall be no separate Supplementary Examinations for 2nd and 3rd year B Tech. However, for 1st year and final year students, Supplementary Examinations only in respect of 1st and 2nd semester for 1st year B Tech and M Tech, 3rd and 4th semester for final year M Tech, and 7th and 8th semester of final year B Tech shall be held within one month from the date of publication of results."*
- Clause-5.4.2.6: A new clause be included in the Statutes, Rules and Regulations under "**Scope for Grade Improvement**" as  
  
*"A candidate may apply to re-appear in a regular examination of an already passed paper to improve the grade by depositing the requisite fees. Maximum number of such attempts will be two (2) in the entire degree program."*

PC,

*The internal assessment marks of the paper(s) will however be carried forward. If the grade obtained in the repeat examination is lower than his / her original grade, the original grade shall prevail."*

- Revision of the Syllabus for the Paper CSEN 2201 (Design and Analysis of Algorithms)
- Consideration of results of Odd semester 2015-2016

The BOG considered and approved the above mentioned recommendations of the Academic Council.

**Agenda Item No. 5: To consider a report on various activities of the Institute since the last meeting**

The BOG noted the following:

→ The Institute has submitted application to AICTE on 17.02.2016 for the Academic Year 2016-2017 in respect of

- Extension of Approval of all existing B.Tech. & M.Tech. programmes
- Introduction of new M.Tech. programme in Renewable Energy to be offered by the Dept. of Chemical Engineering

→ Computer Application Centre, HIT has submitted application to AICTE on 12.02.2016 for the Academic Year 2016-2017 for the extension of approval of MCA course

→ Result of Odd Semester Examination 2015-2016 under Autonomy was published on 18.02.2016

→ Visit by Expert Committee from IIT Kharagpur for evaluation of various activities under the Knowledge Incubation for TEQIP

→ The Institute has submitted the hard and soft copy of the NIRF (National Institutional Ranking Framework) application to the concerned authority on 24.02.2016 for the purpose of ranking

→ Students Achievement / Activities organized during the period under report



→ Student Development Programme during the period under report

→ XAT 2016, a prestigious All India Level Entrance Test, was held on 03.01.2016 at the Institute

→ Special Lectures / Seminars / Workshops organized during the period under report

→ Celebration of E-Week in association with National Entrepreneurship Network (NEN) from 20-27.02.2016

**Agenda Item No.6: To consider a report on training and placement activities**

The BOG considered and approved the report of the Training & Placement Cell. The BOG also noted that specific skills training programmes for individual unplaced students are identified to increase employability based on the results of the CII Wheebox tests.

**Agenda Item No.7: To consider a report on the progress of construction activities**

The BOG expressed satisfaction at the progress of construction activities.

**Agenda Item No.8: To report on HR related matters since the last meeting**

The BOG considered and approved (i) the appointment of 5 (five) members of Faculty and 1 (one) Staff on the basis of recommendations of the respective Selection Committee(s) constituted for the purpose (ii) cases of resignation/ retirement of 8 (eight) persons (along with reasons for their leaving) and (iii) Career Progression in respect of 1 (one) member of faculty since the last meeting held on 05.12.2015.

**Agenda Item No.9: Miscellaneous**

- (i) It was proposed that the Institute should submit an application for introduction of Differential Fee Structure to the Fee Structure Committee, Govt. of West Bengal, through the Director of Technical Education, Govt. of West Bengal for permission to charge 10% additional tuition fees in view of our autonomous status as per recommendation of National Fee Structure Committee constituted by AICTE. The proposal was approved by the BOG.

*K.*

- (ii) Smt. Madhumita Ray, Secretary, Dept. of Higher Education, Govt. of West Bengal suggested that makeup classes should be arranged for late admitted students. She also suggested that the proposal of differential fee structure may be forwarded to Hon'ble Justice (Retired) Pradipta Ray, Chairman, Fee Structure Committee, Govt. of West Bengal on account of financial burden of having Autonomous status and NBA Accreditation of the Institute.

There being no other item, the meeting ended with a vote of thanks to the Chair.

*P. R. Agarwala*

**Prahlad Rai Agarwala**  
Chairman  
Board of Governors

*P. Chaudhuri*

**Prof. (Dr.) P. Chaudhuri**  
Member Secretary  
Board of Governors



### **Declaration by the Head of the Institution**

I certify tht the data included in Self-Study Report (SSR) are true to the best of my knowledge.

This SSR is prepared by the institutions after internal discussions, and no part thereof has been outsourced.

I am aware tht the Peer team will validate the information provided in this SSR during the peer team visit.



Signature of the Head of the institution  
with seal:

Place: Heritage Institute of Technology, Kolkata

Date : 31<sup>st</sup> May 2016

