Volume: II

SELF STUDY REPORT

CYCLE - I

Submitted to

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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VOLUME - II

EVALUATIVE REPORTS OF THE DEPARTMENTS
(PART – D)

May 2016

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DEPARTMENT OF

APPLIED ELECTRONICS
&
INSTRUMENTATION ENGINEERING

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 engilish	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
	Opeation reaearch & 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	▪ MEMS based sensor ▪ Instrumentation for BLDC motor ▪ Electrical impedance topography and different application in instrumentation.	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	▪ Bio medical Instrumentation	25	0
Arabinda Kumar Pal	MTech	Associate Prof	▪ Soft computing ▪ Control engg ▪ Process control system	22	0

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. students guided in last 4 years
Santanu Ghorai	PhD	Associate Prof	▪ Signal & image processing ▪ Machine learning algorithm	15	1 a) Pradip Saha (Registered in Jadavpur University)
Soumik Das	PhD	Asst.Prof	▪ Power electronics ▪ Energy studies	10	0
Anil Kr. Bag	PhD	Asst.Prof	▪ Process control ▪ Industrial Instrumentation ▪ Sensors and Transducers	13	0
Pradip Saha	MTech	Asst.Prof	▪ Signal processing ▪ Pattern recognition	10	0
Indrajit Naskar	MTech	Asst.Prof	▪ Electronics circuits ▪ Control engg ▪ Sensors and Transducers	14	0
Reshma Sengupta	MTech	Asst.Prof	▪ Instrumentation ▪ Control engg	9	0
Arindam Sarkar	MTech	Asst.Prof	▪ Power electronics ▪ Opto electronics	7	0
Samiul Alam	MTech	Asst.Prof	▪ Biomedical instrumentation	9	0
Damayanti Ghosh	MTech	Asst.Prof	▪ Microprocessor & Microcontroller ▪ Electronic measurement ▪ Biomedical instrumentation	7	0
Samik Chakraborty	MTech	Asst.Prof	▪ Signal processing ▪ Industrial Instrumentation ▪ Bio medical instrumentation	5	0
Debjyoti Chowdhury	M. Tech	Asst. Prof.	▪ Mechatronics ▪ Embedded system ▪ Microelectronics devices	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:

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 3rd 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, 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 & Implermentation 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. Reshrna Sengupta, "Design & Implermentation 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. Reshrna 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 Imerging 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.

- Prof.(Dr.) Madhurima Chattopadhyay, "Qualitative Analysis of Two liquids in an Immiscible mixture using Electrical Impedance Tomography", International Journal of Electrical, Electronics and Data Communication, vol. 2, no. 6, pp. 50-53, 2014, ISSN: 2320-2084.

- Pradip Saha, Dr. Santanu Ghorai "A Novel Technique of Black Tea Quality Prediction Using Electronic Tongue Signals", IEEE Transactions on Instrumentation and Measurement, 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, 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", Computatioal 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. Pradip Saha, 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. Pradip Saha, Prof. (Dr.) Santanu Ghorai "Optimization of Sensor Arrary 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:

- 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'	10th Aug. 2012, HIT-K
	2nd International Conference on MICRO – 2015	11th – 12th July 2015
	Information systems Design and Intelligent Applications (INDIA-2015)	Jan, 2015
Prof. (Dr.) Madhurima Chattopadhyay	2nd International Conference on Microelectronics, Circuits & Systems	July, 2015
	Third International Conference on Computer, Communication, Control and Information Technology (C3IT)	7th & 8th Feb 2015
	INUP Familiarization Workshop on "Nanofabrication Technologies	8th – 9th October 2015, IIT Patna
	ITR International Conference	2014
	ICECI 2014	16th – 17th Jan, 2014
	Industry Academic Workshop on Instrumentation & Control	10th – 11th Nov, 2014
	1st International Conference on	27th – 28th Sept., 2013

Faculty name	Workshop/ Seminar/ Conference/ FDP	Date
	Computational Intelligence: Modelling, Techniques and Applications (CIMTA- 2013)	
	Second Intl. Conf. on Advances in Electronics, Electrical and Computer Engineering (EEC 2013)	22nd – 23rd June, 2013
	IEEE Workshop on MEMS, Microfluidics & Microsystems with Hands on Training in Device Simulation & Microfabrication Programme	4th – 6th July, 2013
	3-day Workshop on Research Methodology	29th – 31st July, 2013
	2nd International Conference on Computing, Communication and Sensor Network- CCSN-2013	22nd – 24th Nov, 2013
	2nd International Conference on Control, communication, computer and Information Technology (C3IT-2012)	25th – 26th Feb 2012
	International Conference on Advanced Communication Control and Computing Technologies (ICACCCT)	23rd – 25th Aug, 2012
	5th International Conference on Computer and Devices for Communication (CODEC 2012)	17th – 19th Dec 2012, Kolkata
	FDP on Cloud Computing	10th Aug 2012 HIT, Kolkata
	6th International Conference on Sensing Technology (ICST-12), Kolkata	19th - 21st Dec, 2012
	International Conference on Advances in Electronics, Electrical and Computer Science Engineering(EEC -12)	7th – 9th July 2012
	International Conference on Advances in Engineering, Science and Management (ICAESM)	30th – 31st March 2012
	4th International Conferences on Recent Advances in Mathematics, Technology and Management,	Jan, 2012
	2nd Annual International Conference IEMCON-2012	Jan, 2012
	International Conference on Recent Advances in Mathematical Sciences & Applications	9th – 11th Dec 2011
	Work Shop on VLSI Design: Recent Trends and Technologies, NSEC, Kolkata	2011
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	Feb. 7-8, 2015, Academia of

Faculty name	Workshop/ Seminar/ Conference/ FDP	Date
	Technology (C3IT 2015)	Technology, Hooghly, West Bengal
	FDP on Effective Teaching	17-19th Nov., 2014, IIT KGP
	FDP on Embedded Systems and PCB Design	July 6-10, 2015, Department of AEIE, Heritage Institute of Technology
	1st 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,
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

Faculty name	Workshop/ Seminar/ Conference/ FDP	Date
	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
	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 Pepprl+Fuchs	24th February,2012 / HIT-K
	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

Faculty name	Workshop/ Seminar/ Conference/ FDP	Date
	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.
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.
	Workshop on Mobile Computing & Wireless	Oct. 24-25, 2013,

Faculty name	Workshop/ Seminar/ Conference/ FDP	Date
	Sensor Network	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 (21st 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	4th April, 2012
	Workshop on Foundation Fieldbus Technology	24th February 2012 / Heritage Institute of Technology,Kolkata
	CONFERENCE- 1st National conference on Instrumentation and Control (NATCONIC-2011)	6-7th 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

Faculty name	Workshop/ Seminar/ Conference/ FDP	Date
	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
	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	6th Nov., 2015
	FDP-Embeded 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	1st Aug., 2014
	FDP -Machine intelligence	15-19 july,2013
	CONFERENCE -2nd National conference on Instrumentation and Control(NATCONIC-2013)	26-27th 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	20th Jan., 2012
	FDP-Wireless SensorNetworking	17-19 July 2012
	SEMINAR-Vacuum Technology	24.04.2012
	SEMINAR-Power electronics device and application	4th April, 2012

Faculty name	Workshop/ Seminar/ Conference/ FDP	Date
	CONFERENCE- 1st National conference on Instrumentation and Control (NATCONIC-2011)	6-7th January, 2011
Reshma Sengupta	FDP on ‘ Embedded system and PCB design’ under TEQIP-II	06.07.15-10.07.15, HIT-K
	Workshop on ‘Mobile Computing & Wireless Sensor Networks’ under TEQIP-II	24.10.13- 25.10.13, HIT-K
	TCS Workshop on 'Cloud computing'	10.08.12, HIT-K
	Traning on changing role of the teacher-TEQIP-II	21.07.12, HIT-K
	FDP on 'Wireless Networking'-by IT dept.	17.07.12- 19.07.12, HIT-K
	Seminar on 'Vacuum Technology'-by AEIE dept.	24.04.12, HIT-K
	Seminar-cum -workshop on 'Foundation Fieldbus training module'-by Pepprl+Fuchs	24.02.12, HIT-K
	Seminar on 'YOKOGAWA training module & simulation'-by YOKOGAWA India Ltd.	22.02.12, HIT-K
	Workshop on 'Wireless Communication & Computing:Current trends & research'-by IT dept	20.01.12, HIT-K
	Seminar on 'Fieldbus Technology'- by Pepprl+Fuchs	25.10.11, HIT-K
Damayanti Ghosh	1. Seminar on Energy Technology for tomorrow in conjunction with Instrumentation Engineering. 2. Sensors for disease detection.	06.11.2015 at HIT-K
	FDP on Embedded System and PCB Design (TEQIP-II)	06/07/2015 - 10/07/2015 at HIT-K
	FDP on Changing role of the teacher- TEQIP-II	21.07.12.
	FDP on 'Wireless Networking' - by IT dept, HIT-K	17.07.12- 19.07.12
	Seminar on 'Vacuum Technology'-by AEIE dept., HIT-K	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	7th ISSS National Conference on MEMS, Smart Materials, Structures & Systems	23rd -25th Sep, 2015
	Five Days Hand on FDP on Embedded Systems and PCB Design.	06th -10th July, 2015
	Academia Workshop on “Instrumentation & Control” Organized by PCI	10th -11th Nov, 2014

Faculty name	Workshop/ Seminar/ Conference/ FDP	Date
	Pedagogy for effective use of ICT in Engineering Education	12th June -02nd Aug, 2014
	National Conference on Recent Developments and Applications of Nano Science and Technology	14th -15th 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
	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 13th March 2016 for this astounding contribution.They were awarded with 1 lakh to further pursue the above work.

- 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 for Invited Talk 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, 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	6th Nov., 2015	funded by TEQIP-II

Sr. no	Title of Seminars/ Conferences/Workshops conducted	Convener	Date of Seminars/ Conferences /Workshops	Funding
2.	Embedded system and PCB design,	Dr. Madhurima Chattopadhyay	6-10th Jul., 2015	funded by TEQIP-II
3.	Importance of embedded and other electronics system	Dr. Madhurima Chattopadhyay	14th Nov., 2014	funded by TEQIP-II
4.	Embedded system	Dr. Madhurima Chattopadhyay	1st Aug., 2014	funded by TEQIP-II
5.	Analytical instrumentation	Dr. Madhurima Chattopadhyay	1st Aug., 2014	funded by TEQIP-II
6.	Instrumentation- in industry Practical- Aspects	S. Bagchi	23rd Feb., 2013	funded by TEQIP-II
7.	Vacuum technology	A.K. Pal	24th April, 2012	Funded by Institute
8.	Power electronics device and application	A.K. Pal	4th April, 2012	Funded by Institute
9.	International conference on electronics communication and instrumentation (ICECI), Technically sponsored by IEEE,	S. Bagchi	16-17th January, 2014	funded by TEQIP-II
10.	2nd National conference on Instrumentation and Control(NATCONIC-2013),	Dr. Santanu Ghorai Dr. Soumik Das	26-27th February, 2013	funded by TEQIP-II
11.	1st National conference on Instrumentation and Control (NATCONIC-2011)	Sreeparna Dasgupta	6-7th 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 Campus selection Other than campus recruitment	71.80% 9.00%
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 with ICT facility: ICT facility is installed in one classroom.
- Students' laboratories: 18 (UG=13, PG=5)
- Research laboratories: 01

28. Number of students of the department getting financial assistance from college-Government sponsored scholarship

Year	AEIE	1st year	2nd year	3rd year	4th 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 and discussed infront of industry experts present in the Board of Studies to frame the syllabus under 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 alumni 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 in 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	▪ Dr.Nabarun Bhattacharya, Associate Director, C-DAC, Kolkata. ▪ Mr.Arunava Chakraborty, Project Manager, Honeywell. ▪ Mr. Sarbajit das, Founder & CEO, Sundew Solutions.
Seminar under TEQIP-II	▪ Sensors for disease detection. ▪ Energy Technology for Tomorrow in Conjunction with Instrumentation Engineering. Date: 06.11.2015	▪ Prof. Panchanan Pramanik, Ex-Prof., Dept. of Chemistry, IIT Kharagpur. ▪ Prof. Biswajit Ghosh, Prof. Dept. of Energy Studies, JU.
Seminar	▪ Instrumentation in IT ▪ Analytical Instrumentation ▪ Embedded System Date: 31.07.2014, 01.08.2014	▪ Mr. Sarbajit Das, Founder & CEO, Sundew Solutions Pvt. Ltd. ▪ Mr. Sugata Bandyopadhyay, Senior General Manager, TATA Consulting Engineers Ltd., Saltlake. ▪ Mr. Anupam Baid, Director, Baid Power Services Pvt. Ltd., Lake Town, Kol-89.
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 HIT-K 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, HIT-K.

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 / White board
- OHP
- Projectors

34. How doe 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 HIT-K are expected to attend the following with in 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 HIT-K 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.

Industrial Tour Industrial tours are organized for 2nd & 3rd year B.Tech students and 1st year M. Tech students to enable them to understand the practical application of the engineering knowledge better.

Microcontroller based Project Competition Application ability of the students is encouraged by organizing interdepartmental workshop with project competition based on microcontroller.

Grooming and Personality Development	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 to generate revenue through better exploitation of consultancy.
  - To be 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 loosing 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.

APPLIED ELECTRONICS & INSTRUMENTATION ENGG.

DEPARTMENT OF

BIOTECHNOLOGY

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 courses for Humanities, Management, Chemistry, Physics, Mathematics, Electrical Engineering, Mechanical Engineering, Electronics Engineering, Computer Engineering and Chemical Engineering departments.

Programme	Interdisciplinary Course	Offering Department
B.Tech. in Biotechnology	Business English & Language Practice Lab (Level 1)	Humanities
	Physics I & Physics I Lab	Physics
	Mathematics I	Mathematics
	Basic Electronics Engineering & Basic Electronics Engineering Lab	Electronics & Communication Engineering
	Engineering Mechanics & Workshop Practice	Mechanical Engineering
	Introduction to Computing & Introduction to Computing Lab	Computer Science & Engineering
	Chemistry I & Chemistry I Lab	Chemistry
	Mathematics II	Mathematics
	Basic Electrical Engineering & Basic Electrical Engineering Lab	Electrical Engineering
	Engineering Thermodynamics and Fluid Mechanics	Mechanical Engineering
	Engineering Drawing	Mechanical Engineering

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	Humanities

	Management	
	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	**Participation of Department of Biotechnology**
Information Technology	Bioinformatics

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	33	0

			development, Structure-based Drug Design, Drug Delivery, Computational Biology.		
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. (Biotechnology): 15:1
PG -M.Tech. (Biotechnology): 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 lakh

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.) : 10
- Citation Index-range/average: range: 0 - 321
- SNIP : 0-1.8
- SJR : 0-2.30
- Impact factor-range/average: 0 - 5.94
- h-index : 0-7

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 nimbidiol 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].
    - Process for the preparation of a novel disaccharidase enzyme composition from the plant Tinospora cordifolia useful for disaccharide intolerence 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 department 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 Mondal 3. Koel Mukherjee 4. Madhurima Mukhopadhyay 5. Nidhi Khandelwal 6. Pranav Preman 7. Riddhipratim Mondal 8. Sagnika Dutta 9. Shreya Sengupta 10. Singini Paul 11. Sougata Pramanick 12. Sangita Basak	2014

Name of Award/Recognition	Name of student	Year
	13. Ahana Chatterjee 14. Dishary Banerjee	
	1. Ms. Abira Sahoo 2. Ms. Debapriya Sinha 3. Ms. Pratity Ray 4. Mr. Govinda Sharma 5. Mr. Dipayan Ghosh 6. Rakesh Das - IISER	2013
	1. Sayantan Ghosh 2. Rupesh Agarwal 3. Payal Chirania 4. Ayesha B. Khandekar	2012
Novozyme Award	Shreyasree Bose	2014
38th W.B. State Archery Championship – 2nd place	Pallabi Kundu	2015
4th Inter-district Archery Meet – 2nd place	Pallabi Kundu	2015

20. Seminars / Conferences / Workshops organized and the source of funding (national and international) with details of outstanding participants, if any.

Seminar/Conference

Title	Name of the Expert/ Invited speakers	Funding Agency	Date/Year	Highlights
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	20th Jan - 22nd Jan 2016.	International Conference Attended by renowned scientists across the globe Selected papers for oral presentations are being published by Elsevier-Materials Today journal
Biotechnology for Sustainable Development	-	Institute funded	Feb 2012	National Seminar Eighty papers presented from different parts of India One paper was from Bangladesh

Workshop:

Title	Name of the Expert	Funding Agency	Date/Year	Highlights
Analytical Techniques for Characterization of Biological Macromolecules	➢ Dr. Debi Prasad Sarkar, Professor, Department of Biotechnology, University of Delhi, ➢ Dr. Debashish Mitra, Scientist 'G', National Centre for Cell Sciences (NCCS), Pune ➢ Dr. Rabindranath Mukhopadhyaya Former Scientist, Advanced centre for Treatment, Research and Education in Cancer	Funded by TEQIP	30th Jan – 1st Feb 2013	☐ Organized by Department of Biotechnology ☐ Benefitted both faculty and technical staff
Workshop on Computational Biology & Protein Structure Prediction	➢ Dr.Dhananjay Bhattacharyya, Saha Institute of Nuclear Physics, Kolkata. ➢ Dr.Soumalee Basu, University of Calcutta ➢ Dr. Rajgopal Chattopadhyaya, Bose Institute, Kolkata ➢ Dr.Chhabinath Mondal, NIPER,Kolkata ➢ Dr.Saikat Chakrabarti, Indian Institute of Chemical Biology, Kolkata ➢ Dr.Debnath Pal, IISc, Bangalore ➢ Chitra Dutta, Indian institute of Chemical Biology, Kolkata ➢ Dr.Pinakpani Chakrabarti. Senior Professor & head, Centre of Excellence in Bioinformatics, Bose Institute,Kolkata ➢ Rahul Banerjee, Professor,Saha institute of Nuclear Physics	Funded by TEQIP	23rd Sep – 27th Sep 2013	☐ Organized by Biotechnology Department ☐ Benefitted faculty in understanding an emerging field with hands on training.

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 August 2014	1 day workshop By sports and youth motivator For B.Tech students
Workshop on operation and maintenance of Sophisticated Instruments	➢ Dr. Amit Kumar De ➢ Dr. Prabal Chakraborty ➢ Dr. Sagaramoy Ghosh	Funded by TEQIP	18th to 20th March 2015	For Technical Assistants
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
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.

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 cholarae 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

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

Name of the Course (Refer question no. 2)	Applications Received	Selected		Pass Percentage	
		Male	Female	Male	Female
B.Tech Biotechnology (2011-15)	60	22	37	100	100
M.Tech Biotechnology (2013-15)	18	4	8	100	100

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
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?

Name of Examination	Number of students cleared
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 ➢ Other than campus recruitment	 54 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 deapartment 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).

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	Sapyan 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 cholarae 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
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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
Thallasemia 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
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. Doraiswami Ramakrishna 5. Prof. U. Banerjee 6.Prof. P.K. Bhattacharya	Funded by TEQIP Phase II	20th Jan - 22nd Jan 2016.	International Conference Attended by renowned scientists across the globe Selected papers for oral presentations are being published by Elsevier-Materials Today journal
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:

a. Lectures & tutorials
b. Chalk & board
c. Presentation (Still and Video)
d. Experimental Laboratory Work
e. Assignments
f. 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 graduatation:

- 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 an 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 microgranisms, 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 followi ng 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 Lecture Series	➢ Biotechnology and its Prospects on 31st October 2014 by Dr. Sudit Mukhopadhyay ➢ Vibrio cholarae pathogenesis in humans and zebrafish on 13th Feb 2015 by Prof. Jeffrey H. Withey ➢ Role of human placental extract in wound healing on 2nd Aug 2013 by Dr. Subhasri Bandopadhyay ➢ Peptide chemistry and biology at the intersection of Drug Design on 7th Feb 2013 by Dr. Victor J. Hruby ➢ Sustainable Development: Myth or Reality on 21st Sep 2012 by Dr. Ashish Ghosh ➢ Biological and cultural determinants of autism, from genes to neural information processing to behavior on 3rd Feb 2012 by Dr. Matthew Belmonte
Workshop	➢ One day interactive session on Time and Stress Management on 10th Feb 2012 by Mr. Amit Chakraborty . ➢ Analytical Techniques for Characterization of Biological Macromolecules" on 30th Jan – 1st Feb 2013 by ▪ Dr. Debi Prasad Sarkar, Professor, Department of Biotechnology, University of Delhi, ▪ Dr. Debashish Mitra, Scientist 'G', National Centre for Cell Sciences (NCCS), Pune ▪ .Dr. Rabindranath Mukhopadhyaya

	Former Scientist, Advanced centre for Treatment, Research and Education in Cancer ➢ Workshop on Computational Biology & Protein Structure Prediction Organized by Biotechnology Dept on 23rd – 27th September 2013 by ▪ Dr.Dhananjay Bhattacharyya, Saha Institute of Nuclear Physics, Kolkata. ▪ Dr.Soumalee Basu, University of Calcutta ▪ Dr. Rajgopal Chattopadhyaya, Bose Institute, kolkata ▪ Dr.Chhabinath Mondal, NIPER, Kolkata ▪ Dr.Saikat Chakrabarti, Indian Institute of Chemical Biology, Kolkata ▪ Dr.Debnath Pal, IISc, Bangalore ▪ Chitra Dutta, Indian institute of Chemical Biology, Kolkata ▪ Dr.Pinakpani Chakrabarti. Senior Professor & head, Centre of Excellence in Bioinformatics, Bose Institute, Kolkata, Rahul Banerjee, Professor,Saha institute of Nuclear Physics ➢ 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. ➢ Workshop on operation and maintenance of Sophisticated Instruments for Technical Assistants on 18th to 20th March 2015 by ▪ Dr. Amit Kumar De ▪ Dr. Prabal Chakraborty ▪ Dr. Sagaramoy Ghosh ➢ 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.
Seminar/Conference	➢ 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 ➢ National Seminar on Biotechnology for Sustainable Development in Feb 2012 organized by Department of Biotechnology and Chemistry, Heritage Institute of Technology

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 stacked 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.

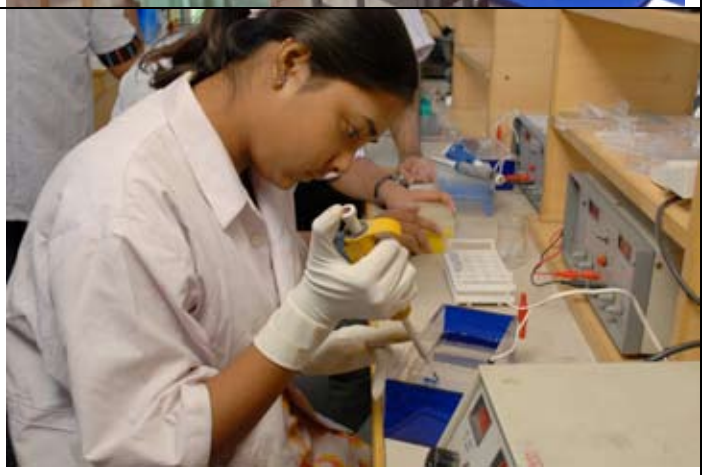
▪ Challenges

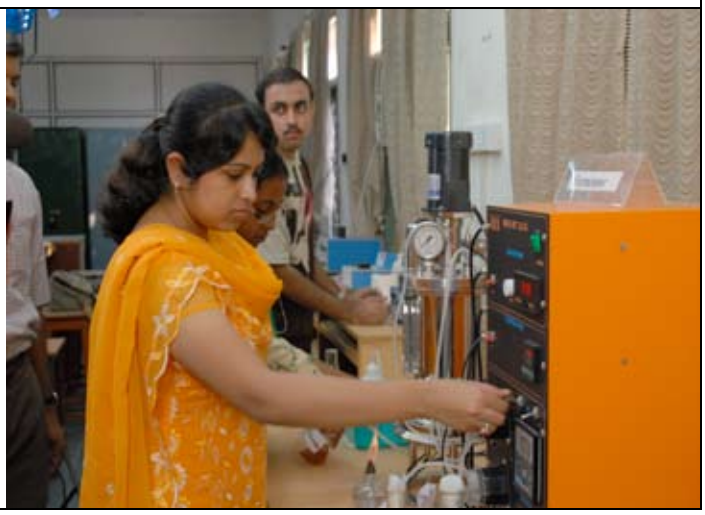
- Other universities offering similar programmes can affect the student intake.
- Effort has to be made to upgrade the department as a centre of excellence.

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.

Faculty
Development
Programme





DEPARTMENT OF CHEMICAL ENGINEERING

1. Name of the Department & Its year of establishment : Department of Chemical Engineering; 2002

2. Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., etc.) : UG : - B. Tech. from 2002 continuing
PG: - from 2009 – 2012 academic year (Discontinued from academic year 2012-13 because of the non-availability of sufficient number of students. This might be due to students preferring jobs.)

3. Interdisciplinary courses and departments involved:

The department offers courses on Humanities, Management, Chemistry, Physics, Mathematics, Electrical Engineering, Mechanical Engineering, Electronics and Communication Engineering, and Computer Science & Engineering. Details are stated in the table below.

Programme	**Interdisciplinary Course**	**Offering Department**
B.Tech in Chemical Engineering	Business English (HMTS1101)	Humanities
	Language Practice lab (Level 1) (HMTS1111)	Humanities
	Co- Curricular activities (HMTS1121)	Humanities
	Indian Culture and Heritage (HMTS2002)	Humanities
	Human values and Professional Ethics (HMTS2001)	Humanities
	Language Practice Lab (Level 2) (HMTS2011)	Humanities
	Economics for Engineers (HU501)	Humanities
	Principles of Management (HU601)	Humanities
	Group Discussion (HU791)	Humanities
	Project Management (HU801B)	Humanities
	Physics-I (PHYS1001)	Physics
	Physics-I lab (PHYS1011)	Physics
	Chemistry- I (CHEM 1001)	Chemistry
	Chemistry–I Lab (CHEM 1011)	Chemistry
	Basic Environmental Engineering & Ecology (CHEM 2001)	Chemistry
	Chemistry -II (CHEM 2201)	Chemistry
	Mathematics-I (MATH1101)	Mathematics
	Mathematics- II (MATH 1201)	Mathematics
	Basic Electronics Engineering	Electronics and

	(ECEN1001)	Communication Engineering
	Basic Electronics Engineering Lab. (ECEN1001)	Electronics and Communication Engineering
	Basic Electrical Engineering (ELEC 1001)	Electrical Engineering
	Basic Electrical Engineering Lab. (ELEC 1011)	Electrical Engineering
	Electrical Machines (CHE 504A, EE)	Electrical Engineering
	Electrical Machine Laboratory (ChE594A,EE)	Electrical Engineering
	Engineering Mechanics (MECH1101)	Mechanical Engineering
	Workshop Practice (MECH1011)	Mechanical Engineering
	Engineering Thermodynamics and Fluid Mechanics (MECH 1201)	Mechanical Engineering
	Engineering Drawing (MECH 1012)	Mechanical Engineering
	Machine Design (CHE 504B, ME)	Mechanical Engineering
	Machine Design Laboratory (ChE594B, ME)	Mechanical Engineering
	Introduction to Computing (CSEN 1201)	Computer Science
	DBMS Lab (CSEN2211)	Computer Science
	Data Structure and Database Concept (CSEN2201)	Computer Science

4. Annual/ semester/choice based credit system :

   Credit Based Semester System

5. Participation of the department in the courses offered by other departments

Department	**Subjects offered by Department of Chemical Engineering**
Biotechnology	Transfer Operation-I Lab (BIOT2211)
	Transfer operation –II Lab (CH-515/BIOT3104)
	Process Instrumentation & Control Lab (CHE783)

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	-
Prof. Bibhuti Ranjan Saha	M. Tech. (CU)	Professor & Registrar	Heat Transfer, Project Engineering, Transport Phenomena	37	-
Prof. (Dr.) Swami Vedajnananda	PhD (JU)	Professor	Bioprocess Engineering, Enviornmental Engineering	37	-
Prof. (Dr.) Sulagna Chatterjee	PhD (UTA)	Professor	Computational Fluid Dynamics, Flow in microchannels	13	-
Prof. (Dr.) Sangita Bhattacharya	PhD (JU)	Assistant Professor	Separation Process including Advanced Separation, Waste water Treatment	21	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	-
Prof. (Dr.) Diptendu Datta	PhD (JU)	Assistant Professor	Ultrafiltration, Membrane Separation	11	-
Prof. Abhuday Mallick	M. Tech. (CU)	Assistant Professor	Petroleum Refinery Engineering & Petrochemicals	5	-
Prof. (Dr.) Pramita Sen	PhD (JU)	Assistant Professor	Reaction Engineering, Membrane technology	5	-

Prof. (Dr.) Dwaipayan Sen	PhD (JU)	Assistant Professor	Biomembrane reactor, nanofiltration, membrane separation	5	2 (Ongoing) Dibyajyoti Haldar and Sirsha Putatunda (Ongoing)
Prof. (Dr.) Aparna Ray Sarkar	PhD (JU)	Assistant Professor	Nonconventional Energy and Pyrolysis	1	-
Prof. (Dr.) Avijit Ghosh	PhD (IIT Guwahati)	Assistant Professor	Nonconventional Energy and Fuel Cell	2	-

JU: Jadavpur University; CU: University of Calcutta; UTA: University of Texas Austin; IIT KGP: Indian Institute of Technology Kharagpur

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 Deproteinated 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	1	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	1	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: 05

  - 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)
  - Arijit Nath, Ooi Chien Wei, Sangita Bhattacharjee, Chiranjib Bhattacharjee, "Emerging Purification and Isolation" in "Food Waste Recovery : Processig Technology and Industrial Techniques", Eds:Chairs M. Galankais, Elsevier Academic Press (ISBN: 978-0-12-800351-0) (July 2015)
  - 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 – 6.0
- 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
2015-2016					
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	
2014-2015					
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 Goswami Assistant Prof., ChE Department	24th -26th September, 2014	IIT KGP	Short term course on 'Faculty Development Programme for effective Teaching' IIT KGP	Pedagogy training
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"

Sl. No.	Name of the faculty	Date	Place	Conference name	Paper name
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
2013-2014					
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

Sl. No.	Name of the faculty	Date	Place	Conference name	Paper name
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 Engineers	National Conference on Recent Trends in Chemical and Allied industries: Engineering Economics and Environment	Optimization of Lactose Hydrolysis by β- galactosidase in lmmoblized mode using Response Surface Methodology
2012-2013					
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.) Aloke 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
2011-2012					
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 served Calcutta Regional Center of IIChE as EC Member during 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, 19th 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, IIChE.

2014 – 2015

- Prof. (Dr.) Swami Vedajnananda was the member for Member, All India Council & Treasurer, IIChE 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, IIChE on 3rd May 2014.

- Prof. (Dr.) Swami Vedajnananda has served IIChE Council as Treasurer during 2013-14.

- Prof. (Dr.) Dwaipayan Sen was recognized as the Life Member of IIChE in the academic year 2013 – 14.

- Ph.D. 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 IIChE 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 served IIChE Council as Honorary Secretary, during the period 2011-12

▪ Doctoral / Post doctoral fellows:

- Doctoral / post doctoral fellows: Prof. (Dr.) Pramita Sen is presently working as a Post-Doctoral Fellow in the Department of Chemical Engineering, IISc Bengaluru since July 2015.

▪ Students :

- Shubham Sharma awarded the best presentation in oral session by Indian Institute of chemical engineers (IIChE) at SCHEMCON-2015.
- Won second prize in Technical Quiz, IIChE at Jadavpur University in the academic year 2013-14.
- Won first prize in Technical Quiz, IIChE at Jadavpur University in the academic year 2012-13.
- 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
2015-2016					
1.	International Conference on Advances in Bioprocess Engineering and Technology	20th -22nd 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

Sl.No.	Name of the Workshop/Seminar/Conference	Date	Funding Agency	No of Participant	Main Speakers
					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 Corporation, Haldia Refineries Ltd.
2014-2015					
4.	Disaster Risk Reduction	4th 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	26th 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	17th 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	19th & 20th March,	TEQIP II	59	1. Dr. R.N.Singh, INSA Senior Scientist, Emeritus Scientist

Sl.No.	Name of the Workshop/Seminar/Conference	Date	Funding Agency	No of Participant	Main Speakers
		2015			(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	29th 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
2013-2014					
9.	Workshop on "Energy Conservation Techniques in Industries"	27th – 28th 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 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[1]	
			Male	Female	Male	Female
B.Tech.	2015-2016	60+3*+12#	43	19	Result yet to be published	Result yet to be published
	2014-2015	60+3*+12#	38+07#	22+04#	100[1]	100[1]
	2013-2014	60+3*+12#	48+09#	14+02#	100[2]	100[2]
	2012-2013	60+3*+12#	47+08#	15+03#	100[3]	100[3]
	2011-2012	60+3*+12#	50+10#	07+03#	96.4[4]	100.0[4]

**5% of the sanctioned AICTE intake will be tuition fee waived candidates*
#20% of the sanctioned AICTE intake will be lateral entry from 3rd semester
[1]Based on the 2nd Semester Examinations; [2]Based on the 4th Semester Examinations;
[3]Based on the 6th Semester Examinations; [4]Based on the 8th 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

Name of the course			Percentage against the enrollment
		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	Departmental Library: Books: 150 Central Library: 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.

Academic Year	Details
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 (IIEST), 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 Pensylvania 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.**
2015-2016						
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

Module Description	Any other contributory institute /industry	Developed/ organised by	Duration	Resource persons	Target audience	Usage and citation, etc.
2014-2015						
One day Workshop	University of Calabria, Italy	Dr. Sangita Bhattacharjee	1 day, 26th 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, 19-20th 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, 29th April, 2015	Dr. Asit Kumar Das, Senior Vice President and Head Mr. Ramchandra Dutta, Director & Chief Inspector of Factories, Govt. of	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,

Module Description	Any other contributory institute /industry	Developed/ organised by	Duration	Resource persons	Target audience	Usage and citation, etc.
				West Bengal		Major Accident and Hazard Control Regulations (MSIHC) Rules & Emergency Preparedness Plan in relation to Chemical & allied industries
2013-2014						
Two Day Workshop	Petroleum Conservation Research Association	Mr. Abhyuday Mallick	2 days, September, 27-28th, 2013	Mr. S Mohanta, Mr. J. Chakraborty	Faculty members and UG students	To create awareness about energy conservation techniques in Industries
One day Workshop on Disaster Risk Reduction	National Disaster Management Authority (NDMA)	Prof. P. Bhattacharya, H.O.D	4th 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
2012-2013						
Invited Lecture	Exide Industries Limited, Research & Development Centre, Kolkata	Prof. (Dr.) Sangita Bhattacharjee	One day, 12th March, 2013	Dr. Dipak Sen Choudhury, E xecutive Vice President & Chief, R&D, Industrial, Exide Industries Limited, Research & Development Centre, Kolkata	3rd and 4th 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 doe 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, HIT-K

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.
  - Classroom lectures delivered by members of faculty to cover the syllabus are further clarified through tutorial classes with lesser number of students in a batch

- Members of faculty are in intimate contact with other institutions as well as industries.
- Majority number of students are involved with the professional body like IIChE through Students' Chapter.
- Classroom spaces are adequate with good facilities.
- Laboratory manuals are available and the experiments are effectively conducted by the students.
- Proper safety measures are maintained in the laboratory and in the classroom.

▪ Weaknesses

- Non-availability of funds from Government and Private funding agencies for strengthening R&D activities in the Department.
- Inadequate space in faculty rooms inhibiting better interacton with students in groups
- Not having smart classroom with digital facilities
- No control on intake quality

▪ Opportunities

- Interdisciplinary course through networking with other departments and institutes like University of Calcutta, Jadavpur University and IIEST which are situated nearby and have age old experience in teaching-learning process.
- Having autonomous status, department can always introduce / revise need based curricula and syllabi.
- Introduction of PG programme in Renewable Energy will generate scope of R&D activity in that field.

▪ Challenges

- Each graduates from the department should be ready to accept challenges of industry.
- Inculcate leadership quality in students.
- Trained students to be able to handle complex industrial problems.
- Enhanced interaction with industry for consultancy projects.

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 IIEST, 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 through consultancy projects.

DEPARTMENT OF CIVIL ENGINEERING

1. Name of the Department & Its year of establishment	:	Department of Civil Engineering 2011
2. Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., etc.)	:	U.G. – B.Tech. in 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 Electronics & Communication Engineering
Engineering Mechanics (MECH 1101) Workshop Practice (MECH 1011) Engineering Thermodynamics and Fluid Mechanics(MECH 1201) Engineering Drawing(MECH 1012)	Department of Mechanical Engineering

Introduction to Computing (CSEN 1201) Introduction to Computing Lab(CSEN 1211)	Department of Computer Science & Engineering
Chemistry I (CHEM 1001) Chemistry I Lab.(CHEM1011)	Department of Chemistry
Basic Electrical Engineering(ELEC 1001) Basic Electrical Engineering Lab.(ELEC 1011)	Department of Electrical Engineering

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 the 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 Resources Engineering	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: 8-68
- SNIP : 2.025 – 2.97
- SJR : 0.14 – 1.52
- Impact factor-range/average: 4.355
- h-index : 5-83

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 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 been 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 Bhattacharya, Aupal Mondal 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.

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 ➢ Other than campus recruitment	 37 NA
Entrepreneurs	1

25. Diversity of staff

Percentage of faculty who are graduates	
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 Laborties: Nil

28. Number of students of the department getting financial assistance from college:

Course	Course Year	No. of Students Availed 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.

Our department is not yet eligible to start a new programme as only one batch of students have been passed out.

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 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 industries & institutions attend the 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 is obtained from the students regarding teaching, syllabus covering and evaluation systems. Their feedbacks are discussed in the Departmental Academic Committee meeting for taking necessary measures.

- Alumni and employers on the programmes and what is the response of the department to the same?

Yes. First of all a draft of syllabi is prepared in the BOS meeting. Feedback on this draft is obtained from alumni and employers and necessary modifications are incorporated in the final syllabi.

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 adopted by the faculty members:

- Lecture Method
- Tutorial
- PowerPoint presentation with overhead projectors.
- Group teaching
- Board work

34. How does the department ensure that programme objectives are constantly met and learning outcomes monitored?

Class tests, assignment, reports, presentations etc.

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 & Fcaulty
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 (2013-2017) 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 (2013-2017) 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 (2012-2016) Faculty - Prof. Sushovan Sarkar Prof. Prithwish Saha
4	21/02/14	Site Visit at Railway Bridge Project, Belur, Being Constructed By Bridge and Roof Co(I)Ltd	Student - CIVIL 2nd Year (2012-2016) 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 (2011-2015) Faculty - Prof. Sushovan Sarkar Prof. Puja Basu Chaudhury Prof. Sarmila Sahoo

Sl No	Date	Programme	Participation of student & Fcaulty
6	30/08/13	Plant visit at ACC Ready Mix Concrete Plant	Student - CIVIL 3rd Year (2011-2015) 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 (2011-2015) 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, USA based on their marks and regularity. All the students performed extremely good in their research work at NJIT. Also every year our students arrange some workshop/events where students from our college compete with students from 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 passes 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 of 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 members
  - 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

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

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 Prfessor*
*** 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 2nd February 2015.
Dr. Dinabandhu Bhandari	Ph. D.	Associate Professor	Pattern Recognition, Data Mining, Image	25 Yrs (includes 15	Nil

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. students guided in the last 4 years
			Processing, Machine Intelligence	yrs industrial exp)	
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 1. Himadri Nath Moulik 2. Anindita Mitra
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

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. students guided in the last 4 years
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
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	5 months	Nil

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. students guided in the last 4 years
			Biochip, Computational Geometry		
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, IIEST 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, IIEST 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. ISSN 2194-5357, Volume 2.	Springer	2015
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	Springer	2014

Author	Chapter Title	Book Title	Publisher	Year
		Applications. ISBN 978-1-4419-7142-5,Pages 185-220		

- 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	US Patent. Patent No. – 8700548 (Application No. –	Dr. Dinabandhu Bhandari.

Title	Number with details	Inventors
Algorithms	13/265, 480).	
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 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
	Seminar on Optimizing Multiple Objectives for Clustering by INAE	February18,2015
Lopamudra Dey	Sensor/feature selection with controlled redundancy using neural networks	February18,2015
	Seminar on Optimizing Multiple Objectives for Clustering by INAE	February18,2015
	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, SALTLAKE, KOLKATA titled as IEMCON.	August 30,2014
Mohuya Byabartta Kar	Seminar on Optimizing Multiple Objectives for Clustering by INAE	February18,2015
	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
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	February18,2015
	Short term course on faculty development	24-26th September,

Faculty Name	Workshop/seminar/conference/Faculty Development Programme	Date
	program for effective Teaching organized by education Technology & continuing education center, IIT KGP.	2014
Anindita Kundu	Seminar on Optimizing Multiple Objectives for Clustering by INAE	February18,2015
	Annual IEEE India Conference (INDICON)	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	Jan 13--15, 2014
	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
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).	Nov 27-29, 2014
	Seminar on Optimizing Multiple Objectives for Clustering by INAE	February18,2015

Faculty Name	Workshop/seminar/conference/Faculty Development Programme	Date
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	13 – 15 Jan, 2014
	FDP on Algorithms	22 – 26 July, 2013
	Cleared 3 course works as part of Ph.D. registration requirement at ISI, Kolkata	Aug '13 – Apr '14 timeframe
Anindita Ghosh	Continuing Education Program On "Machine Intelligence"	July 15-19,2013
	Refresher Course On "Algorithms"	July22-July26,2013
	Workshop on "Mobile Computing & Wireless Sensor Networks"	October 24-25,2013
	Workshop on Application Development in Android Platform	October 30-Nov 1,2013
	"VLSI Design and Technology"	Nov 12-13,2013
	International Conference on Applied Algorithms ICAA 2014	January13-15,2014
Anindita Kundu	FDP on Algorithms	22 – 26 July 2013
	Workshop on Mobile Computing	24-25 Oct, 2013
	Workshop on Sensor Networks	24-25 Oct, 2013
Arpita Talukdar	International Conference on Applied Algorithms	Jan 13-15, 2014
	Workshop on VLSI Design and Technology	Nov 12-13,2013
	Workshop on Mobile Computing and Wireless Sensor Networks	Oct 24-25,2013
	Computational Biology and Protein Structure Prediction	Sep 23-27,2013
	Refresher Course On Algorithms	July 22-28,2013
	Workshop on Machine Intelligence	July 15-19,2013
	Refresher Course On Algorithms	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	July 15-19, 2013
	"Algorithms" under Technical Education Quality Improvement Program (TEQIP – II)From	July 22, 2013 to July 26, 2013

Faculty Name	Workshop/seminar/conference/Faculty Development Programme	Date
	Organized By Department of Computer 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 HIT-K (funded by TEQIP-II)	July 22 – 26, 2013
	Workshop on "Computational Biology and Protein Structure Prediction" organized by dept. of Biotechnology of HIT-K (funded by TEQIP-II)	September 23 – 27, 2013
	Workshop on "Mobile Computing & Wireless Sensor Networks", organized by CSE dept. of HIT-K (funded by TEQIP-II)	October 24 – 25, 2013
	International Conference on Applied Algorithms, jointly organized by CSE & IT Dept. of HIT-K (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. HIT-K	22-July-2013 to 26-July-2013
	Machine Intelligence organized by Dept of I.T. HIT-K	15-19thJuly 2013
	VLSI Design and Technology	Nov 12-13, 2013
	Workshop on Mobile Computing and wireless and Sensor Networks	October 24-25,2013
	International Conference on Applied Algorithms	13-15th jan 2014

Faculty Name	Workshop/seminar/conference/Faculty Development Programme	Date
Rumpa Hazra	Continuing Education Program On “Machine Intelligence”	July 15-19,2013
	Refresher Course On "Algorithms"	July22-July26,2013
	“VLSI Design and Technology”	Nov12-13,2013
	Participated and presented a paper in Conference “IEEE TENCON,2013” at Xian, China	Oct 22-25, 2013
	International Conference on Applied Algorithms ICAA 2014	January13-15,2014
Reshma Roychoudhuri	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
	International Conference on Applied Algorithms	January 13--15, 2014
Sandip Samaddar	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
Sabyasachee Banerjee	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
Sujay 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 HIT-K (funded by TEQIP-II)	July 22 – 26, 2013
	Workshop on "Computational Biology and Protein Structure Prediction" organized by dept. of Biotechnology of HIT-K (funded by TEQIP-II)	September 23 – 27, 2013
	Workshop on "Mobile Computing & Wireless Sensor Networks", organized by CSE dept. of HIT-K (funded by TEQIP-II)	October 24 – 25, 2013
	International Conference on Applied Algorithms, jointly organized by CSE & IT Dept. of HIT-K (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. HIT-K	22-July-2013 to 26-July-2013
	Machine Intelligence organized by Dept of I.T. HIT-K	15-19thJuly 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 (HIT-K)	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 Name	Workshop/seminar/conference/Faculty Development Programme	Date
	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

Faculty Name	Workshop/seminar/conference/Faculty Development Programme	Date
Reshma Roychoudhuri	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
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

Faculty Name	Workshop/seminar/conference/Faculty Development Programme	Date
	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	13th-15th 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	18th February,2015	Sponsored by INAE
Seminar on "Design Automation of Embedded System"	Dr. Subhashis Majumder	14th August, 2015	
Workshop on " IBM Bluemix"	Dr. Subhashis Majumder	17th August, 2015	Sponsored by IBM
Special Lecture on "Finding influencials in the world wide web: PageRank and HITS"	Dr. Dinabandhu Bhandari	06th October, 2015	Sponsored by ACM Student Chapter.
Special Lecture on " Basic Introduction to Quantum Computation"	Dr. Dinabandhu Bhandari	24th 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	01st September, 2014	Sponsored by TEQIP II.

Title	Convener	Date	Source of Funding
Special Lecture on "Generating Top-k Combinations Using a Directed Acyclic Graph"	Dr. Subhashis Majumder	2nd 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	22nd July-26th July, 2013	Sponsored by TEQIP II
Workshop on Mobile Computing & Wireless Sensor Networks	Sujay Saha Anindita Kundu	24th -25th October, 2013	Sponsored by TEQIP II
Workshop on "Complex and Social Networks"	Mandakini Majumdar, Partha Basu Chowdhury	24th and 25th January,2013	Sponsored by TEQIP II
Workshop on "Emerging Trends in Algorithms	Partha Basu Chowdhury	27th and 29th 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	12th and 13th 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

Name	University	Program	Pass-out Batch
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
Moitreya 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 selection Other than campus recruitment	89% --	85% --	67% --	89% --	89% --
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)

	1st Year	2nd Year	3rd Year	4th 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)

	1st Year	2nd Year
2014-15	2	0
2013-14	1	2
2012-13	2	3
2011-12	3	0

M.Tech (Teaching Assistantship from TEQIP)

	1st Year	2nd 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 is 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 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 to 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 members 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 the 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,3rd Year) HIT-K,ACM Student Chapter	24th –27th Sep,2013
Lecture on Decision trees	Ashmi Banerjee and Suman Datta (CSE,3rd Year) HIT-K,ACM Student Chapter	25th July 2014
Workshop on R programming.	Sohom Ghosh(CSE,3rd Year), Heritage Institute of Technology and Angan Mitra(CSE,3rd Year), Jadavpur University.HIT-K,ACM Student Chapter	1st August 2014
Lecture on Hidden Markov Model	Jayant Jaiswal, Shoaib Khan and Rohan Aggarwal (CSE,3rd Year) of Heritage Institute of Technology HIT-K,ACM Student Chapter	8th August,2014
Lecture on Bayessian Classifiers	Subhojit Basak , Girish Venkatraman, Raina Sengupta (CSE 2nd Year) as a part of SIGKDD. HIT-K, ACM Student Chapter	
Lecture on Hierarchical Clustering	Prof. Partha Basuchowdhuri and Ashmi Banerjee(CSE 3rd Year) as a part of the SIGKDD	11th Sep, 2014

Hands on Workshop on Python	Satyaki Sikdar (CSE, 3rd Year) , HIT-K,ACM Student Chapter	28th 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 upliftment 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 repute, 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.
- 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.

COMPUTER SCIENCE & ENGG.

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

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 (ECE, Communications)
M.Tech (VLSI)

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 (one) Mr. Sabyasachi Chatterjee

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. students guided in the last 4 years
Dr. S. Biswas	Ph. D., P.R.S.	Dy. Director & Prof.	Radio Physics & 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
Mr. S. Mondal	M. Tech	Asst. Prof.	Technology in Telecomm. Engg	6	Nil

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. students guided in the last 4 years
Mr. M. Shahnawaz,	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 & Communicatio n 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

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. students guided in the last 4 years
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 (VLSI)	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	19 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
Journals (National & International)	27	15	17	10	10
Book Chapters	4	6	2	2	1
Patents	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 $GaSb_{1-x}Bi_x$ 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

Author	Chapter Title	Book Title	Publisher	Year
Dip Prakash Samajdar	Effect of bismuth incorporation on the Growth Kinetics and Valence Band Structure for $InP_{1-x}Bi_x$ 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 InAs1-xBix 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
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

Author	Chapter Title	Book Title	Publisher	Year
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, IIMs.

- The various activities under this scheme are as follows:
  - Faculty members are encouraged to publish technical papersin National and International conferences. The cost of travel, registration and publication are offered by the Institute.
  - Seminars/ Workshops and FDPs are conducted by the department 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^{th}-13^{th} 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^{th} -13^{th} 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

Faculty Name	Workshop/Seminar/Conference/FDP	Date
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) 2nd National conference on Electronics Communication & Signal process	18th – 21st December, 2015 17th -19th November, 2014 18th -20th December, 2013 3rd-7th June, 2013 5th – 7th October 2012 18th – 23rd 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)	13th - 14th August, 2015 17th -19th December, 2014 1st – 5th April, 2014
Mr. Sabyasachi Chatterjee, Assistant Prof.	International Conference on Computational Intelligence & Networks, 2015	12th - 13th 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)	22nd -23rd December, 2014 28th – 29th December 2012
Dr. Anindya Sen, Associate Prof.	Short term course on 'Faculty Development Programme for effective Teaching' IIT KGP	17th -19th November, 2014
Mr. Soumya Kanti Raj, Assistant Prof.	Short term course on 'Faculty Development Programme for effective Teaching' IIT KGP	24th -26th September, 2014
Mr. Siladitya Sen, Associate Prof.	International Conference on Advances in Computer Science, Engineering & Technology (ICACSET 2014)	12th -15th January 2014
Ms. Sayantani Datta, Assistant Prof.	Quality based Evaluation in the process of Accreditation for technical & Management Institutions	16th 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)	22nd -24th November, 2013 27th – 28th April, 2013 5th – 7th October 2012

Faculty Name	Workshop/Seminar/Conference/FDP	Date
Ms. Mousiki Kar, Assistant Prof.	Texas Instruments India Educator's Conference (THEC) 2013	4th -7th 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. Three, M. Tech. ECE (Communications) students 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, Protugal.

➢ 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 Bhubaneshwar

- 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	17th April, 2015	Importance of Calibration in	IEEE EDS Chapter Kolkata & ECE Dept, Heritage Inst.	Dr. Sivaji Chakravorti, JU

Seminars/ Conferences / Workshops	Date	Title	Sponsors	Name of the Speaker
		Quality Assurance	of Technology, Kolkata	
	17th 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
	23rd April, 2014	NANOELECTRONICS: A Bottom-up Approach	IEEE EDS Chapter Kolkata & ECE Dept, Heritage Inst. of Technology, Kolkata	Kaushik Roy, Purdue University, USA
	9th 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
	8th April, 2014	Beyond Charge-Based Computing	IEEE EDS Chapter Kolkata & ECE Dept, Heritage Inst. of Technology, Kolkata	Kaushik Roy, Purdue University, USA
	18th 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.
	4th 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
	11th. March, 2013	Short channel effects in MOSFETs	IEEE EDS Chapter Kolkata & ECE Dept, Heritage Inst. of Technology, Kolkata	Prof. Swapnadip De, MSIT, Kolkata

Seminars/ Conferences / Workshops	Date	Title	Sponsors	Name of the Speaker
	11th. March, 2013	Challenges of VLSI Interconnects	IEEE EDS Chapter Kolkata & ECE Dept, Heritage Inst. of Technology, Kolkata	Prof. Debaprasad Das, MSIT, Kolkata
	16th. October, 2012	MOSFET and Interconnect Inductor Modeling for CMOS VLSI Design"	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 Lousiana, USA Dr. M. K. Radhakrishnan, NanoRel Corporation
Workshops	2-4th 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 Chattapadhyay, Director, NTA, Bangalore

Seminars/ Conferences / Workshops	Date	Title	Sponsors	Name of the Speaker
Conferences	16-17th 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
	18th April, 2011	IEEE EDS Student Paper Conference (IESPC-2011)	IEEE EDS Chapter, Kolkata & ECE Dept, Heritage Institute 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 VLSI	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	2015-16	154	34	Pursuing	

	Main/MQ/TFW	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 (VLSI)	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 VLSI	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 Jhunjhunwala	CAT	98.53 percentile	2012
Ms. Amrita Das	CAT	94 percentile	2012
Shri Sourav Chatterjee	GATE	AIR 67	2012
Ms Adrisha 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. Adrisha 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 Campus selection Other than campus recruitment	84% --	71% --	58% --	92% --	75% --
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 & Kadmatt
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.	Suvobrato 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 Bhattacharya	147	TEQIP
Lectures by	19th Feb,	Dr. Salil Sanyal	50	TEQIP

Name of the Enrichment Programme	Date	External Experts(s)	Nos. of Participants	Sponsored by
Eminent Speakers	2014			
Remedial classes on Basic Science-Physics	13th April, 2013	Dr. Swarup Ranjan Shaoo, 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 PPT or 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 doe 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.

Ø 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 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 qualities are excellent.
  - The department has top grade infrastructure with excellent laboratories and spacious class-rooms.
  - 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 are provided to the weak students with funds from TEQIP.
  - Due to the brand image of HIT-K, 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 need to be tuned further.
  - Lack of subscription to online journals has 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 is to be overcome.

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 HIT-K with Sankalp Semiconductor Pvt. Ltd. And IIEST Shibpur are the steps towards the attainment of this future objective.
  - To improve the statistics regarding the progression of students to higher studies by shifting their inclination towards research-related activities.

Electronics Communication Engineering, Kolkata

DEPARTMENT OF ELECTRICAL ENGINEERING

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 (PrasunHalder)
Dr. Saibal Dutta	Ph.D(Engg.)	Associate Professor	Measurement & Instrumentation	13	Nil
Mr. Amitava Hatial	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 Years of Experience	No. of Ph.D. 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: 0-78 / 51.5
- SNIP :
- SJR :
- Impact factor-range/average: 0-2.223
- h-index : 3

15. Details of patents and income generated: Nil

16. Areas of consultancy and income generated: Nil

17. Faculty recharging strategies:
The various activities of Electrical Engineering department include organizing different programmes such as workshop, seminar, conference, and faculty development program 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 members to publish technical papers in conferences and journals
  - Conducting short-time seminar/ workshop by inviting industry experts and researchers.
  - Encouraging faculty members to attend workshop/ Faculty Development Programme in other colleges.
  - Special Faculty Development Programmes are arranged for new faculty members.
  - List of workshop/seminar/ faculty development programmes attended by faculty members is given 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 HIT-K
Prof .Samiran Choudhuri, Dr. Saibal Dutta and Dr. Prithwiraj Das	leadership development	The Programme was organised by HIT-K under TEQIP-II.
Mr. Sudipta Mitra and Mr. Sanjay Ch. Das	"Pedagogy training for teaching faculties"	The Programme was organised by HIT-K under TEQIP-II.
Mr. Amitava Hatial	"Workshop on Energy Conservation Techniques in Industries"	Organized by HIT-K and PCRA
Mr. Amitava Hatial	Attended National Conference on" Mathematical Trends In Physical Sciences"	Organized by HIT-K.

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 wavering scheme
B.Tech in EE (Lateral Entry)	20%	JELET

Name of the Course (refer question no. 2)	Eligibility / Entrace 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 Campus selection Other than campus recruitment	75 02
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 market 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 feedback 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	Professor, IIEST	Power System	14th March, 2014	TEQIP-II

Bandyopadhyay		Protection		
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

Based 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 encouraged to participate in 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
  - Improper faculty-cadre ratio.
  - Non-availability of research grants from funding agencies.
- 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

DEPARTMENT OF MECHANICAL ENGINEERING

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 Disucssions (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 2012)	Department of Mathematics
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)	Department of Electrical Engineering

Electrical Machines Lab (ME 595B)	
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 3rd year students
   Electrical Engineering > Thermal Power Engineering theory and Lab both for 2nd 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 Turbo Machinery	05(Industrial 14(Academic)	Nil

3	Amal Kumar Ray	PhD.(Engg.)	Associate Professor	Operations Research	26(Industrial) 12(Academic)	Nil
4	Rajarshi Sengupta	PhD.(Engg.)	Assistant Professor	Fluid Mechanics & Hydraulics	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	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
1st Year		900	16.36:1
2nd Year	08	120	15:1
3rd Year	04	60	15:1
4th 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 encouraged 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 are reimbursed the expenses for registration and course fees 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 Conferences.

- 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: 6
- Students : Nil

20. Seminers/ 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 esearch Methodology	29.07.2014 31.07.2014	TEQIP-II under FDP scheme	32	Dr. Tapan Kumar Ghoshal onorary Emeritus Professor, EE, JU) Dr. Bijan Sarkar (Prof. & ormer head, Production Engg. Dept, JU) Prof. M.K.Tiwari (FNAE, ead, 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, WBPDCL) Mr. Saroj Kumar Sarkar Consultant on Environment of

					Electro Steel Casting) Mr. Sujoy Ghosh (Consultant, BOC) Mr. Amarnath Bhadra (Consultant, Instutions of Engineers(India))
03	"Research ethodology" course for D students of WBUT.	06.03.2014 08.05.2014	WBUT	57	Prof. Siddhartha Ray (HOD, ME, HIT-K) Prof. Samir Saha (Ex. Prof. ME Dept, JU) Prof. Bijan Sarkar (Prof. & ormer head, Production Engg. Dept, JU) Dr. Tapan Kumar Ghoshal onorary Emeritus Professor, EE, JU) Dr. Amal Kumar Ray ssociate Prof., ME Dept, HIT-K)
04	Workshop on Value Engineering	27.04.2016 28.04.2016	TEQIP-II	42	Dr. Bimal Kumar Basak, junct Professor – HIT-K Dr. Siddhartha Ray, Professor, Dept. & Dean (UG),HIT-K Dr. Habiba Hussain, Assistant fessor, NITTTR Kolkata Dr. Bijan Sarkar, Professor & mer Head of Production gineering Dept., Jadavpur iversity Mr. Sankar Nath khopadhyay, Asstt. Professor, T-K

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 batches)	TEQIP-II
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, HIT-K
23	Kolaghat Thermal Power Plant, Kolaghat	2011-2015	17.04.2013	40	Industry Institute Partnership Cell, HIT-K

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	Nil
2014-2015	NA	55.65	44.35	Nil
2013-2014	NA	73.01	26.99	Nil
2012-2013	NA	84.13	15.87	Nil

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 Campus selection Other than campus recruitment	67.1 Data not available
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) : 6

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 and in addition Wi-Fi facility can be accessed both by the students and 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	3rd semester: 9
2012-13	3rd semester : 3 5th semester : 8
2013-14	3rd semester : 5 4th semester : 3 5th semester : 5

	6th semester : 8
2014-15	1st semester : 5 2nd semester : 5 3rd semester : 5 4th semester : 6 5th semester : 5 6th semester : 4 7th semester : 8 8th semester: 5
2015-16	1st semester : 3 3rd semester : 5 5th semester : 5 7th semester : 2

29. Was any need assessment exercise undertaken before the development of new program(s)?
If so, give the methodology.

Yes

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?

Yes

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(s) 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?

There is a mechanism of taking formal feedback from the students on all the faculty members once after every semester. The Head of the Department share

this feedback with faculty members and suggests necessary steps to improve the teaching-learning skills.

Apart from that the faculty members collect regular feedback from the students about the teaching methodology and course completeness.

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	24th April,2014
Dr.Bimal Kumar Basak	Former Executive Director-Wesman Engg.(P) Ltd.	Foundry Equipment- Usages & Applications	24th 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 are within the periphery of Chalk & Talk, OHP and power-point presentation as teaching methodology to make the students understand well about the subjects.

34. How does the department ensure that programme objectives are constantly met and learning outcomes monitored?

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.

To achieve the programme Outcome (PO) the department follows the procedures mentioned below:

Assessment Method	Procedure
1. Quiz, assignment, Tutorials etc.	Quiz are conducted in the class regularly after delivering few lectures. Home assignments are given to the students which are evaluated and the same is communicated to them for their improvement. Tutorials are conducted in the class in small groups to develop their ability in solving problems which the teacher continuously monitors.
2. Internal Examination	Class tests are conducted on each theoretical subject twice in a semester. The answer scripts are evaluated and the students are made aware of their performance.
3. Semester Examination	Semester Examinations for each theoretical & practical subject are held and students performs are evaluated accordingly.
4. Viva-voce for laboratory classes	Viva-voce is conducted for each laboratory course in each semester and the students got evaluated on their knowledge about the subject.
5. Industry feedback	Feedback is obtained from the employers of ex-students which provide information about the effectiveness of the teaching learning process.
6. Students feedback	Feedback is invited from the students about the teaching-learning process through on-line feedback system.

35. Highlight the participation of students and faculty in extension activities :

- Seminars & Workshops are organized on a regular basis
- Refresher courses are attended regularly
- Special Lecture delivered by eminent personalities in various technical fields are organized 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 setups and instruments with adequate space.
- 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 are effectively explained to the students.
- The department conducts frequent industrial visits for our students with real life exposure.
- Safty precautions are followed in each and every laboratoty.
- Faculty members take active interest in writing books / reasearch work and regularly publish research articles in national / international conferences and Journals.
- Students are encouraged to perticipate in technical competitions and sports held in eminent institites 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 core 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 of 1st generation graduates.
- The research facilities need to be upgraded regularly in order to 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.

DEPARTMENT OF INFORMATION TECHNOLOGY

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.) : UG: B.Tech (Information Technology

PG: 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(EI 504A),DBMS(EI 504B)
Electronics and Communication Engineering	Introduction to computing(CSEN 1201), Data 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
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 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

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. students guided in the last 4 years
Mr. Uttam Kr. Dash	MTech	Asst Prof.	Cloud Computing	10	Nil
Mr. Deep Malya Mukhopadhya	ME	Asst Prof.	Cognitive Network, Cryptography	10	Nil
Ms. Smritikona Barai	M.Tech	Asst Prof.	Image Processing, Opportunistic Network	5	Nil
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
1	"Computer Architecture and organization", by T. K. Ghosh and A. J. Pal	Tata Mcgraw Hill	9780070699830

- 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: 0611–3.8 / 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 / institutes of repute
  - Special Faculty Development Programmes are arranged for new faculty
  - The faculty members attend programmes organized by IITs, NITs, IIMs etc.
  - Workshop on Teaching Methodologies are jointly organized with IITs, NITTTR, Wipro 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	Management Development Program	05-Aug-13 - 09-Aug-13
Dr. Tapan Chakraborti, Dr. Anindya Jyoti	Refresher Course on Algorithm	22-Jul-13 - 26-Jul-

Faculty Name	Workshop/Seminar/Conference/Faculty Development Programme(FDP)	Date
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 Hazra		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	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	Workshop on "Wireless Communication & Computing: Current Trends & Research"	20-Jan-12 - 20-Jan-12

Faculty Name	Workshop/Seminar/Conference/Faculty Development Programme(FDP)	Date
Sarder, Sudipta Bhadra, Rajib Biswas, Rudranath Mitra, Uttam Kr. Dash		
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
M.Tech	2014-2015	100
	2013-2014	100
	2012-2013	100
	2011-2012	100

- 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
1st 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 Mukhopadhay	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 3rd 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 fromother 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(TOEFEL,ELITMAS 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 ▪ Other than campus recruitment	61.78 No record available	69.23 No record available	68.18 No record available	90.76 No record available	83.33 No record available
	Entrepreneurs	--	--	--	--	--
M.Tech	UG to PG	NA	NA	NA	NA	NA
	PG to M.Phil.	--	--	--	--	--
	PG to Ph.D.	--	--	--	--	--
	Ph.D. to Post-Doctoral	--	--	--	--	--
	Employed ▪ Campus selection ▪ Other than campus recruitment	9 No record available	5.55 No record available	0 No record available	NA	NA
	Entrepreneurs	--	--	--	--	--

25. Diversity of staff

Percentage of faculty who are graduates	
of the same parent university	33.33
from other universities within the State	60.0
from other universities from other States	6.67

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 Regisration
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
Gourav Mukherjee (2015)	Software Engineer at Wipro
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)
1	Workshop on "C and Embedded C Programming Language"	Students of 2nd and 3rd Year	22nd Feb – 3rd 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 2nd and 3rd Year	23rd – 27th 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 4th year batch for cracking interviews.
- Departmental Industrial Visit.
- Soft Skill Classes for students as a preparatory course work for enhanced employability.
- Group Discussion classes for 4th year students are arranged to make them ready 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

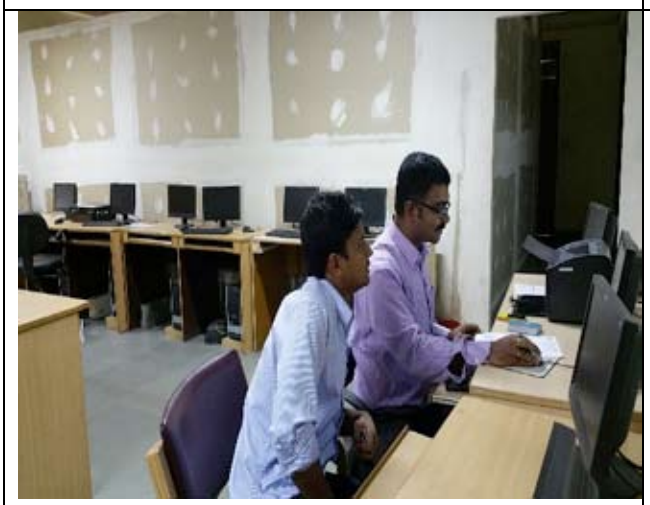
- Strengths
  - Many National/International Conferences, Seminars, workshop are organized.
  - Highly qualified and expertise Faculty members with multiple specialization
  - High demand for admission in B.Tech course.
  - Very good infrastructure with well equipped Laboratories
  - Updated curriculum
  - 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 of IT department placed in reputed institutions and industries, 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.

39. Future plan of the department
  - To accelerate and motivate research activities in the Department
  - To make the Department as the Centre of Excellence.

Applied Algorithms
ICAA

INFORMATION TECHNOLOGY



COMPUTER APPLICATION CENTRE

1. Name of the Department & Its year of establishment : Computer Application Centre, Heritage Institute of Technology; 2003
2. Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., etc.) : Master of Computer Application (PG Program)
3. Interdisciplinary courses and departments involved:

Course Name	Course Code	Department Involved
Business English and Communication	HU 101	Humanities
Business Presentation and Language Lab	HU 191	Humanities
Environment and Ecology	HU 401	Chemistry
Values and Ethics of Profession	HU 501	Humanities
Business Management	MBA 301	Humanities
Management Accounting	MBA 302	Humanities
Accounting System Lab	MBA 392	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 (CSEN 1201) & Introduction to Computing Lab (CSEN 1211) 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
Total	12	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. Siuli Roy	Ph.D.(Engg.), MCA	Associate Professor and Director	Mobile Wireless Network, Sensor Network, IoT	21	4
Mr. SouvikBasu	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	-
Mr. Anirban Kundu	MCA	Assistant Professor	Image Processing	10	-
Ms. Subhra Pramanik	M. Tech, MCA	Assistant Professor	Distributed Database Management System	11	-
Mr. Sandipan Ganguly	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	-

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. students guided in the last 4 years
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: 15:1

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 (DiSARM)	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 *
ShelterTrack: A Smart-phone based Shelter Management System for Post-Disaster Relief Operations using	Dr. Siuli Roy Co-investigator: Mr. SouvikBasu	AICTE – RPS scheme	3 years (2013 – 2016)	1.00

Name of Project	Principal Investigator / Co-investigator	Funding Agency	Duration	Rs. (Lakhs)
Opportunistic Wireless Networks				

* Multi-institutional joint R&D Project with IIT KGP, IIM Calcutta, IIEST 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]
  - Souvik Basu, 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, Somprakash Bandyopadhyay, "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, Souvik Basu, Siuli Roy, Somprakash Bandyopadhyay, "Developing a Coherent Global View for Post Disaster Situation Awareness using Opportunistic Network", COMSNETS 2015, IEEE Xplore
  - Souvik Basu, Suman Bhattacharjee, Siuli Roy, Somprakash Bandyapadhyay, "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.

- Chandrima Chakrabarti, Siuli Roy, "Adapting mobility of observers for quick reputation assignment in a sparse post-disaster communication network", Applications and Innovations in Mobile Computing (AIMoC) 2015, pp. 29-35, doi:10.1109/AIMOC.2015.7083826.

- Sandipan Ganguly, Souvik Basu, Siuli Roy, Suvankar Mitra, "A Location Based Mobility Prediction Scheme for Post Disaster Network using DTN", Applications and Innovations in Mobile Computing (AIMoC) 2015, pp. 25-28, doi:10.1109/AIMOC.2015.7083825

- Souvik Basu, 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.

- Souvik Basu, 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, pp. 1566-1572, doi:10.1909/ICACCI.2014.6968358

- 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, pp. 179-185 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". Applications and Innovations in Mobile Computing (AIMoC) 2014, pp. 151-156, doi:10.1109/AIMOC.2014.6785534.

- 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 Bandypadhyay, 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 2016	Distributed Systems for Coordinated Disaster Management (CORDIM-2016)	IIM Calcutta	2 Days – 2/1/2016 to 3/1/2016
		2015	Organized and Attended Short Term Course STC-NGN	Changing Communication Paradigm using Mobile Devices in Next Generation Network	IIEST 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

Sl. No	Faculty Name	Year	Conference, Workshop, Summer/Winter Schools	Topic	Place	Period
			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
		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	IIEST 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

Sl. No	Faculty Name	Year	Conference, Workshop, Summer/Winter Schools	Topic	Place	Period
			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 &	Heritage	2 Days -

Sl. No	Faculty Name	Year	Conference, Workshop, Summer/Winter Schools	Topic	Place	Period
				Wireless Sensor Networks	Institute of Technology	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 Science : State – Of – The – Art – Perspectives	Heritage Institute of Technology	2 Days - 12/07/2012 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	2 Days - 23/08/2012 to

Sl. No	Faculty Name	Year	Conference, Workshop, Summer/Winter Schools	Topic	Place	Period
					Centre, Heritage Institute of Technology	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	2 Days - 24/01/2013 to

Sl. No	Faculty Name	Year	Conference, Workshop, Summer/Winter Schools	Topic	Place	Period
					Technology	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
		2015	Shortterm Course	Changing Communication Paradigm using Mobile Devices in Next Generation Network	IIEST, 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

Sl. No	Faculty Name	Year	Conference, Workshop, Summer/Winter Schools	Topic	Place	Period
			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	Machine Intelligence	Heritage	5 Days -

Sl. No	Faculty Name	Year	Conference, Workshop, Summer/Winter Schools	Topic	Place	Period
			Education Program		Institute of Technology	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 Technology	2 Days - 23/07/2015 to 24/07/2015.
		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 to 26/07/2013
			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

Sl. No	Faculty Name	Year	Conference, Workshop, Summer/Winter Schools	Topic	Place	Period
			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 to 26/07/2013
			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

Sl. No	Faculty Name	Year	Conference, Workshop, Summer/Winter Schools	Topic	Place	Period
			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
			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

Sl. No	Faculty Name	Year	Conference, Workshop, Summer/Winter Schools	Topic	Place	Period
			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 IIEST 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 □ Other than campus selection	 55 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.

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. SouvikBasu, Assistant Professor, CAC, HIT and Mr. Suman Bhattacharjee, Research Scholar along with research scholars from IIM Calcutta and KGEC 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, HIT-K 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, IIEST 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	29.06.2015 to 17.07.2015

A seminar entitled "A Prelude of Modern Cryptography: From Ancient to Enigma by Mr. SandipanGanguly	16 Jan, 2015
In house summer training for campus preparedness by the faculties of the department	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	***Strong Faculty:*** The Computer Application Centre has qualified Faculty members with strong theoretical background as well as exposure to industry applications.
2	***Well Endowed Infrastructure:*** The Department possesses a model classroom furnished with laptop and LCD projector.
3	***Planned Approach Towards Teaching:*** 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	***Innovative Teaching-Learning:*** 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: Brain Storming – Problem Solving Role Play – Skits Puzzles – Crossword Quiz – Pick-n-Learn, Fill in the blanks, True-False Seminar – Presentation by Learner and Facilitator, Learner Led Group Discussion Case Study – Problem Based Application, Concept/ Theory Application, Resolving Conflicts Demonstration – Demonstration by facilitator Group Discussion – Panel Discussions
5	***Research and Higher Studies:*** Some Faculty members are engaged in high

Sr. No.	Strengths
	quality research and are associated with premier institutes like IIMC, IIEST, 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	***Fall in Infrastructure:*** 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	***Processes and Systems, etc:*** 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	***Market Advantage:*** Since there is ample number of students pursuing BCA course, there should not be any dearth of students in the Department.
2	***Promoting Research Activities:*** 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	***Alumni Relationships:*** Establishing contacts with alumni and forming an active alumni association could be beneficial for the placement and job opportunities of the present students.
4	***Arranging Training Programs:*** 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	***Training to IT Schools:*** The Department can impart training to the faculty members of the proposed IT schools.

CHALLENGES:

Sr. No.	Challenges
1	***Market Demand:*** 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	***New Technologies:*** 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	***Research Activities:*** 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 fledged 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.

DEPARTMENT OF PHYSICS

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 PHYS 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
Total	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. students guided in the last 4 years
Dr. Sudeepto Sen	Ph.D.	Asst. Prof	Polymer Physics	11 years including 5 yrs. of research experience.)	None
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

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. students guided in the last 4 years
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 – moleculer 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.	Guest Faculty	Electronics, Condensed Matter	10 years teaching + research	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:
1st year student teacher ratio16.36:1

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
	International Journal	7.728	0031-9007
Shinjinee Das Gupta	"$^{37}_{97}Rb_{60}$: 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.		
Hirak Kumar Chandra	Ferroelectric distortions in doped ferroelectrics: $BaTiO_3$:M (TM = V-Fe), Hirak Kumar Chandra, Kapil Gupta,et.al, PHYSICAL REVIEW B 87, 214110 (2013).	3.66	2469-9969
Hirak Kumar Chandra	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
	National Conference Proceedings:		
Shinjinee Dasgupta	"Mystery of ^{151}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:

Sl 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)	HIT-K Not Required TEQIP Phase II

NAME OF THE FACULTY	WORKSHOP / CONFERENCE etc.	Source of Funding
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	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. 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	HIT-K

A Talk by Prof. Bikash Sinha Topic: 'Chasing the missing link at CERN: Higgs Boson' Speaker: Prof. Bikash Sinha, Former Director, Saha Institute of Nuclear Physics, Kolkata	Physics Department Convenor: N.P.Nayak	Venue: HIT-K,Auditorium Time : 3 p.m. Date : 08-08-2012	HIT-K
National Conference on Mathematical Trends in Physical Sciences.	Physics and Mathematics Department Convenor: Nirman Ganguly N.P.Nayak	Venue: HIT-K, 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	90
from other universities from other States	10

26. Number of faculty who were awarded Ph.D., D.Sc., and D.Litt during the assessment period : One

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 from outside. 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 regular class tests.

  - Seminars with external speakers are arranged to motivate students and knowledge enrichment of the faculty members.

33. List the teaching methods adopted by the faculty for different programmes: Chalk and board.

34. How does 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 / Quizzes
  - Regular departmental meetings of faculty members with the Technical Assistants to undertake future 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. :

B.Tech programmes in AEIE, BT, ChE, ECE and IT of the Institute was accredited by NBA for a period of 2 years w.e.f. 18.09.2013. The application for renewal of accreditation has already been submitted and visit by Expert Committee is awaited. B.Tech. programme in CSE has been accredited by NBA for a period of 5 years w.e.f. 04.02.2014. Department of Physics contributed towards this achievement.

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.

  - Faculty members are encouraged to join Post Doctoral Researc / Training within the country as well as abroad

  - Department has three laboratories with sufficient number of equipments / instruments / experiemental set ups.

- 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 credit 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.

DEPARTMENT OF CHEMISTRY & ENVIRONMENT

1. Name of the Department & Its year of establishment : Chemistry and Environment; September 2001
2. Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., etc.) : Supporting Department of B.Tech program
3. Interdisciplinary courses and departments involved: Not offered
4. Annual/ semester/choice based credit system :

   Semester based Credit System
5. Participation of the department in the courses offered by other departments

   Yes, The Department offers Chemistry – I (CHEM 1001), Chemistry Laboratory (CHEM 1011) and Basic Environmental Engineering & Elementary Biology (CHEM 2001) to students of AEIE, BT, CE, ChE, CSE, ECE, EE, IT and ME Department. The department also offers Chemistry-II(CHEM 2201) to students of ChE Department.
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
Total	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:
1st year student teacher ratio 16.36:1

10. Number of academic support staff (technical) and administrative staff: sanctioned and filled

	Sanctioned	Filled
Administraitve 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_2O_3 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.

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- "Tri- and Tetranuclear Nickel(II) Metallacrown Complexes Involving Oximato 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.

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- Targated syntheses of homo-and heterotrinuclear complex involvingM^{II}-Ni^{II}-M^{II} M=Ni, Cu and Pd) nonlinear core: Structure, sprectroscopy, 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.

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▪ Book chapter

Sisir Debnath and Rein V. Ulijn "Enzyme-responsive supramolecular gels" in: Functional Molecular Gels, (Miravet JF and Escuder B Eds) RSC Soft Matter Series Chapter 4, pp 95-116. (Print ISBN: 978-1-84973-665-7)

- Unusual Formation of a Cyclyne Dimer and an Inenoindene Derivative, Manisha Chakraborty, C. A. Tessier, W. J. Youngs J. Org. Chem 64, 2947 1999.

- A Novel Tandem Bicyclization to Form An Indenopyran Ring System, Manisha Chakraborty, D. B. McConville, T. Saito, H. Meng, P. L. Rinaldi, C. A. Tessier, W J. YoungsTetrahedron Let 39, 8237 1998.

- Reactions of Primary and Secondary Amines with Substituted Hydroquinones: Nuclear Amination, Side-chain Amination and Indolequinone Formation; Manisha Chakraborty, D. B. McConville, Y. Niu, C. A. Tessier, W. J. Youngs J. Org. Chem 63, 7563 1998.

- A Novel High Yield Synthesis of Substituted Isoindolequinones; Manisha Chakraborty, D. B. McConville, G. F. Koser, C. A. Tessier, T. Saito, P. L. Rinaldi, W. J. YoungsJ. Org. Chem 62, 8193 1997.

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

Name of the faculty	Workshop/Conference	Source of funding
	➢ 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. ➢ Acharya Prafulla Chandra Ray Memorial Symposium on Chemistry and Industry: Indian Chemical Society, August 02-03, 2013. ➢ Workshop on Computational Biology and Protein Structure Prediction, Department of Biotechnology, Heritage Institute of Technology, Sept 23-27, 2013. ➢ Workshop on Pedagogy for Effective use of ICT in Engineering Education conducted by IIT, Bombay from 12th June to 2nd August, 2014. ➢ Presentation in the 52nd Annual Convention of Chemists 2015, organized by Indian Chemical Society, held at the JECRC University, Jaipur, December 28-30, 2015.	Academic science culture promotion society TEQIP II TEQIP II TEQIP II 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. ➢ Acharya Prafulla Chandra Ray Memorial Symposium on Chemistry and Industry: Indian Chemical Society, August 02-03, 2013.	Academic Science culture promotion society TEQIP II

Name of the faculty	Workshop/Conference	Source of funding
	➢ Workshop on Computational Biology and Protein Structure Prediction, Department of Biotechnology, Heritage Institute of Technology, Sept 23-27, 2013. ➢ Workshop on Pedagogy for Effective use of ICT in Engineering Education conducted by IIT, Bombay from 12th June to 2nd August, 2014. ➢ Oral 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 TEQIP II TEQIP II
Dr. Abhijit Mandal	➢ Seminar on Acharya Prafulla Chandra Ray and hemistry Today, Department of Chemistry & Environment in collaboration with Department of Biotechnology, Heritage Institute of Technology, Kolkata, September 28, 2011. ➢ Acharya Prafulla Chandra Ray Memorial Symposium on Chemistry and Industry: Indian Chemical Society, August 02-03, 2013. ➢ Workshop on Computational Biology and Protein Structure Prediction, Department of Biotechnology, Heritage Institute of Technology, Sept 23-27, 2013.	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/Intern ational
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. In addition Wi-Fi facility can be accessed by both students and staff.
- 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 curricula and syllabi is designed by consulting each members of faculty and then its forwarded to the respective Board of Studies of Degree Awarding Department for approval. At least one member of faculty from Department of Chemistry & Enviornment is nominated in each of the BOS of Degree awarding departments.
- 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.

1. Paper presented by the faculty at state, national and international level
2. Faculty participation in various seminars and workshop
3. 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.

B.Tech programmes in AEIE, BT, ChE, ECE and IT of the Institute was accredited by NBA for a period of 2 years w.e.f. 18.09.2013. The application for renewal of accreditation has already been submitted and visit by Expert Committee is awaited. B.Tech. programme in CSE has been accredited by NBA for a period of 5 years w.e.f. 04.02.2014. Department of Chemistry & Environment contributed towards this achievement.

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.

DEPARTMENT OF MATHEMATICS

1. Name of the Department & Its year of establishment : Department of Mathematics; 2001

2. Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., etc.) : Undergraduate (UG) : B.Tech

   Postgraduate (PG) : M.Tech

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

Paper Code	Paper Name	Semester	Programme	Streams
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
Total	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 trans-port, Image processing, PTV, PIV, Flow through porous media	11	NIL
Dr. Nirman Ganguly	Ph.D.	Assistant Professor	Quantum Information and Computation	12	NIL
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

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. students guided in the last 4 Years
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 give an opportunity to the faculty members to enhance their research 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 members.

  - 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.

DEPARTMENT OF HUMANITIES

1. Name of the Department & Its year of establishment : Department of Humanities; 2001

2. Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., etc.) : Dept. of Humanities mans all humanities courses offered by the degree awarding 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	06
Total	10	06

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	-

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. students guided in the last 4 Years
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

Name	Period	Percentage of classes	Programme
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. Mrittika Ghosh	2015-2016 (Odd)	5	1)Business English
		15	2)Language Practice Lab

9. Programme-wise Student Teacher Ratio: 1 : 15

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 Counry." 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 Evolvement from Bardolatory 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: 24th - 26th 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: 11th July, 2014

2. Name of the Programme: 'Learner Training'
Conducted by: The British Council, Kolkata
No. of Days: 1 Date: 9th July, 2014

3. Name of the Programme:FDP for Effective Teaching
Conducted by: CET, IIT KGP
No. of Days: 3 Date:24th - 26th 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:

Dr. Arindam Das

- 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 Humanitiesis 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.

Prior to introduction of a new course, external experts are invited to brainstorm the objective for it. During this brainstorming session, the larger objects of holistic grooming of the students is taken into consideration. Once the modalities have been discussed, the proposal is then forwarded to the respective Boad of Studies of each department. After the concurrence on the proposal in the BOS, the syllabus is presented to the Academic Council for final approval.

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?

- 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.

b) 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.

c) 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.

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. © 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)

Inspector of Colleges

Copy forwarded for information and necessary action to :

1. 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.

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, MADURDAHA, 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 COMMUNCATIONS 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.

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)

Inspector of Colleges

Copy forwarded for information and necessary action to :

1. 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.

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.

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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.

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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)

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.

Inspector of Colleges

Enclosure-B2

FRI. 29-JUN-01 16:04 91 11 3379025 P.01

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. & Trg.
Govt. of West Bengal,
Bikash Bhavan, 6th Floor, East Block.

Sub: AICTE approval to Kalyan Bharati Trust, Tobacco House, 1&2 Old Court House Corner, Kolkata 700001. WB. for establishment of Haritage 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 [illegible] to Kalyan Bharati Trust, Tobacco House, 1&2 Old Court House Corner, Kolkata - 700001. WB. for establishment of Haritage 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 Unni Krishanan 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.

Contd2..

इंदिरा गांधी खेल परिसर, इन्द्रप्रस्थ एस्टेट, नई दिल्ली - 110 002
Indira Gandhi Sports Complex, I.P. Estate, New Delhi - 110 002
Phone : 3379010/11/12/13/15/16/17/18, Fax : 011-3379002

FRI, 29-JUN-01 16:05 91 11 3379025 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 stipulate time frame.

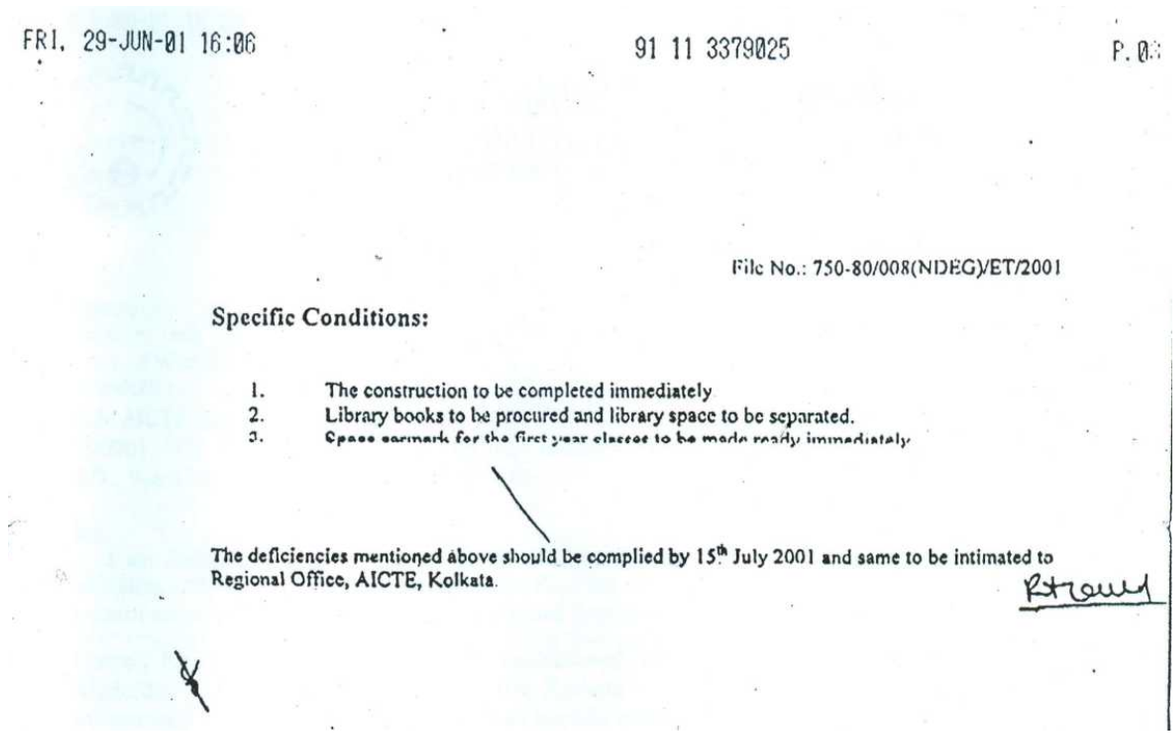
2. The Director of Technical Education, Govt. of West Bengal, Bikash Bhavan, 10th Floor, East Block, Salt Lake City Kolkata – 700 091.

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, Haritage 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 Annexure 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



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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 15th July 2001 and same to be intimated to Regional Office, AICTE, Kolkata.

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

CORRIGENDUMN

To
Secretary,
Dept of Tech. Edu. & Trg.,
Govt. of West Bengal,
Bikas Bhawan, 6th 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, 10th Floor, East Block Lake City, Kolkata – 700 091.
3. Registrar, W.B. University of Tech., BF-142, Salt Lake, Kokata – 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, 10th 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.

(P.N. Razdan)
Adviser (UG)

इंदिरा गांधी खेल परिसर, इन्द्रप्रस्थ एस्टेट, नई दिल्ली - 110 002
Indira Gandhi Sports Complex, I.P. Estate, New Delhi 110 002
दूरभाष/Phone : 3392505,63-65,68,71.73-75 फैक्स/Fax : 011-3392554

Enclosure-B3

डॉ. मंजू सिंह
संयुक्त सचिव
Dr. Manju Singh
Joint Secretary

10/24/6/14

सत्यमेव जयते

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 19th & 20th 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

Enclosure-B4

WEST BENGAL UNIVERSITY OF TECHNOLOGY
BF-142, SALTLAKE, SECTOR-I, KOLKATA-700 064, INDIA
Web Site : www.wbut.net / 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

1

Phone (033) 2321 8771 (O), (033) 2289 5233 (R), Fax (033) 2321 8775, E-mail : srislam56@yahoo.co.in / registrar@wbut.ac.in

WEST BENGAL UNIVERSITY OF TECHNOLOGY
BF-142, SALTLAKE, SECTOR-I, KOLKATA-700 064, INDIA
Web Site: www.wbut.net / 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 Rafikul 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/WBUT/Regis.(NTF)/2012 Date: July 24, 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 occuring 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 Gove nent of India and the State Government had taken joint initiative to establish autonomous gineering institutes in the State through implementation of Technical Education Qual Improv ent Programme (Phase-II). The Department of Higher Education had already communicated t '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 2nd 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 ne.

In view of the above, the Univ rsity referred t issue to differ t 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 14th 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) Rs.450/- per student (with late fine)
Data base 2. For examination related activities	-	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

Dr. Syed Rafiqul 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 confered 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

one : (033) 2321 8771 (O), (033) 2289 5233 (R), Fax (033) 2321 8775, E-mail : srislam56@yahoo.co.in / registrar @ wbut.ac.in

Enclosure-B5

Ph. 23236351, 23232701, 2323[illegible]21
23234116, 23235733, 2323231[illegible]
23236735, 2323943[illegible], 2323962[illegible]

Extension No. 413 (CPP-I Colleges)
UGC Website: www.ugc.ac.in

बहादुरशाह जफर मार्ग
नई दिल्ली 110 002
UNIVERSITY GRANTS COMMISSION
BAHADURSHAH ZAFAR MARG
NEW DELHI-110 002

SPEED POST

F. No. 8-349/2006 (CPP-I)

January, 2010

2 : JAN 2010

The Registrar,
West Bengal University of Technology,
West Bengal.

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 **not** 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 Bhavan, 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

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,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 Collaborarion/Twining Program Approval status
Program	Shift	Level								
ENGINEERING AND TECHNOLO	1st Shift	POST GRADUA	APPLIED ELECTRONICS AND INSTRUMENTA	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.

Page **1** of **4**
Letter Printed On:26 April 2016

Printed By : AE040491

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

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
Note: This is a Computer generated Report.No signature is required.

Page **2** of **4**
Letter Printed On:26 April 2016

Printed By : AE040491

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

ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	CIVIL ENGINEERING	FULL TIME	West Bengal University of Technology, Kolkata	120	120	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	COMPUTER SCIENCE AND ENGINEERING	FULL TIME	West Bengal University of Technology, Kolkata	180	180	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	ELECTRICAL ENGINEERING	FULL TIME	West Bengal University of Technology, Kolkata	60	60	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	ELECTRONICS AND COMMUNICATIONS ENGINEERING	FULL TIME	West Bengal University of Technology, Kolkata	180	180	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	INFORMATION TECHNOLOGY	FULL TIME	West Bengal University of Technology, Kolkata	60	60	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	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

Dr. Avinash S Pant
Vice - Chairman, AICTE

Copy to:

Application Number: 1-2811681310
Note: This is a Computer generated Report.No signature is required.

Page **3** of **4**
Letter Printed On:26 April 2016

Printed By : AE040491

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

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
Note: This is a Computer generated Report.No signature is required.

Page **4** of **4**
Letter Printed On:26 April 2016

Printed By : AE040491

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

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 Collaborarion/Twining 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

		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

Dr. Avinash S Pant
Vice - Chairman, AICTE

Copy to:

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,**
   COMPUTER APPLICATION CENTRE, 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: 1-2811764541
Note: This is a Computer generated Report.No signature is required.

Page **2** of **2**
Letter Printed On:22 April 2016

Printed By : ae3623151

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)
(अभातशिप 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 & 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 प्लैस, भीष्म पितामह मार्ग, प्रगति विहार, लोधी रोड, नई दिल्ली –110003
4th Floor, East Tower, NBCC Place, Bhishm Pitahma Marg, Pragati Vihar, Lodhi Road, New Delhi-110003
Tele : 011-24369633 (D) Fax : 24369624, EPBAX : 24369619 - 22, E-mail : drdynesh@yahoo.com

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,

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)

Heritage Institute of Technology
Kolkata
Date : 04.04.09
No. : 1/1
Received by :

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

NATIONAL BOARD OF ACCREDITATION

F. No. 36-25/2010-NBA

Date : 04.10.2013

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 5th to 7th 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. Baliwal

Contd. (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,

D.K. Paliwal

(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

NATIONAL BOARD OF ACCREDITATION

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

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 Benga

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

8th 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 13th November 2013 filed by you in response to NBA's letter of even number dated 04th 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 18th December 2013. The recommendations of the Appellate Committee were considered by the Sub-Committee of General Council of NBA at its meeting held on 4th 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 Eduction
   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)
****

Room No. 433-C Wing
Shastri Bhawan, New Delhi-110001
14th 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
	Grand Total	**42**	**6.51**	**0.16**	**6.67**

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,-3601 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	0.23
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 Jublee 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 Proudyogiki 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)	RCC 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)

Annexure C.1

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 1st year and one for 2nd 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 1st 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 1/3rd 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 1st April to 31st 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 1st year Students' joining classes or as a part of the Special programme on 5th 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 - 5th September

ii) Freshers' Welcome - 5th September or within 7 days of 1st yr. students joining classes

iii) Biswakarma Puja	-	17th 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 10th 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.)
SOURCES OF FUNDS					
FUND BALANCES	1				
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
			221,988,720		**219,258,996**
APPLICATION OF FUNDS					
Fixed Assets	2				
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
Current Assets and Advances					
Stock of Spares & Stationery Items		1,090,738		742,630	
Cash and Bank Balances	3	11,203,387		3,663,539	
Fixed Deposits		20,381,970		18,862,753	
Advances	4	12,351,895		10,948,595	
		45,027,990		34,217,517	
Less: Current Liabilities & Provisions					
Current Liabilities	5	30,864,350	14,163,640	18,359,657	15,857,860
Deferred Revenue Expenditure					
(to the extent not written off)			1,471,233		2,942,466
			221,988,720		**219,258,996**
Significant Accounting Policies and Notes on Accounts	10				

AS PER OUR AUDIT REPORT OF EVEN DATE

FOR RUSTAGI & COMPANY
CHARTERED ACCOUNTANTS

R. N. Rustagi

RUSTAGI & CO. Kolkata Chartered Accountants

R. N. RUSTAGI
(PARTNER)
Membership No.10467

PLACE : KOLKATA
DATED : THE 22ND DAY OF SEPTEMBER 2012

ON BEHALF OF
HERITAGE INSTITUTE OF TECHNOLOGY

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.)
INCOME			
Fee & Charges	6	215,173,011	169,164,725
Other Receipts	7	7,693,487	1,976,219
		222,866,498	**171,140,944**
EXPENDITURE			
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
		192,833,026	**172,003,850**
Surplus transferred to General Fund		**30,033,472**	**(862,906)**
Significant Accounting Policies and Notes on Accounts	10		

AS PER OUR AUDIT REPORT OF EVEN DATE

FOR RUSTAGI & COMPANY
CHARTERED ACCOUNTANTS

RUSTAGI & CO. Kolkata Chartered Accountants

.. N. RUSTAGI
(PARTNER)
Membership No.10467

ON BEHALF OF
HERITAGE INSTITUTE OF TECHNOLOGY

PLACE : KOLKATA
DATED : THE 22ND DAY OF SEPTEMBER 2012

HERITAGE INSTITUTE OF TECHNOLOGY

(A unit of Kalyan Bharti Trust)

SCHEDULES 1 TO 5 ANNEXED TO AND FORMING PART OF BALANCE SHEET

		As at 31.03.2012 (Rs.)		As at 31.03.2011 (Rs.)
SCHEDULE - 1				
FUND BALANCES				
General Fund				
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)
Development Fund				
As per Last Account	28,136,339		21,155,239	
Add: Devleopment Fee	5,735,875	33,872,214	6,981,100	28,136,339
Reserve Fund				
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
		65,874,632		**21,583,068**
SCHEDULE - 3				
CASH AND BANK BALANCES				
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
		31,585,357		**22,526,292**
SCHEDULE - 4				
ADVANCES				
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
		12,351,895		**10,948,595**
SCHEDULE - 5				
CURRENT LIABILITIES				
Sundry Creditors				
For Capital Expenditure		1,084,400		4,609,424
For Expenses & Other Finances		29,779,950		13,750,233
		30,864,350		**18,359,657**

HERITAGE INSTITUTE OF TECHNOLOGY

(A unit of Kalyan Bharti Trust)

SCHEDULE ANNEXED TO AND FORMING PART OF BALANCE SHEET

SCHEDULE - 2

FIXED ASSETS

Amount (Rs.)

Particulars	Gross Block				Depreciation				Net Block	
	As on 01.04.2011	For the year	Sale/Adjustment during the year	As on 31.03.2012	Upto 31.03.2011	For the year	Sale/Adjustment 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.)
SCHEDULE - 6		
FEE & CHARGES		
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
	215,173,011	**169,164,725**
SCHEDULE - 7		
OTHER RECEIPTS		
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
	7,693,487	**1,976,219**
SCHEDULE - 8		
PERSONNEL EXPENSES		
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
	128,743,392	**105,692,649**

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.)
SCHEDULE - 9		
EDUCATIONAL, ADMINISTRATIVE & OTHER EXPENSES		
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
	32,773,493	**29,537,347**

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
(PARTNER)
Membership No.10461

RUSTAGI & CO. Kolkata Chartered Accountants

ON BEHALF OF
HERITAGE INSTITUTE OF TECHNOLOGY

PLACE: KOLKATA
DATED: THE 22ND 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.)
SOURCES OF FUNDS					
FUND BALANCES	1				
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
			396,433,589		**221,988,720**
APPLICATION OF FUNDS					
Fixed Assets	2				
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
Current Assets and Advances					
Stock of Spares & Stationery Items		1,177,891		1,090,738	
Cash and Bank Balances	3	5,570,237		11,203,387	
Fixed Deposits		7,193,344		20,381,970	
Advances	4	13,024,773		12,351,895	
		26,966,245		45,027,990	
Less: Current Liabilities & Provisions					
Current Liabilities	5	35,320,222	(8,353,977)	30,864,350	14,163,640
Deferred Revenue Expenditure					
(to the extent not written off)			-		1,471,233
			396,433,589		**221,988,720**
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

CHAIRMAN

SECRETARY, KALYAN BHARTI TRUST

TREASURER, KALYAN BHARTI TRUST

RUSTAGI & CO. Kolkata Chartered Accountants

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED MARCH 31,2013

	Schedule	2012-13 (Rs.)	2011-12 (Rs.)
INCOME			
Fee & Charges	6	261,952,430	215,173,011
Other Receipts	7	6,984,469	7,693,487
		268,936,899	**222,866,498**
EXPENDITURE			
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
		243,734,187	**192,833,026**
Surplus transferred to General Fund		**25,202,712**	**30,033,472**
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

CHAIRMAN

SECRETARY, KALYAN BHARTI TRUST

TREASURER, KALYAN BHARTI TRUST

RUSTAGI & CO. Kolkata Chartered Accountants

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.)
SCHEDULE - 1				
FUND BALANCES				
General Fund				
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
Development Fund				
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
Reserve Fund				
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
		103,302,094		**65,874,632**
SCHEDULE - 3				
CASH AND BANK BALANCES				
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
		12,763,581		**31,585,357**
SCHEDULE - 4				
ADVANCES				
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
		13,024,773		**12,351,895**
SCHEDULE - 5				
CURRENT LIABILITIES				
Sundry Creditors				
For Capital Expenditure		9,219,654		1,084,400
For Expenses & Other Finances		26,100,568		29,779,950
		35,320,222		**30,864,350**

RUSTAGI & CO. Kolkata Chartered Accountants

HERITAGE INSTITUTE OF TECHNOLOGY

(A unit of Kalyan Bharti Trust)

SCHEDULE ANNEXED TO AND FORMING PART OF BALANCE SHEET

SCHEDULE - 2

FIXED ASSETS

Amount (Rs.)

Particulars	Gross Block				Depreciation				Net Block	
	As on 01.04.2012	For the year	Sale/Adjustment during the year	As on 31.03.2013	Upto 31.03.2012	For the year	Sale/Adjustment 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**	-

RUSTAGI & CO. Kolkata Chartered Accountants

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.)
SCHEDULE - 6		
FEE & CHARGES		
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
	261,952,430	**215,173,011**
SCHEDULE - 7		
OTHER RECEIPTS		
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	-
	6,984,469	**7,693,487**
SCHEDULE - 8		
PERSONNEL EXPENSES		
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
	170,632,802	**128,743,392**

RUSTAGI & CO. Kolkata Chartered Accountants

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.)
SCHEDULE - 9		
EDUCATIONAL, ADMINISTRATIVE & OTHER EXPENSES		
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
	40,712,762	**32,773,493**

RUSTAGI & CO. Kolkata Chartered Accountants

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.

RUSTAGI & CO. Kolkata Chartered Accountants

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 20TH DAY OF JULY 2013

FOR HERITAGE INSTITUTE OF TECHNOLOGY

CHAIRMAN

SECRETARY, KALYAN BHARTI TRUST

TREASURER, KALYAN BHARTI TRUST

RUSTAGI & CO. Kolkata Chartered Accountants

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.)
SOURCES OF FUNDS					
FUND BALANCES	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
Deposits and Advances from Students			143,150,550		149,325,219
Kalyan Bharti Trust			118,037,626		143,806,276
			356,755,521		**396,433,589**
APPLICATION OF FUNDS					
Fixed Assets	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
Current Assets and Advances					
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	
Less: Current Liabilities & Provisions					
Current Liabilities	5	79,444,590	(38,296,352)	35,320,222	(8,353,977)
			356,755,521		**396,433,589**
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

R.U. TAGI & CO. Kolkata Chartered Accountants

PLACE : KOLKATA
DATED : THE 26TH DAY OF JULY 2014

FOR HERITAGE INSTITUTE OF TECHNOLOGY

P. R. Agarwala
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 31,2014

	Schedule	2013-14 (Rs.)	2012-13 (Rs.)
INCOME			
Fee & Charges	6	248,216,521	261,952,430
Other Receipts	7	5,134,214	6,984,469
		253,350,735	**268,936,899**
EXPENDITURE			
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
		262,199,372	**243,734,187**
Surplus transferred to General Fund		**(8,848,637)**	**25,202,712**
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

R. RUSTAGI & CO. Kolkata Chartered Accountants

PLACE : KOLKATA
DATED : THE 26TH DAY OF JULY 2014

FOR HERITAGE INSTITUTE OF TECHNOLOGY

P. R. Agarwala

CHAIRMAN

SECRETARY, KALYAN BHARTI TRUST

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 31.03.2014 (Rs.)		As at 31.03.2013 (Rs.)
SCHEDULE - 1				
FUND BALANCES				
General Fund				
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
Development Fund				
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
Reserve Fund				
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
		95,567,345		**103,302,094**
SCHEDULE - 3				
CASH AND BANK BALANCES				
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
		19,510,387		**12,763,581**
SCHEDULE - 4				
ADVANCES				
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
		20,501,014		**13,024,773**
SCHEDULE - 5				
CURRENT LIABILITIES				
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		-
		79,444,590		**35,320,222**

HERITAGE INSTITUTE OF TECHNOLOGY

(A unit of Kalyan Bharti Trust)

SCHEDULE ANNEXED TO AND FORMING PART OF BALANCE SHEET

SCHEDULE - 2

FIXED ASSETS

Amount (Rs.)

Particulars	Gross Block					Depreciation					Net Block	
	As on 01.04.2013	For the year	Sale/Adjustment during the year	Transferred to Heritage Business School	As on 31.03.2014	Upto 31.03.2013	For the year	Sale/Adjustment 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

	2013-14 (Rs.)	2012-13 (Rs.)
SCHEDULE - 6		
FEE & CHARGES		
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
	248,216,521	**261,952,430**
SCHEDULE - 7		
OTHER RECEIPTS		
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
	5,134,214	**6,984,469**
SCHEDULE - 8		
PERSONNEL EXPENSES		
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
	188,740,849	**170,632,802**

HERITAGE INSTITUTE OF TECHNOLOGY

(A unit of Kalyan Bharti Trust)

SCHEDULES 6 TO 9 FORMING PART OF INCOME AND EXPENDITURE ACCOUNT

	2013-14 (Rs.)	2012-13 (Rs.)
SCHEDULE - 9		
EDUCATIONAL, ADMINISTRATIVE & OTHER EXPENSES		
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
	32,058,717	**40,712,762**

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 19th 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
(PARTNER)
Membership No.10467
PLACE: KOLKATA
DATED: THE 26TH DAY OF JULY 2014

RUSTAGI & CO. Kolkata Chartered Accountants

FOR HERITAGE INSTITUTE OF TECHNOLOGY

CHAIRMAN

SECRETARY, KALYAN BHARTI TRUST

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.)
SOURCES OF FUNDS					
FUND BALANCES	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
Deposits and Advances from Students					
Caution Deposit		54,034,800		53,874,800	
Advance Fee		104,376,345	158,411,145	89,275,750	143,150,550
Kalyan Bharti Trust			373,769,841		118,037,626
			616,699,064		**356,755,521**
APPLICATION OF FUNDS					
Fixed Assets	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
Current Assets and Advances					
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	
Less: Current Liabilities & Provisions					
Current Liabilities	5	75,666,840	(37,532,447)	79,444,590	(38,296,352)
			616,699,064		**356,755,521**
Significant Accounting Policies and Notes on Accounts	10				

AS PER OUR AUDIT REPORT OF EVEN DATE

FOR RUSTAGI & COMPANY
CHARTERED ACCOUNTANTS

R. N. RUSTAGI
(PARTNER)
Membership No.10467

RUSTAGI & CO. Kolkata Chartered Accountants

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.)
INCOME			
Fee & Charges	6	294,642,850	248,216,521
Other Receipts	7	2,784,614	5,134,214
		297,427,464	**253,350,735**
EXPENDITURE			
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
		309,804,631	**262,199,372**
Surplus transferred to General Fund		**(12,377,167)**	**(8,848,637)**
Significant Accounting Policies and Notes on Accounts	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

RUSTAGI & CO. Kolkata Chartered Accountants

HERITAGE INSTITUTE OF TECHNOLOGY

(A unit of Kalyan Bharti Trust)

SCHEDULES 1 TO 5 ANNEXED TO AND FORMING PART OF BALANCE SHEET

		As at 31.03.2015 (Rs.)		As at 31.03.2014 (Rs.)
SCHEDULE - 1				
FUND BALANCES				
General Fund				
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
Development Fund				
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
Reserve Fund				
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
		84,518,078		**95,567,345**
SCHEDULE - 3				
CASH AND BANK BALANCES				
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
		24,589,605		**19,510,387**
SCHEDULE - 4				
ADVANCES				
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
		12,418,132		**20,501,014**
SCHEDULE - 5				
CURRENT LIABILITIES				
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
		75,666,840		**79,444,590**

RUSTAGI & CO Kolkata Chartered Accountants

HERITAGE INSTITUTE OF TECHNOLOGY

(A unit of Kalyan Bharti Trust)

SCHEDULE ANNEXED TO AND FORMING PART OF BALANCE SHEET

SCHEDULE - 2

FIXED ASSETS

Amount (Rs.)

Particulars	Gross Block				Depreciation				Net Block	
	As on 01.04.2014	For the year	Sale/Adjustment during the year	As on 31.03.2015	Upto 31.03.2014	For the year	Sale/Adjustment 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				
	567,572,730	**298,621,305**	**19,301,182**	**846,892,853**	**182,987,983**	**45,700,251**	**18,670,252**	**204,729,142**	**642,163,711**	**384,584,747**
Previous Year	**561,151,509**	**32,407,903**	**25,986,682**	**567,572,730**	**159,697,798**	**37,024,613**	**13,734,428**	**182,987,983**	**384,584,747**	-

RUSTAGI & CO. Kolkata Chartered Accountants

HERITAGE INSTITUTE OF TECHNOLOGY

(A unit of Kalyan Bharti Trust)

SCHEDULES 6 TO 9 FORMING PART OF INCOME AND EXPENDITURE ACCOUNT

	2014-15 (Rs.)	2013-14 (Rs.)
SCHEDULE - 6		
FEE & CHARGES		
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
	294,642,850	**248,216,521**
SCHEDULE - 7		
OTHER RECEIPTS		
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
	2,784,614	**5,134,214**
SCHEDULE - 8		
PERSONNEL EXPENSES		
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
	219,398,361	**188,740,849**

RUSTAGI & CO. Kolkata Chartered Accountants

HERITAGE INSTITUTE OF TECHNOLOGY

(A unit of Kalyan Bharti Trust)

SCHEDULES 6 TO 9 FORMING PART OF INCOME AND EXPENDITURE ACCOUNT

	2014-15 (Rs.)	2013-14 (Rs.)
SCHEDULE - 9		
EDUCATIONAL, ADMINISTRATIVE & OTHER EXPENSES		
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
	41,358,339	**32,058,717**

RUSTAGI & CO. Kolkata Chartered Accountants

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

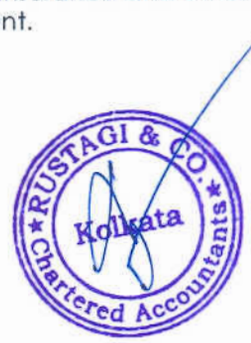
5 Retirement Benefits

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
(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

RUSTAGI & CO. Kolkata Chartered Accountants

HERITAGE INSTITUTE OF TECHNOLOGY, KOLKATA

43rd Meeting of the Board of Governors

Date : Saturday, 12th 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	12/03/16
9.	Prof. (Dr.) Parameswar De	Member	12/03/2016
10.	Regional Officer (ERO),AICTE	Member	
11.	Prof. (Dr.) N. P. Nayak	Member	Leave of absence
12.	Ms. Satarupa Bagchi Biswas	Member	Satarupa Bagchi Biswas
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	12/3/16.
24.	Prof. (Dr.) S. Biswas	
25.	Prof. (Dr.) B. R. Saha	12/3/16
26.	Prof (Dr.) Ratul Kumar Majumdar	
27.	Shri R. P. Sinha	
28.	Shri Manoj Saraogi	
29.	Shri Arvind Srivastava	12/3/16

MINUTES OF THE FORTY-THIRD MEETING OF THE BOARD OF GOVERNORS HELD ON SATURDAY, THE 12TH 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, 5th December, 2015**

Minutes of the 42nd Meeting of the BOG held on 5th 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.

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) 2nd 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.

- 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 3rd 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, 4th 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**

7th 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: Statues, Rules & Regulations, p. 25): The portion "There shall be no separate supplementary examinations under normal condition for I / II / IIIrd year B.Tech., I/IInd year MCA, Ist 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.*

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.

(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.

Prahlad Rai Agarwala
Chairman
Board of Governors

Prof. (Dr.) P. Chaudhuri
Member Secretary
Board of Governors

Declaration by the Head of the Institution

I certify that 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 that 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 : 31st May 2016

Certificate of Compliance

This is to certify that HERITAGE INSTITUTE OF TECHNOLOGY fulfils all norms

1. Stipulated by the affiliating University, Maulana Abul Kalam Azad University of Technology, West Bengal.

2. Regulatory Council / Body [such as UGC, AICTE]

3. The affiliation and recognition is valid as on date

In case the affiliation / recognition is conditional, then a detailed enclosure with regard to compliance of conditions by the instituton will be sent.

It is noted that NAAC's accreditation, if granted, shall stand cancelled automatically, once the institutition loses its University affilation or Recognition by the Regulatory Council, as the case may be.

In case the undertaking submitted by the institutuion is found to be false then the accreditation given by NAAC is liable to withdrawn. It is also agreeable that the undertaking given to NAAC will be displayed on the college website.

Signature of the Head of the institution
with seal:

Date : 7th July 2016

Place: Heritage Institute of Technology, Kolkata

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Heritage Institute Of Technology