

Evaluative Report of the School of Engineering and Technology (SET)

- 1. Name of the Department:** Electrical and Electronics Engineering
- 2. Year of establishment:** 2009
- 3. Is the Department part of a School/Faculty of the university?**
Yes, the EEE department is part of School of Engineering & Technology
- 4. Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.)**

S.No.	Name of Programme Offered	Mode	Remarks
1	B.Tech – Electrical & Electronics Engineering.	Full Time Regular	UG
2	M.Tech – In Electrical and Electronics Engineering with specialization in Power System	Full Time Regular	PG
3	M.Tech – In Electrical and Electronics Engineering with specialization in Instrumentation and Control	Full Time Regular	
4	Ph.D.	Part Time	PG

5. Interdisciplinary programmes and departments involved

- I. B.Tech : M.Tech Integrated Programme/EEE department of Electrical & Electronics Engineering & SBSR
- II. B.Tech: M.Tech Integrated Programme/EEE department of Electrical & Electronics Engineering & School of Business Studies

6. Courses in collaboration with other universities, industries, foreign institutions, etc.

Nil

7. Details of programmes discontinued, if any, with reasons

Nil

8. Examination System: Annual/Semester/Trimester/Choice Based Credit System

Semester- Credit System

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

S. No.	Name of the courses handled for the other department	Name of the Other Department
1	Industrial Instrumentation (EEE 412)	ECE
2	Instrumentation & process control (EEE 011)	ECE
3	Renewable Energy System(OEL017)	ECE, ME, AE, Civil, BT,CSE,IT
4	Control System(EIE 301)	ME, Civil, AE,CSE,IT
5	Energy Conversion	ME, ECE,AE
6	Energy Management and Energy Efficient Technology	ECE, ME, AE, Civil, BT,CSE
7	Telemetry and SCADA	ECE

8	Principles of Electrical Engineering	All Branches of Engineering Except BT
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10. Number of teaching posts sanctioned, filled and actual (Professors/Associate Professors/Asst. Professors/others)

	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	03	03	03
Associate Professors	06	Nil	Nil
Asst. Professors	18	10	10
Others	--	01	01

11. Faculty profile with name, qualification, designation, area of specialization, experience and research under guidance

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D./M.Phil. students guided for the last 4 years
Dr. R K Jatley	Ph.D.(EE)	Distinguished Professor, Dean(SET)	Electrical Engineering	42+ Years	
Dr. H K Verma	Ph.D.	Distinguished Professor	Electrical Engineering	50 Years	
Dr.	Ph.D.	Professor	Power	39 Years	

Gajendra Singh		& HoD	System		
Ms. Shiwani Saini	M.Tech	Assistant Professor	Instrumentation	11 Years	Nil
Ms. Soma Deb	M.Tech	Assistant Professor	Instrumentation & Control	9 Years	Nil
Mr. S P Jaiswal	M.Tech	Assistant Professor	Power Systems	7 Years	Nil
Ms. Suman Lata Dhar	M.Tech	Assistant Professor	Electrical & Electronics	13 Years	Nil
Ms. Ranjeeta Singh	M.Tech	Assistant Professor	Electrical & Electronics	11 Years	Nil
Mr. C Mohan	M.Tech	Assistant Professor	Electrical & Electronics	14 Years	Nil
Mr. Manjeet Singh	M.Tech	Assistant Professor	Power System & Electric Device	4 Years	Nil
Ms. K Jayachitra	M.Tech	Teaching Assistant	Telecommunication	6 Years	Nil
Mr. Abhijeet Kumar	M.Tech	Assistant Professor	Power Systems	3 Years	Nil
Mr. Soumyabrata Das	M.Tech	Assistant Professor	Power & Energy System Engineering	3 Years	Nil
Mr. Shashank Singh	M.Tech	Assistant Professor	Power Systems	3 Years	Nil

12. **List of senior Visiting Fellows, adjunct faculty, emeritus professors**
Nil

13. **Percentage of classes taken by temporary faculty – programme-wise information**
Zero percent

14. **Programme-wise Student Teacher Ratio**

S. No.	Name of the programme	Student Teacher Ratio
1	B.Tech	160/13= 12.30:1
2	M.Tech	65/14= 4.64:1
	Total	225/14=16.07:1

15. **Number of academic support staff (technical) and administrative staff: sanctioned, filled and actual**

	Sanctioned	Filled and Actual
Academic Support Staff(Technical)	03	03
Administrative Staff	01	01

16. **Research thrust areas as recognized by major funding agencies**
Intelligent Instrumentation
Advance Automation

17. **Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Give the names of the funding agencies, project title and grants received project-wise.**
Nil

18. **Inter-institutional collaborative projects and associated grants received**

a) **National collaboration-** Nil

b) **International collaboration-**Nil

19. Departmental projects funded by DST-FIST; UGC-SAP/CAS, DPE; DBT, ICSSR, AICTE, etc.; total grants received.

Nil

20. Research facility / centre with

- **state recognition**
- **national recognition**
- **international recognition**

Advance Instrumentation and Automation Lab

The lab. supports research at Master and Ph.D. levels. Some specialized training programme is also held in this lab with active participation of the industry. During the past one year following programmes has been conducted in this lab:

- I. PLC and SCADA in association with JRM Solution
- II. Embedded Systems and Robotics in association with IIT Mumbai.
- III. Analog Circuits in association with Texas Instrumentation.

The Advanced Instrumentation and Automation Lab has following sections within it :

- I. Advanced Industrial Instrumentation
- II. Advanced Process Automation
- III. Virtual Instrumentation
- IV. Embedded Systems and Robotics
- V. Building Automation
- VI. Smart Sensors
- VII. Sensors and Actuator Networks

21. Special research laboratories sponsored by / created by industry or corporate bodies:

- Under the **e-Yantra** lab set up initiative, the department has set up special research laboratory related to Embedded

System and Robotics with part funding from Ministry of Human Resource Development through IIT Mumbai and balance by Sharda University.

- Nodal Centre for Virtual Labs has been set up under the National Mission ICTE of Ministry of HRD of government of India through IIT Roorkee and IIT Delhi.

22. Publications:

- I. Roop Pahuja, **H.K. Verma** and Moin Uddin, “A Wireless Sensor Network for Greenhouse Climate Control”, IEEE Pervasive Computing, Vol.12, Issue 2, April-June 2013, pp. 49-58
- II. **Shiva Pujan Jaiswal, Rajesh Narayan Deo**, M.V. Naik, ‘Fuzzy logic based Automatic Load Frequency Control of Multi-Area Power Systems’, International Journal of Engineering Development and Research, Vol.1, Issue 1, Aug 2013, pp. 13-60.
- III. **Mohan C, Vinod** Kumar Giri, “DC Motor Control using EMG Signal for Prosthesis”, International Journal of Electronics and Communication Technology, Vol 2, Issue 2, June 2011.
- IV. **Ms. Shiwani Saini** “Graphical Method to Determine Base Change Locations in Genomic Sequences of Influenza. A Virus using Wavelets”. “International Journal of Computational mathematics” Communicated
- V. **Ms. K.Jayachitra** “Circularly Polarized Microstrip Patch Antenna with FR4 Substrate in Dual Feed for WLAN Applications” “International Journal of Advanced Research in Computer Science and Electronics Engineering” (Communicated).
- VI. **Ms. K.Jayachitra** “Design and Development of Hybrid Coupler with FR4” “International Journal of Advanced Research in Electronics and Communication Engineering” and (Communicated).
- VII. **Ms. K.Jayachitra** “Design of Microstrip Patch Antenna for WLAN Applications” “ International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering”

(Communicated).

VIII. **Ms. K.Jayachitra** “ Design of Hybrid Coupler” International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering” (Communicated).

IX. **Mr. S.P. Jaiswal** “LabView Based Low Cost Instrument for Measuring Flux and Frequency” “International Conference On Science And Engineering Of Materials, Sharda University, India”

Books/Monographs published

e-Monographs Written and Published by Prof. H.K.Verma

- Smart Sensors
- Sensor Networks
- Telemetry
- SCADA

23. Details of patents and income generated

Nil

24. Areas of consultancy and income generated

Nil

25. Faculty selected nationally / internationally to visit other laboratories / institutions / industries in India and abroad

Faculty	Nationally/ Internationally	Place/Laboratory/Industries
Shiwani Saini	National	1. Visited Gautam Buddha University in 2012 to deliver Oral presentation in 11th Biennial Conference of Indian Society of Industrial and Applied Mathematics on Emerging Mathematical

		<p>Methods, Models Algorithms for Science and Technology.</p> <p>2. Delivered oral presentation in Satellite Conference ICM2010 on Mathematics in Science and Technology , 1^{5th} - 1^{7th}, August 2010, Indian Habitat Center Lodhi Road ,New Delhi</p>
C. Mohan	National	<p>1. Visited Haryana Collage Technology & Management, Kaithal to deliver oral presentation in 2nd National Conference on Electronics Design & Communication, NCEDCT-2010.</p> <p>2. Visited AL-FALAH School of Engineering & Technology, Dhauj, Faridabad to deliver oral presentation in AVEC-2010.</p> <p>3. Visited Dr. B.R. Ambedkar, National Institute of Technology, Jalandhar, Punjab to deliver oral presentation in BEATS 2010.</p> <p>4. Visited to BHEL, Haridwar on April 18, 2015.</p>

Ranjeeta Singh	National	<ol style="list-style-type: none"> 1. Delivered oral presentation in , 2nd Satellite Conference of International Congress of Mathematicians, Aug 14-17, 2010, at India Habitat Centre . 2. Visited Haryana Collage Technology & Management, Kaithal to deliver oral presentation in 2nd National Conference on Electronics Design & Communication, NCEDCT-2010 3. Delivered oral presentation at National Institute of Technology, Jalandhar, Punjab in BEATS 2010. 4. Visited Temflo systems pvt. ltd Ghaziabad in 2013 5. Visited JRM Solutions Ghaziabad, May 2014. 6. Visited TERI GRAM, Gurgaon on September 17, 2014 7. Visited to BHEL, Haridwar on April 18, 2015
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Suman Dhar	Lata	National	<ol style="list-style-type: none"> 1. Visited Thapar University Patiala, Punjab to deliver oral presentation in Trends in Instrumentation and Control Engineering (TICE-09). 2. Delivered oral presentation in Satellite Conference ICM2010 on Mathematics in Science and Technology , 1^{5th} - 1^{7th}, August 2010, Indian Habitat Center Lodhi Road ,New Delhi. 3. Delivered oral presentation in 11th Biennial conference of the ISIAM, Emerging Mathematical Methods, Models and Algorithms for Science and Technology, 15th -16th December 2012. 4. Visited Temflo systems pvt. ltd Ghaziabad in 2013. 5. Visited JRM Solutions Ghaziabad, May 2014. 6. Visited TERI GRAM, Gurgaon on September 17, 2014. 7. Visited Delhi Jal Board, near Akshardham on April 16, 2015.
Soma Deb		National	<ol style="list-style-type: none"> 1. Visited Temflo systems pvt. ltd Ghaziabad in 2013.

		<p>2. Visited TERI GRAM, Gurgaon on September 17, 2014.</p> <p>3. Visited BHEL, Haridwar on April 18, 2015</p>
S P Jaiswal	National	<p>1. Visited TERI GRAM, Gurgaon on September 17, 2014</p> <p>2. Visited NPTI, Faridabad on November 28, 2013.</p> <p>3. Visited to Delhi Jal Board, near Akshardham on April 16, 2015</p> <p>4. Visited to BHEL, Haridwar on April 18, 2015.</p>
Shashank Singh	National	<p>1. Visited to HPGCL, Panipat on February 16, 2015</p>
Soumyabrata Das	National	<p>1. Visited to BHEL, Haridwar on April 18, 2015.</p>

26. Faculty serving in

- a) **National committees-** Dr. H. K. Verma, Member of draft committee for standards and small hydropower, Ministry of New & Renewable Energy, Govt. of India
- b) **International committees-** Nil
- c) **Editorial Boards-** Nil

27. Faculty recharging strategies (UGC, ASC, Refresher / orientation programs, workshops, training programs and similar programs).

a-Faculty Development program

Faculty		Details of the Faculty Development Program
Suman Lata Dhar		<ol style="list-style-type: none"> 1. Attended a workshop on High Impact Teaching Skills and Mission 10X learning Approach, organised by WIPRO from 8th-12th November, 2011. 2. Attended Advanced Workshop Mission 10X learning Approach, organized by WIPRO from 5th-6th January, 2012. 3. Participated in FDP on Digital Signal Processing organized by department of electronics and communication, SET from 12th - 17th June, 2014.
Soma Deb		<ol style="list-style-type: none"> 1. Attended a workshop on High Impact Teaching Skills and Mission 10X learning Approach, organised by WIPRO from 8th-12th November, 2011. 2. Attended Advanced Workshop Mission 10X learning Approach, organized by WIPRO from 5th-6th January, 2012.

b-Workshops

Faculty		Details of the Workshop/Seminar
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Suman Lata Dhar		<ol style="list-style-type: none"> 1. Participated in a Two –week ISTE Workshop on Signals and systems conducted by IIT Kharagpur from 2nd -12th January, 2014. 2. Participated in All India seminar on ‘Power Electronics Applications to Power systems (PEAPS-2011) 19th -20th November, 2011 organized by SKIT Jaipur.
Ranjeeta Singh		<ol style="list-style-type: none"> 1. Participated in a Two –week ISTE Workshop on Signals and systems conducted by IIT Kharagpur from 2nd -12th January, 2014. 2. Participated in All India seminar on ‘Power Electronics Applications to Power systems (PEAPS-2011) 19th -20th November, 2011 organized by SKIT Jaipur

c-Lecture series by expert of industry as well as academician.

d-Faculty also goes to various industry to get different training

e- Industrial visit

28. Student projects

- **Percentage of students who have done in-house projects including inter-departmental projects**
UG –EEE-90%
PG-PS—85%
- **Percentage of students doing projects in collaboration with**

**other universities
/ industry / institute**

UG—EEE-10%

PG-PS- 15%

29. Awards / recognitions received at the national and international level by

- Faculty-Nil
- Doctoral / post doctoral fellows- Nil
- Students-Nil

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

Nil

31. Code of ethics for research followed by the departments

The following clauses of Ph.D regulation of Sharda University are related to the code of ethics for research:

12.0 REVIEW OF THE PROGRESS

12.1 The research progress will be reviewed by the Dean Research in consultation with the supervisor. Each research scholar will submit a progress report at the end of each semester in the prescribed format.

12.2 In case two consecutive progress reports are unsatisfactory, the research scholar may be de-registered from the Ph.D. programme.

18.0 Pre- Ph.D. PRESENTATION

18.1 On completion of the research work, the research scholar shall submit a request and eight copies of synopsis including bibliography of research work to Dean Research who in turn will advise SRC to conduct pre Ph.D. open presentation.

18.2 SRC will make one of the following recommendations:

- (i) Qualify
- (ii) Reappear*

(iii) Disqualify

* The committee may define the period and time for reappearing.

19.0 PANEL OF EXAMINERS

The supervisor will submit along with synopsis, a panel of the examiners drawn from premier Institutes/ University/Organizations to SRC. The panel will have minimum four examiners each from India and abroad. SRC will finalize the synopsis and the panel of examiners with its recommendation for further processing. **The Vice-Chancellor shall approve the names of three examiners, preferably one from abroad, out of the names recommended by SRC.**

20.0 SUBMISSION OF THESIS

20.1 The research scholar will submit the following documents to University.

- (a) 04 copies of synopsis of the thesis.
- (b) 04 hard bound copies of the thesis (along with a soft copy) in a format.
- (c) A no-dues certificate from all concerned.
- (d) Proof of having two research papers accepted/published in refereed indexed Journals.

20.2 The University will send the synopsis of the thesis to the examiners for their consent for evaluation. On receipt of the consent, the thesis in hard and soft copy would be sent to them for evaluation.

20.3 If the consent of the examiners is not received within one month, the synopsis of the thesis will be send to the next examiner as approved by the Vice-Chancellor.

32. Student profile programme-wise:

Name of the Programme	Applications received	Selected	Pass percentage
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(refer to question no. 4)		Male	Female	Male	Female
2010 EEE	NA	121	11	NA	NA
2011 EEE	646	70	10	NA	NA
2012 EEE	197	44	7	NA	NA
2013 EEE	160	41	3	NA	NA

33. Diversity of students

Name of the Programme (refer to question no. 4)	% of students from the same university	% of students from other universities within the State	% of students from universities outside the State	% of students from other countries
2010 EEE	NA	38.20%	62%	NA
2011 EEE	NA	29.50%	60.50%	10%
2012 EEE	NA	25.50%	66.70%	7.90%
2013 EEE	NA	17.50%	47.70%	36.40%

34. How many students have cleared Civil Services and Defense Services examinations, NET, SET, GATE and other competitive examinations? Give details category-wise.

Nil

35. Student progression

Student progression	Percentage against enrolled
UG to PG	1%
PG to M.Phil.	Nil
PG to Ph.D.	Nil
Ph.D. to Post-Doctoral	Nil
Employed <ul style="list-style-type: none">• Campus selection• Other than campus recruitment	
Entrepreneurs	Nil

36. Diversity of staff

Percentage of faculty who are graduates	
of the same university	Nil
from other universities within the State	21.4%
from universities from other States	72%
from universities outside the country	7.14%

37. Number of faculty who were awarded M.Phil., Ph.D., D.Sc. and D.Litt. during the assessment period

Nil

38. Present details of departmental infrastructural facilities with regard to

Library	<p>Carpet area of library (in m²)</p> <p>Reading space (in m²):</p> <p>Total Area : 595</p> <p>Carpet Area : 400</p> <p>Reading Space : 195</p> <p>Number of seats in reading space : (100 Users)</p> <p>N Number of users (issue book) per day Number of users : (200+Books)</p> <p>(reading space) per day : (100+ Users)</p> <p>Timings: During working day, weekend, and vacation : (08:30am to 0 8:00 pm)</p> <p>Number of library staff : 06</p> <p>Number of library staff with degree in Library : 06</p> <p>Management Computerisation for search, indexing, issue/return records Bar coding used : YES</p> <p>Library services on Internet/Intranet INDEST or other similar membership archives : YES</p>
Internet facilities for staff and students	Wi-Fi Campus
Total number of class rooms	6
Class rooms with ICT facility	6

Students' laboratories	Power Electronics Lab
	EEE Simulation Lab
	Electrical Assembly Lab
	Basic Electrical Engineering lab
	Measurement & Instrumentation Lab
	Control System Lab
	Power System Engineering lab
	Energy Audit Lab
	Virtual Instrumentation Lab
Research laboratories	Advanced Instrumentation and Automation Lab

39. List of doctoral, post-doctoral students and Research Associates from the host institution/university-

- a. Ms. Shiwani Saini (Bio Medical Signal Analysis using Wavelength)
- b. Ms. Soma Deb (Protection of HVDC System)
- c. Mr. S. P. Jaiswal (Optimal Distribution System Planning with Voltage Control)
- d. Ms. Suman Lata Dhar (Instrumentation and Remote Control of Green House)
- e. Mr. Ranjeeta Singh (Web Based Neuro Fuzzy Supervisory Control of manufacturing Systems)
- f. Mr. C Mohan (Assistive Technologies for elderly People)

from other institutions/universities-

- a. Ms. Abha Sharma
- b. A. Ambikapathy
- c. Roop Pahuja

40. Number of post graduate students getting financial assistance from the university.

Nil

41. Was any need assessment exercise undertaken before the development of new programme(s)? If so, highlight the methodology.

M.tech in PSE was started in 2010-11 session and

M.tech in I&C was started in 2013-14 session.

Before the development of these programs following assessment exercise was done:

- a. Demand of Post graduates in subjects was assessed for industry/teaching/research
- b. A workshop was held to interact with experts from industry, research organization and leading academic institutions from country

42. Does the department obtain feedback from

a. faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?

Yes, the department obtains feedback from faculty on curriculum, teaching, learning and evaluation. The feedback collected will be analysed and placed before the departmental committee and staff council. The feedback on curriculum will be used in designing / modifying the syllabi. The feedback on teaching learning evaluation will be used to improve the respective processes

b. students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?

Yes, the department collect the feedback from students on staff curriculum on teaching learning and evaluation processes. The data is analyzed and corrective measures are taken accordingly.

c. alumni and employers on the programmes offered and how does the department utilize the feedback?

Yes, the feedback from alumni and employees on programmes

offered is collected and such information is used for improvement of quality of the department

43. List the distinguished alumni of the department

S. No.	Name of the Alumni	Organisation/Institute	Designation/Degree
1	Sumit Kumar	BITS Mesra, Ranchi	ME in Electrical
2	Ramit Debnath	IIT, Mumbai	M.Tech(Technology & Development)
3	Abhishek Dhama	Steel Authority of India Limited	Management Trainee
4	Deepanshu Gupta	GENPACT	Material Engineer
5	Tausif Anwar	NTTDATA	Software Engineer
6	Manisha Kaur	Indian Petro Group	Research Associate
7	Samakshi Malik	Honeywell	GET
8	Praveen Mishra	Hindware	Management Trainee
9	Anirudh Mehlawat	University of Petroleum and Energy Studies	Master of Technology
10	Dinesh Sharma	Quadra Infratel Pvt. Ltd	Project Coordinator (Electrical Board)

44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts.

Special Lectures:

- I. Prof. H. K. Verma delivered special lecture on ‘**Smart Sensors**’ on March 02, 2013
- II. Prof. J. D. Sharma special lecture on ‘**Power System Reliability considering Renewable Energy Resources and Deregulation**’ on March 16, 2013

- III. Prof. Ekram Hussain , AMU ,Aligarh delivered expert lecture on ‘**Gases A Future Insulation Medium**’ on April 5, 2013
- IV. Expert lecture on 20th November, 2013, by Er. Rahul Pandey , Er. Alka Yadav NPTI, Faridabad on “**Hydro Power Plant**” & ‘**Power System Simulator**’.
- V. Expert lecture on March 11, 2014, by Mr. Ajit Singh, Hindustan Power Projects Pvt. Ltd on ‘**Hydro Power– the White Gold**’.
- VI. An Expert lecture on Hydro Power Plant was delivered by Mr. Rahul Pandey NPTI, Faridabad on January 28, 2015 for the EEE students.
- VII. An Expert Lecture on Industrial Automation was delivered by Mr. Ashish Srivastava and his team from JRM Solutions on Feb 12, 2015 for the students of EEE department.

Industrial/ Technical Visit:

- I. One day industrial visit to TempfloIndia Pvt. Ltd., Ghaziabad on Sept.25, 2013.
- II. One day industrial visit to NPTI, Faridabad on November 28, 2013
- III. One day industrial visit to Teri Gram, Gurgaon on September 17, 2014.
- IV. One day industrial visit to HPGCL, Panipat on February 16, 2015.
- V. One day industrial visit to Delhi Jal Board, near Akshardham on April 16, 2015.
- VI. One day industrial visit to BHEL, Haridwar on April 18, 2015.

Conference/Workshop organized

- I. Two day workshop on ‘**Robotics**’ organized for students on 21st and 22nd September, 2013.
- II. A 75 hours training cum workshop programme on PLC and SCADA in collaboration with JRM Solutions, Ghaziabad from the month of mid February, 2015 to April 2015
- III. A series of workshops for students of B.Tech and M.Tech to prepare students for the competition organized by Texas Instrumentation in the field of Embedded Systems and Robotics and Analog Systems

- IV. Organized a University level technical competition of IET Award Ambitions (UK based), “Present Around The World”, Feb 4, 2011, Sharda University
- V. Organized an “Embedded System Workshop” for beginners (3rd-5th Nov,2011) in Sharda university for three days. Contribution: Design, Development, Programming and delivery of lectures for embedded based experiments

45. List the teaching methods adopted by the faculty for different programmes.

- i. Power Point Presentations
- ii. Video Lectures
- iii. LMS
- iv. Hands on practice in laboratories
- v. Tutorials exercise
- vi. Case studies
- vii. Visits to industries, research lab and leading academic institutions

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

Meeting of faculty of department and Board of Studies are held at least once in a semester where programme objectives and learning outcomes are discussed and necessary action and correction are initiated

47. Highlight the participation of students and faculty in extension activities.

- a. Faculty members are encouraged to participate in the special courses/ summer school/ winter school/ seminars/ conferences organized by central universities / IIT's/ NIT's etc. On an average each faculty member attends at least one programme per year.
- b. Students are also encouraged the training programmes/ national and state level competition/ seminars and technical festival held in other universities/ IIT's/ NIT's

48. Give details of “beyond syllabus scholarly activities” of the department.

Workshop on specific software/ tools such as MatLab, LabView, PSCAD, PLC, Embedded Systems, Robotics etc

49. State whether the programme/ department is accredited/ graded by other agencies? If yes, give details.

Nil

50. Briefly highlight the contributions of the department in generating new knowledge, basic or applied.

Research in socially and industrially relevant technologies is carried out:

- Assistive technology for elderly and disabled person
- Automation of Green building
- Smart building
- Smart Grid

51. Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.

Strengths:

- i. Highly qualified and experienced professors
- ii. Strong academic counseling and consultation for students
- iii. A strong focus on quality teaching, both in theory and practical course
- iv. Focus on personality development of each student through development of positive attitude, leadership qualities and self awareness.

Weakness:

- i. Less faculty members at intermediate level
- ii. Lack of communication skill in the student commuting from rural and semi-urban background
- iii. Inadequate participation in extra-curricular activities like sports, arts etc.
- iv. Inadequate technical assistance in laboratories

- v. Inadequate sophisticated equipment

Opportunities:

- i. Lots of scope for consultancy and research
- ii. Access to best international journals
- iii. Grant from various funding agencies
- iv. Young and dynamic society
- v. Assessment and accreditations NAAC, NBA, ABET

Challenges:

- i. Rapid changes in technology
- ii. Declining enrollment (interest) in engineering
- iii. Quality of incoming students
- iv. New mushrooming colleges
- v. Facing challenges in placements

52. Future plans of the department

- i. Set up a centre of excellence for Smart Grid Technologies
- ii. Grants from various funding agencies
- iii. Establishing tie-ups with leading industries and educational institutions for having collaborative activities
- iv. To achieve 100 percent placement in leading companies