



GIET UNIVERSITY, GUNUPUR.

SCHOOL OF ENGINEERING

DEPARTMENT OF ELECTRONIC AND COMMUNICATION ENGINEERING

Ref No: BoS/Dept/No-/2019-213.

Dt: 18.05.2019

Minutes of the Board of Studies (BoS) meeting of Electronics and Communication Engineering Department, School of Engineering, GIET University Gunupur held in Conference Hall, Admin Block, GIET, and University on Dt: 18.05.2019 at 10a.m.

Members present:

- Prof. S. Pradhan, Chairman, BoS / HoD
- Mr. Virender Kumar, CEO, EDGE Telecom Pvt. Ltd, Gurgaon, Industry Expert
- Dr. B. N .Chatterji, Former Professor ,E&ECE Dept. IIT, Kharagpur ,Experts from outside University
- Dr. Bijayananda Patnaik, Associate Professor, ECE, IIIT, BBSR, Experts from outside University
- Dr. Arunanshu Mahapatro, Associate Professor, ECE, VSSUT, BURLA, Experts from outside University
- Dr. Pradyut Kumar Biswal, Associate Professor, ECE, IIIT, BBSR, Experts from outside University
- Dr. Sanjeev Kumar Mishra, Associate Professor, ECE, IIIT, BBSR, Experts from outside University
- Dr. Basudeba Behera, Asst. Prof, NIT, Jamshedpur, Postgraduate Meritorious Alumnus
- All the Faculty Members of Dept. of ECE, School of Engineering, GIET University

The meeting of the “Board of Studies” commenced with a warm welcome note by the Chairman, BOS, Department of Electronics and Communication Engineering. While addressing he informed that he will try to continue the practices of his predecessors for the development of the department within his capacity. He expressed his confidence in getting the cooperation and support from other members of the BOS in effective discharge of his duties.

The following points are discussed and the corresponding resolutions are adopted:

- **Introduction of BOS members.**

The Chairman, BOS has introduced the BOS members proposed by the department. The committee members are convinced with the greetings of the BOS chairman.

- **Vision, Mission of the department**

Chairman BOS presented Visions, Mission of the Department in front of the BOS members.

Vision of the Department

To develop globally accepted and technically competent Electronics & Communication engineers through quality education, innovation and collaborative research.

Mission of the Department

M1: Imparting quality education to the students for enhancing their skills and making them globally competent electronics and communication engineers.

M2: Maintaining state-of-art facilities to provide students and faculty members with opportunities to create interpret and disseminate knowledge.

M3: Association with reputed research organizations and educational institutions for excellence in teaching, research and consultancy practices.

The feedback Analysis report from the stake holders were analysed in detail. The chairman BOS explained about the consistency of Mission vision statement of the department with respect to the mission vision statement of the university. Hence it was decided by all the members to continue with the same mission vision statement for the upcoming session.

- **Program Educational Objectives (PEOs) of the department.**

The chairman of BOS presented the PEOs of the department in front of the committee members

- PEO1: To strengthen the knowledge of basic sciences and fundamental technical concepts in diversified areas such as communication systems, signal & image processing and allied fields to enhance the capabilities for the career.
- PEO2: To enable the student to address the complexity of real life engineering problems and be able to formulate / design solutions which are technically advanced, economically feasible and environmentally sustainable that lead to professional growth of the society.
- PEO3: To acquire adequate training for working as a team on projects with good technical skills, leadership qualities & professional ethics with social awareness and organizational context in which the engineering skills are utilized to take up life-long learning.

The feedback summary of stake holders were analysed and the consistency of the PEOs with the mission statement of the department was thoroughly discussed by the both external and internal DAC members and it was found satisfactory. Hence the same PEOs were approved for the upcoming session also.

- **Program Outcomes (POs):**

- PO1 Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- PO2 Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- PO3 Design / development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- PO4 Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
- PO5 Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

- PO6 The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
- PO7 Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- PO8 Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- PO9 Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- PO10 Communication: Communicate effectively on complex 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 give and receive clear instructions.
- PO11 Project management and finance: 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 projects and in multidisciplinary environments.
- PO12 Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

The chairman BOS emphasized on the attainment of POs. Attainment of Pos were also analysed from the feedback received from stake holders and it was found satisfactory. Based on the attainment of PO level in the academic year 2018 – 2019, the target levels for the academic year 2019 – 2020 is approved.

- **Program Specific Outcomes (PSOs) of the department.**

- PSO1 Develop, analyze & solve real-time problems relating to communication systems along with allied engineering streams.
- PSO2 Proficiency in use of hardware & software tools to design and analyze electronic systems to become professional technocrats.

The attainment of PSOs were analysed from the feedback reports and it was found satisfactory too.

- **General Comments:**

- Dr. B. N Chatterji expressed their concern about motivating students towards domain specific courses in induction program and environment and other necessary courses.
- Dr. Patnaik asked the reason behind a few courses in IV year 2nd semester without dedicating learners to project work? Specifically reg. the course Environmental Sciences for engineers. Dr. Basudeba suggested to prepone the offering of Environmental Sciences for engineers at 4/2, as it may influence the placement interviewer's glance and inference about curriculum.
- Dr. Biswal inquired about certifications and recommended to include some sensors based activity as a part of curriculum keeping in view of IOT for near future, may be as an inter disciplinary open elective.
- Contents of Professional electives should be revisited keeping in view of the syllabus coverage of core courses, suggested by Dr. B. N Chatterji.
- Inclusion of case studies in professional courses, where ever possible, suggestion by Dr. Mahapatro and Dr. Mishra.
- Dr. Mishra suggested including a few open courseware courses as equivalent to credited courses offered by GIETU to inculcate self learning. He also recommended robotics, embedded systems etc., courses to be offered as open electives by ECE department jointly with other departments to promote inter- disciplinary activity.
- Members opined to include C⁺⁺ in skilling components.

- **Course related comments**

- Mr. Pahi proposed to change the nomenclature of the english course titled: '*Basic of communications*'. As the department is offering a degree in communications engineering, it may confuse the stake holders and leads to a misinterpretation that it may be another departmental core subject
- Dr. Mishra asked to provide a tutorial session for basic science course Single variable calculus and matrix algebra.
- Dr. Behera aksed to downsize university common syllabus in workshop course.
- Dr. Mahapatro suggested retaining a general physics course at basic level and introduces one more elective course in advanced physics at advanced level.
- Domain specific chemistry course with more inclination towards Vapor deposition, silicon batch processing etc., is suggested by Dr. Patnaik.
- Dr. B. N Chatterji suggested revising 'Electrical technology' with Basics of circuit theory and DC

machines. He also recommended introducing control systems as an elective to facilitate GATE aspirants along with choice for inter-disciplinary professional elective as well. Dr. Mahapatro inquired about Control systems.

- Dr. Biswal suggested the inclusion of Band pass sampling concepts to the syllabus of course Signal and systems.
- Dr. Mishra recommended offering a separate course on 'Electromagnetic fields and Transmission lines.' Dr. Mahapatro requested a tutorial session to be attached with EMTL. Dr. B. N Chatterji opined that it may not be necessary.
- *Digital Signal processing* course syllabus should be reorganized, a suggestion from Dr. B. N Chatterji and also recommended to add time-Frequency analysis concept to the syllabus.
- *Audio and Speech signal processing* syllabus to be revised with more focus on speech signal processing. Suggested by Dr. B. N Chatterji recommended including audio codec and speech encoding concepts.
- Dr. Patnaik inquired about ANN and suggested to include a few topics of deep learning in the applications of ANN.
- Dr. Das suggested the inclusion of C-V characteristics of MOS at High & low frequencies in next level course of AECD.
- Dr. Biswal recommended to include Euler path based stick diagram, Logical effect instead of driving large capacitance, FIN FET and SOMMSOFET to VLSI Design syllabus.
- Mr. Pahi asked to include scripting (Perl recommended) in skilling. Asked to collect a few industry centric requirements and include them as experiments for scripting.

•Professional membership for faculty

Chairman BOS and Dr. Arunanshu mohapatra expressed that a having membership in various professional bodies will be advantage to the faculty to interact with vadous members to understand the present trends and activities the companies are engaged with.

Dr. B. N Chatterji expressed their opinion about how IEEE membership had given them opportunity to meet many industry person and academicians engaged in R & D which has given them an idea to propose project for DST.

Resolution:

It is resolved that based on the discussion among the members, a membership drive for faculty to be scheduled and organized to explain the advantages and thus motivate them to take up the professional membership in the bodies such as ISTE, IETE, ISOI, IEEE, IEI etc.

- **In-house consultancy projects**

Chairman BOS and Dr. B.N Patnaik indicated that in-house consultancy projects are sanctioned to inculcate the research among faculty. The projects Sanctioned are :) "Circuit Analysis using PCB", where the students will implement all the experiments on PCB instead of bread boards. The consultancy work is allotted to Mr.Gautam,Asst.Prof of ECE department "Real time Heart Rate Monitoring uses Image Proaessing", a project module for Biomedical Engineering students at GIETU. This work is allotted for Dr. Parida, Assoc.Prof.,

Resolution:

It is resolved that the faculty should plan and execute the in-house projects accurately, so that they can get few more projects from internal as well as from external agencies.

- **Training programs on Dieital design though Verilog and VHDL**

Special invitees are informed by the chairman that the faculty are showing interest to train the students on Digital design through Verilog arrd VHDL. The students had a lab on VHDL, but according to the faculty opinion it is not sufficient for them to learn to the extent they can apply the idea to implement a mini or major project work.

Resolution:

It is resolved that the contents are to be design for the course that will provide them Complete a given task/project work.

- **Course Outcomes (COs) of the department.**

The course outcome of all the courses was discussed analysed and the curriculum gaps were found. The committee decided to go for different activities like workshops, SDP, seminars in the department to minimize the curriculum gap. It was also advised to all the faculty members to encourage students for different value added courses.

- **Approval of the Syllabus Structure of Academic Regulation:-19-20, ECE (UG & PG)**

Chairman BOS presented the Syllabus Structure of Academic Regulation:-19-20, ECE (UG & PG) for approval. After long deliberation, the Syllabus Structure of Academic Regulation:-19-20, ECE (UG & PG) is approved

- Approval of the 1st year Syllabus of Academic Regulation:- 19-20, ECE (UG & PG)**
 The Chairman, BOS proposed the 1st year Syllabus of Academic Regulation:- 19-20, ECE (UG & PG)for acceptance. After an extensive conversation, the 1st year Syllabus of Academic Regulation:- 19-20, ECE (UG & PG) are accepted.
- Rectification of the 2nd year syllabus of Academic Regulation:-18-19, ECE (UG & PG)**
 Chairman of BoS presented of the 2nd year syllabus of Academic Regulation:-17-18, ECE (UG & PG) Rectification. After a stretched out deliberation, the Rectification of the 2nd year syllabus of Academic Regulation:-17-18, ECE (UG & PG)is approved
- Rectification of the 3rd year syllabus of Academic Regulation:-17-18, ECE (UG & PG)**
 Chairman of BoS discussed the Rectification of the 3rd year syllabus of Academic Regulation:-18-19, ECE (UG & PG). After a stretched out deliberation, the Rectification of the 3rd year syllabus of Academic Regulation:-18- 19, ECE (UG & PG) are accepted.
- Rectification of the open electives offered by the department in Academic Regulation:-17-18 &18-19 .**
 Chairman of BoS presented modified the Rectification of the 3rd year syllabus of Academic Regulation:-18-19, ECE (UG & PG) After a stretched out deliberation, the Rectification of the 3rd year syllabus of Academic Regulation:-18-19, ECE (UG & PG)is approved.
- Approval of the Budget for 2019-2020 proposal.**
 Chairman of BoS presented Budget for the academic year 2019-20. Budget for the academic year 2018-19 approved.
- Implementation of MOOC courses**
 Dr. B.N Patnaik suggested to implement the MOOC courses .The chairman BOS also informed the members about the ongoing status of MOOC course registration and it was decided that all the faculty members and students will be encouraged to register in various Online courses(At least one per year) .
- MoU with academic or industry to carry out the research and consultancy work.**
 Chairman of BoS presented MoU with academic or industry to carry out the research and consultancy work. MoU with academic or industry to carry out the research and consultancy work are approved.

- President/Vice-President / Director General /Vice Chancellor/Registrar /Principal School of Engineering/Dean Academics