

Agenda and Minutes of the meeting for the
“Syllabus Review of Department of Electronics and Communication Engineering (ECE)
as per the Industrial and AICTE needs”

with the mentor Institute, College of Engineering (COE), Pune

on 7th and 8th March, 2019 at COE, Pune

under TEQIP-III.

Agenda:

1. Review of course curriculum and credit allotment.
 - Introduction of new subjects
 - Addition of departmental elective subjects and university elective subjects
2. Identification of core subjects.
3. Syllabus review of Dept. of ECE, Manipur Technical University (MTU), as per the industry and AICTE needs with domain experts.
4. Exploring the research and laboratories facilities at Dept. of E&TC, COE, Pune. for collaboration of research work.

Minutes of meeting:

1. Review of course curriculum and credit allotment.

- i. Semester wise uniform credit structure was suggested for all the departments.
- ii. Courses relevant to GATE to be completed before 7th Semester.
- iii. Engineering Graphics to be taught using CAD tools.
- iv. It was suggested that Basic Electronics in the first year to be taught only to non-ECE students.
- v. Change of course name from Electrical Circuit Analysis to **Network Analysis and Synthesis** was discussed.
- vi. Third semester **Electromagnetic Fields** course to be shifted to 4th semester.
- vii. Credit to be allotted for **Technical Communication and Soft skills**. Teaching scheme to be changed to 0-0-2 (L-T-P) with 1 credit.
- viii. Suggested to establish a Language Lab.
- ix. The contents of **Mathematics** courses should be reflected in the course name.
- x. It was suggested that the pre-requisites for different courses be made in a graphical manner. Changes to be made to get proper domain wise vertical flow i.e., VLSI, Communication, Embedded systems and Signal processing.
- xi. Some portion of Analog Electronic Circuits to be merged with Electronic Devices and Circuits as the contents are overlapping. The combined course to be offered as **Electronic Devices and Circuits** in 3rd semester.
- xii. The title for Communication Systems to be changed to **Analog Communication**.

- xiii. It was suggested that Skill based courses be introduced in the curriculum. **Simulation Lab** using MATLAB and PSPICE to be introduced in 4th Semester in the revised course curriculum.
- xiv. Foreign language courses were also suggested in the curriculum (if possible).
- xv. MOOCs based courses to be introduced and regulations to be made for transferring the credit.
- xvi. Remaining portion of Analog Electronic Circuits to be merged with Linear Integrated Circuits. The combined course to be offered as **Integrated Circuits and Applications** in 4th semester.
- xvii. Microprocessors and Microcontrollers and its applications courses to be merged and offered as **Microcontrollers and Applications** in 5th semester.
- xviii. **Digital Signal Processing** and **Control Systems** courses are placed in 5th and 6th semesters respectively.
- xix. **Computer Architecture** to be introduced in 6th semester.
- xx. Curriculum should contain project based learning courses. **Mini project/Electronic design lab** to be introduced in 6th semester with **2 credits**. Projects to be focused on needs of the local industries preferably.
- xxi. Advance Communication course to be removed from departmental elective -II and **Information Theory and Coding** to be introduced instead.
- xxii. It was also suggested departmental electives should have one course from each domain and with lab.
- xxiii. The course structure is thoroughly revised as per the per the Industrial and AICTE needs.

2. Identification of core subjects.

- i. The core subjects have been identified and mentioned in the modified structure under the Program Core Courses category.
- ii. All such courses have been highlighted in green in the modified course structure for every semester.
- iii. The core courses are also highlighted in the domain wise course dependency graph.

3. Syllabus review of Dept. of ECE, Manipur Technical University (MTU), as per the industry and AICTE needs with domain experts.

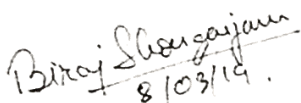
- i. Teaching scheme and Examination scheme to be included in syllabus.
- ii. Course outcomes based on BTL should be mentioned in the syllabus. Four to five outcomes per course were recommended.
- iii. Units of the courses should have proper title along with number of hours. Courses with 3 hour lecture per week is recommended to have 36 to 40 total hours.
- iv. Two text books and four reference books were recommended for each course. The contents of the course should be preferable taken 80% from the text books and remaining from reference books.
- v. All the text and reference books are recommended to be of latest edition: preferably after year 2000. Also, edition and year of publication should be clearly mentioned.
- vi. A maximum of 6 units per course was suggested to maintain uniformity across courses.

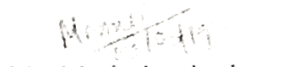
- vii. It was suggested to refer course content of reputed institutes such as IITs, NITs as a benchmark while framing the syllabus.
 - viii. Changes suggested by faculties from E&TC department, COEP were noted and will be incorporated in the revised syllabus.
4. Exploring the research and laboratories facilities at Dept. of E&TC, COE, Pune, for collaboration of research work.
- i. Visited various labs (VLSI Lab, Test and Measurement Lab, Microwave and Optical Lab and Centre of Excellence in Signal and Image Processing) and research facilities of the E&TC department.
 - ii. PG and PhD students demonstrated their projects/on-going research work during the visit to the research facilities/labs.
 - iii. Discussed about the collaborative research work, short term training programs/internship for students between Dept. of E&TC, COE, Pune and Dept. of ECE, MTU.

The suggested changes in the course syllabi have been noted by the MTU faculties and will incorporate in the revised syllabus. The revised syllabi will then be communicated to department of E&TC, COEP via email for the final recommendation from the experts of E&TC, COEP.

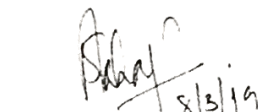
Place: CoE in SIP, COE Pune

Date: 08th March 2019


8/03/19
Dr. Biraj Shougaijam



8/03/19
Mr. Merin Loukrakpam

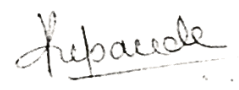
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