DAYANANDA SAGAR UNIVERSITY

SCHOOL OF ENGINEERING

Devarakaggalahalli, Harohalli, Kanakapura Road, Ramanagara Dt., Bengaluru – 562 112

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Minutes of 11th BOS Meeting

School	:	School of Engineering
College	:	Dayananda Sagar University
Programme/Department	:	Electronics and Communication Engineering
Mode of BOS Meeting	:	Offline and Online meet.google.com/mks-oyty-pfi
Date	:	13th June 2024
Venue	:	1st Floor, Lecture Hall 05, A103, A Block
Time	:	10:00 AM

AGENDA

The agenda for the BOS meeting is as follows:

I. Department Vision, Mission, PEOs, and PSOs (Program Educational Objectives & Program Specific Objectives)

- Review and discuss the department's vision, mission, PEOs, and PSOs in alignment with the institution's overall goals.

II. Curriculum Development and Approval

- **B. Tech ECE Programs:**
  - Approval of the scheme and syllabus for 1st and 2nd year of **2024-2028 Batch**.
  - Discussion and approval of the scheme and syllabus for 2nd, 3rd, and 4th year of **2023-2027 Batch**.
  - Approval of the scheme and syllabus for 3rd and 4th year of **2022-2026 Batch**.
- **Open Electives:** Approval for open electives offered in the 3rd and 4th years of B. Tech ECE programs.
- **Ratification of 4th Year curriculum of 2021-2025 Batch:**
  - Discussion on the existing scheme and syllabus.
  - Approval for curriculum and credit increase (159 to 160 credits).
- **Ratification of 2nd-year curriculum of M. Tech Programs of 2023-2025 Batch.**
  - Approval for mandatory credit increase (64 to 72 credits) of 2023-2025 Batch.

- Discussion on the curriculum of M. Tech in Embedded Systems of 2024-2026 Batch.

III. Doctoral Programs

- Discussion on the course syllabus offered for the department's PhD program.

IV. Other Academic Matters

- Discussion regarding the strategic goals and NBA Accreditation in the ECE Department.
- Discussion on minor degrees and honor degrees offered by the ECE Department.
- Open forum for any other academic concerns.\

The Board of Studies (BoS) meeting for Electronics and Communication Engineering was convened on 13th June 2024, at 10:00 AM in the 1st Floor, Lecture Hall 05, A103, A Block, School of Engineering, Dayananda Sagar University. Several members were present in person, while a few joined virtually through the Google Meet platform. The meeting aimed to discuss and deliberate on various matters related to the department's curriculum, courses, and educational initiatives.

MINUTES OF MEETING

- Dr. Udaya Kumar Reddy, Dean of the School of Engineering, extends a warm welcome to Dr. C.P. Ravikumar, Director of Technical Talent Development at Texas Instruments; Mr. Kiran Kumar Kulkarni, Global Industry Manager for Engineering and Technology Services at Mathworks India Pvt Ltd.; Dr. Vasantha M. H., Associate Professor in the Department of ECE at NIT Goa; Ms. Rida Fatima, Supply Chain Engineer, BMW India Pvt Limited; Dr. Arun Balodi, Chairman of the Department of ECE; and all the staff of the ECE Department.
- Dr. Udaya Kumar Reddy, Dean of the School of Engineering, delivered the opening remarks, providing an overview of the unique curriculum designed for the ECE and CSE clusters. He highlighted how courses such as Data Structures, Embedded Systems, and Digital Logic Design with Verilog HDL are included to enhance job prospects, ensuring that students are well-prepared for careers in various domains.
- Dr. Arun Balodi, Chairman of the Department of ECE, welcomes all the members present.
- Dr. Arun Balodi explained the proposed modifications to the vision and mission of the Department of ECE for approval.
- Dr. Arun Balodi provided an overview of the department, detailing the curriculum design, the number of faculty members and their designations, the curriculum and elective courses, research and publications, research labs and project grants, student performance, Alumni association, IEEE student chapter and the student-to-full-time-teacher ratio.
- Dr. Arun Balodi proposed a new ECE program focused on semiconductor chip design.
- Dr. Arun Balodi announced plans to establish an Advanced Communication 5G Lab and an RF/Antenna Lab within the Department of ECE.
- Prof. Nadeem Pasha of the department noted the minutes of the meeting and readout the complete BOS proceedings.
- Dr. Arun Balodi, Chairman of the Department proposed vote of thanks for the valuable inputs given by the External BOS Members.

SUGGESTIONS

- Mr. Kiran Kumar Kulkarni proposed raising awareness among students about tool chains, emphasizing the usefulness of courses like Introduction to Electrical and Introduction to Electronics across programs such as Mechanical Engineering, Computer Science and Engineering, and Aerospace Engineering.
- Dr. Vasantha M H recommended incorporating practical components into basic electronics, while Dr. Arun Balodi affirmed that this concern has been addressed through the implementation of workshops and assignments.
- Dr. Vasantha M H proposed inviting industry professionals from various domains such as VLSI and Embedded Systems to deliver technical talks in relevant courses.
- Mr. Kiran Kumar Kulkarni proposed renaming the skill enhancement course in the 3rd semester from "Introduction to MATLAB and Simulink" to "Introduction to Model Based Engineering using MATLAB."
- Dr. C P Ravikumar recommended renaming certain courses: "Renewable Energy Technology" to "Renewable Energy Technologies" and "Mixed mode VLSI design" to "Mixed Signal VLSI design."
- Dr. C P Ravikumar proposed consolidating Professional Elective verticals: combining Communication and Signal Processing into one vertical (Vertical 1 and 2), and merging VLSI and Embedded Signal Processing into another (Vertical 3 and 4), while categorizing the remaining courses as interdisciplinary.
- Dr. C P Ravikumar proposed renaming the course "Digital IC Design."
- Dr. C P Ravikumar, Mr. Kiran Kumar Kulkarni, and Dr. Vasantha M H recommended revising the title of the M.Tech program in Embedded Systems to make it more specific and detailed.
- Dr. Vasantha M H recommended restructuring the M.Tech program in Embedded Systems to be more industry and research-oriented, aiming to enhance admissions.
- Dr. Vasantha M H proposed introducing an M.Tech program in the VLSI domain within the Department of ECE.
- Ms. Rida Fatima, recommended increasing awareness among students about the M.Tech program in Embedded Systems and proposed integrating industry tools into the curriculum.
- Mr. Kiran Kumar Kulkarni believes that the syllabus for the M.Tech program in embedded systems is overly extensive and lacks specificity.
- Ms. Rida Fatima recommended incorporating courses on EV Technology and Battery Management Systems into the M.Tech curriculum.

- Dr. C P Ravikumar proposed offering regular M.Tech or B.Tech courses to Ph.D. students to enhance their competitiveness and maximize their academic capabilities.
- Dr. C P Ravikumar suggested granting Ph.D. students the freedom to choose courses aligned with their research domains, rather than adhering to a fixed set of subjects.
- Dr. C P Ravikumar recommended incorporating courses focused on PCB designing.
- Dr. C P Ravikumar proposed renaming the course "Basics of Industrial IoT."
- Dr. C P Ravikumar proposed renaming skill enhancement courses such as "Python Programming: 5G and Advanced Cellular Networks" to "Application Development in Python Programming," and "Matlab Programming: 5G and Advanced Cellular Networks" to "Application Development in MATLAB Programming."
- Dr. C P Ravikumar suggested simplifying the curriculum and streamlining the syllabus to align it with the standards of institutions like IITs, emphasizing clarity and coherence in course content.
- Dr. C P Ravikumar suggested identifying talented students and offering them additional training opportunities.
- Ms. Rida Fatima suggested expanding the curriculum to include courses on Microsoft tools, such as Microsoft Excel for data analysis, Microsoft Word for document processing, and Microsoft PowerPoint for presentations.

Action Taken Report (ATR) on Recommendations from the Board of Studies Meeting.

Suggestion	Action Taken / Remarks
1. Awareness on tool chains and foundational electrical/electronic courses across departments*(Mr. Kiran Kumar Kulkarni)*	The department has proposed interdisciplinary orientation sessions and plans to organize demo classes to showcase the relevance of these foundational subjects to students from Mechanical, CSE, and Aerospace programs.
2. Incorporating practical components into Basic Electronics *(Dr. Vasantha M H)*	Practical elements have been enhanced through mandatory workshops and hands-on assignments, as confirmed by Dr. Arun Balodi.
3. Inviting industry experts for talks in VLSI and Embedded Systems *(Dr. Vasantha M H)*	A plan is being rolled out to schedule domain-specific guest lectures each semester. Collaboration with industry partners is underway.
4. Renaming "Introduction to MATLAB and Simulink" to "Introduction to Model-Based Engineering using MATLAB" *(Mr. Kiran Kumar Kulkarni)*	The title has been revised in the new curriculum scheme for the 2025 batch.
5. Course title changes: "Renewable Energy Technology to "Renewable Energy Technologies"; "Mixed mode VLSI design" to Mixed Signal VLSI design" *(Dr. C P Ravikumar)*	Approved and reflected in the updated syllabus document.
6. Consolidation of Professional Elective Verticals *(Dr. C P Ravikumar)*	The new structure has been revised to combine Communication + Signal Processing as Vertical 1, and VLSI + Embedded Signal Processing as Vertical 2. Remaining categorized under interdisciplinary electives.
7. Renaming "Digital IC Design" *(Dr. C P Ravikumar)*	Title changes approved; revised name included in the 2025 scheme.

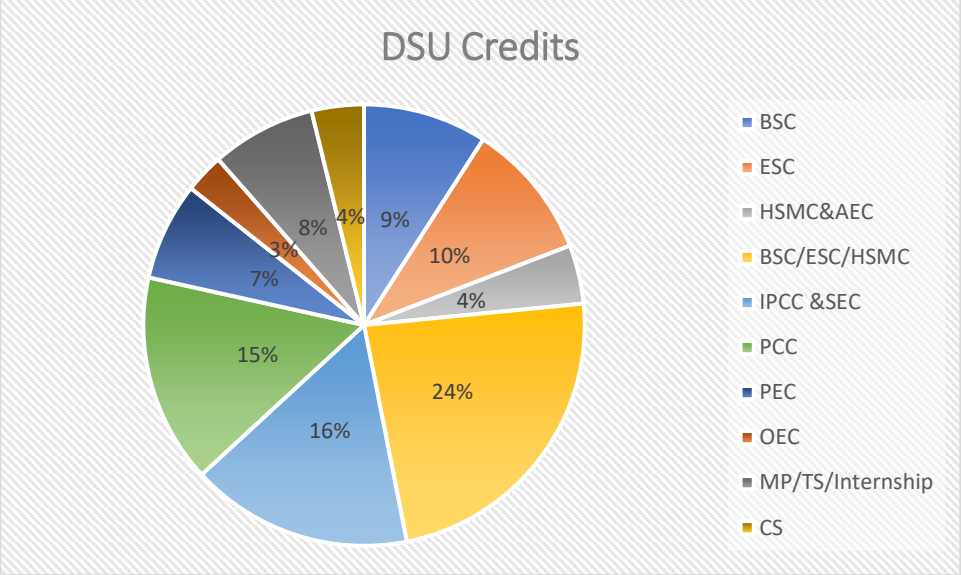
8. Revising M.Tech Embedded Systems program title *(Dr. C P Ravikumar, Mr. Kiran Kumar Kulkarni, Dr. Vasantha M H)*	Proposal under review by curriculum committee; a new, more descriptive title is being formulated.
9. Restructuring M.Tech Embedded Systems curriculum *(Dr. Vasantha M H)*	Curriculum undergoing revision to include more research and industry-relevant projects, along with elective flexibility.
10. Introducing M.Tech in VLSI domain *(Dr. Vasantha M H)*	The proposal has been submitted to the Academic Council for consideration and approval.
11. Promoting M.Tech Embedded Systems and integration of industry tools*(Ms. Rida Fatima)*	Awareness drives and orientation sessions have been scheduled. Tool-based training modules are being incorporated.
12. Syllabus of M.Tech Embedded Systems too broad*(Mr. Kiran Kumar Kulkarni)*	Feedback considered. Redundancies are being trimmed, and focused course content is being prioritized.
13. Inclusion of EV Technology and Battery Management Systems*(Ms. Rida Fatima)*	New electives on EV systems and BMS are being introduced from the next academic session.
14. Offering B.Tech/M.Tech courses to Ph.D. students*(Dr. C P Ravikumar)*	Approved. Ph.D. students now have the option to enroll in advanced courses relevant to their research.
15. Flexibility for Ph.D. students in course selection*(Dr. C P Ravikumar)*	Implemented. A broader list of electives is being made available, allowing alignment with research domains.
16. Introduction of PCB Design course *(Dr. C P Ravikumar)*	A new elective on PCB design will be introduced from the upcoming academic year.
17. Renaming “Basics of Industrial IoT” *(Dr. C P Ravikumar)*	Title change under consideration by syllabus review committee.
18. Renaming Skill Enhancement Courses *(Dr. C P Ravikumar)*	Course titles revised to “Application Development in Python Programming” and “Application Development in MATLAB Programming.” Changes approved.

19. Simplification and clarity in curriculum *(Dr. C P Ravikumar)*	Curriculum restructured for coherence and academic depth, benchmarked against top institutes like IITs.
20. Additional training for talented students *(Dr. C P Ravikumar)*	Plan initiated for identifying meritorious students and enrolling them in value-added and certification programs.
21. Inclusion of Microsoft tools in curriculum *(Ms. Rida Fatima)*	Workshops on Microsoft Excel, Word, and PowerPoint are being added under skill development modules.

List of New Courses Introduced:

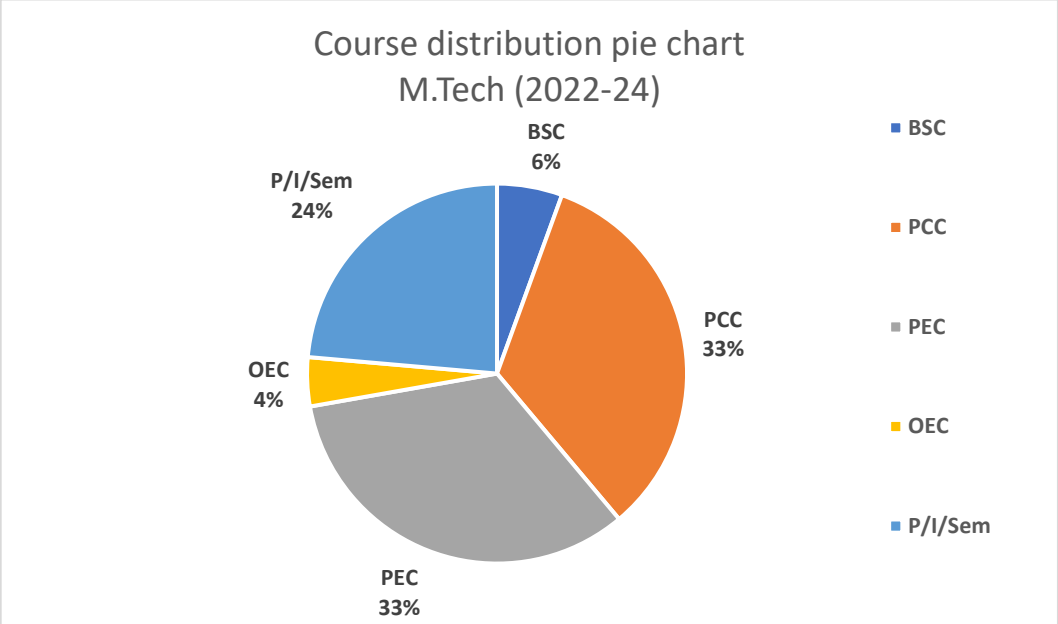
Name of the Course
Computer Organization and Architecture
Introduction to Model-Based Design
Microcontroller Programming
Introduction to Embedded Machine Learning
Introduction to Circuit Design and Simulation
Machine Learning
PLC Programming
Innovation Management and Entrepreneurship
Electric Vehicle Technology
Computer Vision
Software Defined Radio
Signal Processing and Analysis Lab
Quantum Computing
5G Mobile Communication
Hardware Accelerator for AI
AI and ML for VLSI CAD

Program Structure (2023-2027 Scheme)



BSC	-	Basic Sciences
ESC	-	Engineering Sciences
HSMC	-	Humanities and Social Sciences Management Courses
AEC	-	Ability Enhancement Courses
IPCC	-	Integrated Program core courses
SEC	-	Skill Enhancement Courses
PCC	-	Program Core Courses
PEC	-	Professional Elective Courses
PROJ	-	Project
INT	-	Internship
OEC	-	Open Elective Courses
CS	-	Cognitive Skills

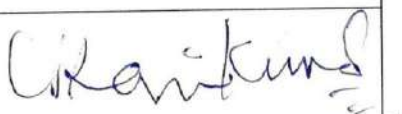
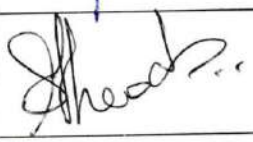
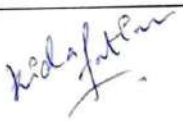
Program Structure (2023-2025 Scheme) -M.Tech



Total Credits – 72

BSC	Basic Sciences (Subjects such as Physics, Chemistry, Maths)
HSC	Humanities Sciences
ESC	Engineering Sciences Courses (subjects Such as, 1st year EC, EE, CPP, etc.,)
IPCC/PCC	Integrated Program Core Courses / Program Core Courses
PEC	Program Elective Courses
OEC	Open Elective Courses
SEC/AEC	Skill Enhancement Courses / Ability Enhancement Courses
P/I/Sem	Major Project/Technical Seminar/Internship

Members Present:

Sl No.	Name	Affiliation	Signature
1	Dr. C P Ravikumar	Director, Technical Talent Development, Texas Instrument, Bengaluru	
2	Dr. Arun Balodi	Chairman and Professor, Department of ECE, SoE, DSU	
3	Dr. Theodore Chandra S	Associate Professor, Department of ECE, SoE, DSU	
4	Mr. Kiran Kumar Kulkarni	Global Industry Manager-Engineering and Technology Services, Mathworks India Pvt ltd.	
5	Dr. Vasantha M H	Associate Professor, Department. of ECE, NIT, Goa	meet.google.com/mks-oyty-pfi
6	Ms. Rida Fatima	Supply Chain Engineer, BMW India Pvt Limited.	
7	Dr.Srinivas Talabattula	Professor, Department of ECE Indian Institute of Science, Bengaluru	meet.google.com/mks-oyty-pfi
8	Dr. Pushpa P.V	Professor, Department of ECE, SoE, DSU	

9	Dr. Arungalai Vendan	Professor, Department of ECE, SoE, DSU	meet.google.com/mks-oyty-pfi
10	Dr. Rupam Bhaduri	Professor, Department of ECE, SoE, DSU	meet.google.com/mks-oyty-pfi
11	Dr. Saara K	Professor, Department of ECE, SoE, DSU	Saara
12	Dr. Pushpamala	Associate Professor, Department of ECE, SoE, DSU	13/6/2024
13	Dr. B M Ashwin Desai	Associate Professor, Department of ECE, SoE, DSU	meet.google.com/mks-oyty-pfi
14	Dr. Arun Ananthanarayanan	Associate Professor, Department of ECE, SoE, DSU	13/6/2024
15	Dr. Supraja Eduru	Associate Professor, Department of ECE, SoE, DSU	13/6
16	Dr. Vinu R	Associate Professor, Department of ECE, SoE, DSU	meet.google.com/mks-oyty-pfi
17	Dr. Sneha Sharma	Assistant Professor, Department of ECE, SoE, DSU	13/6/2024
18	Dr. Mukthi Chaturvedi	Assistant Professor, Department of ECE, SoE, DSU	meet.google.com/mks-oyty-pfi
19	Dr. Shirshendu Roy	Assistant Professor, Department of ECE, SoE, DSU	13.06.24.
20	Dr. Bhawani Patnaik	Assistant Professor, Department of ECE, SoE, DSU	meet.google.com/mks-oyty-pfi
21	Dr. Rashmita Sahoo	Assistant Professor, Department of ECE, SoE, DSU	- NA -
22	Dr. Deepthi Chamkur V	Assistant Professor, Department of ECE, SoE, DSU	13/06/2024
23	Prof. Abhinav Karan	Assistant Professor, Department of ECE, SoE, DSU	13/06/2024
24	Prof. Kokila S	Assistant Professor, Department of ECE, SoE, DSU	meet.google.com/mks-oyty-pfi
25	Prof. Sharanbasavaraj	Assistant Professor, Department of ECE, SoE, DSU	meet.google.com/mks-oyty-pfi
26	Prof. Shwetha M. P	Assistant Professor, Department of ECE, SoE, DSU	meet.google.com/mks-oyty-pfi
27	Mr. Nadeem Pasha	Assistant Professor, Department of ECE, SoE, DSU	13/6
28	Mrs Navya R	Assistant Professor, Department of ECE, SoE, DSU	meet.google.com/mks-oyty-pfi
29	Mrs. Nandini Rao G	Assistant Professor, Department of ECE, SoE, DSU	meet.google.com/mks-oyty-pfi
30	Mrs. Shwetha M P	Assistant Professor, Department of ECE, SoE, DSU	meet.google.com/mks-oyty-pfi
31	Mr. Puneeth S	Assistant Professor, Department of ECE, SoE, DSU	meet.google.com/mks-oyty-pfi

32	Mrs Jaishree Ramadevaru	Assistant Professor, Department of ECE, SoE, DSU	Jaishree
33	Mrs. Jisy N K	Assistant Professor, Department of ECE, SoE, DSU	Jisy N K
34	Mrs. S S Sivasankari	Assistant Professor, Department of ECE, SoE, DSU	meet.google.com/mks-oyty-pfi
35	Prof. V Sudarshan	Assistant Professor, Department of ECE, SoE, DSU	13/6/24

13/6/24

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Highlights from the BoS Session



