



# **Minutes of Meeting (MoM) of Board of Studies (BoS)**

**Date: 10<sup>th</sup> August, 2023**

**Time: 10:30 A.M**

**Venue: Conference Hall, 5<sup>th</sup> Floor, Engineering Block**

**Department of Electrical & Electronics Engineering**

**Faculty of Engineering and Technology**

**SRM University, Delhi-NCR, Sonapat, Haryana**  
**Faculty of Engineering and Technology**  
**Department of Electrical & Electronics Engineering**  
**Minutes of the Meeting**

The Meeting of the Board of Studies of Department of Electrical & Electronics Engineering was held on 10<sup>th</sup> August, 2023 at 10:30 am in Conference Hall, 5<sup>th</sup> Floor, Engineering block.

The following members were present:

Prof.(Dr.) Ranjit Roy Dean, Faculty of Engineering & Technology, SRMUH	Chairman
Prof. Prerna Gaur Instrumentation and Control and Electrical Engineering Department NSUT, New Delhi	External Expert- Member
Prof. Ranjit Roy Department of EEE SRM University Delhi-NCR, Sonapat.	Member
Prof.(Dr.) Rash Bihari Dubey, Department of EEE SRM University Delhi-NCR, Sonapat.	Member
Mr.Murali.S, Assistant Professor, Department of EEE SRM University Delhi-NCR, Sonapat.	Member
Mr Vikram Barara SRM University, Delhi-NCR, Sonapat, Haryana	Controller of Examinations
Dr. D.V. Singh SRM University Delhi-NCR, Sonapat,	Librarian
Dr. Pawan Kumar Singh Associate Professor, Dept. of ECE SRM University, Delhi-NCR, Sonapat, Haryana	Representative of Dean Academic Affairs
Dr. Deepika Yadav, Assistant Professor, Department of Electrical & Electronics Engineering, SRMUH	Convenor




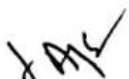
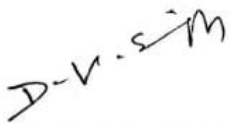




Following were the Agenda Items of the meeting: -

SL.No.	Agenda Item	Discussion	Recommendations
1	Welcome address & Opening remarks by Chairperson, Board of Studies	The Chairperson, Board of Studies welcomed and introduced the members of the Board of Studies and thanked each of them for sparing their valuable time to attend the meeting.	Noted
2	To confirm the minutes of the meeting of the Board of Studies held on 30 <sup>th</sup> July, 2022 at 2:00 pm.	The minutes of the Board of Studies meeting held on 30 <sup>th</sup> July, 2022 were communicated to the members. The comments received have been incorporated and placed for confirmation. (Enclosed in <b>Annexure-I</b> )	Approved
3	To consider and recommend to the Academic Council the syllabus of B.Tech. in Electrical and Electronics Engineering in alignment with National Education Policy 2020 effective from the academic session 2023-24.	The draft curriculum and syllabi were presented before the members. The Chairman, of the Board of Studies briefed the members that the proposed curriculum is prepared in alignment with National Education Policy 2020. Based on the suggestions given by the members, BOS resolved to recommend the curriculum and syllabus B.Tech. in Electrical and Electronics Engineering effective from the academic session 2023-24 to the Academic Council for approval. (Enclosed in <b>Annexure-II</b> )	Recommended
4	To confirm and approve Inclusion of proposed new and revised courses to B.Tech (EEE) Regulation for the academic year 2023-24	Following course category is enclosed as <b>Annexure III &amp; Annexure IV</b>	Recommended
5	Inclusion of Specialization areas in the scheme of studies of B.Tech (EEE) program for the award of Specialization in Minor Degree as per emerging areas in alignment with NEP 2020.	Nomenclature for BTech (EEE) Program for the award of Specialization in Minor Degree as per emerging areas in alignment with NEP 2020 is enclosed as <b>Annexure V</b> 1.Specialization in Electrical and Electronics Engineering 2. Specialization in Hybrid Electric Vehicle and Energy Management	Recommended

		3.Specialization in Renewable & Sustainable Energy Engineering 4. Specialization in IoT based Industrial Automation & Smart Grid	
6	Possible updates/modifications/ Suggestions in the proposed curriculum & Syllabi of various courses of B. Tech (EEE) program for Academic year (2023-2024)	<p>Suggestions by BoS Members</p> <ul style="list-style-type: none"> <li>• Inclusion of Environmental green chemistry to be introduced</li> <li>• Inclusion of more courses on Artificial Intelligence and Machine Learning</li> <li>• Expert suggested to relax 181 credits as per AICTE</li> <li>• Cluster formation for minor degree specialization in following emerging areas               <ul style="list-style-type: none"> <li>➤ Specialization in Hybrid Electric Vehicle and Energy Management</li> <li>➤ Specialization in Renewable &amp; Sustainable Energy Engineering</li> <li>➤ Specialization in IoT based Industrial Automation &amp; Smart Grid</li> </ul> </li> </ul>	<p>May be considered for future course of action.</p> <p>However, credits are finalized in accordance with European credit system</p> <p>Cluster of Courses to be offered via minor specialization incorporated in B. Tech (EEE) program for Academic year (2023-2024)</p>
7	To consider and recommend the names of external paper setters/evaluators for the academic session 2023-24.	Board recommends subject teachers to be paper setters and evaluators for the academic session 2023-24 (As per university ordinance Chapter 7, section 7.21) In addition, EEE faculty members are enclosed as <b>Annexure VI</b>	Recommended
8	To approve the Scheme of examination, Assessment and evaluation of the choice-based credit system (CBCS) for various courses for the academic year 2023-24	(Enclosed in <b>Annexure-VII</b> )	Recommended

The Hon'ble Vice Chancellor is authorized to make changes mutatis mutandis in the syllabi on the recommendations of concerned Dean/Associate Dean and Dean Academic Affairs.

The meeting concluded with thanks to the chair and members by the convenor of the Board of Studies.

		
Prof. (Dr.) Ranjit Roy Dean, Faculty of Engineering & Technology, SRMUH Chairman-BoS	Prof. Prerna Gaur Instrumentation and Control and Electrical Engineering Department NSUT, New Delhi External Expert- Member	Prof. (Dr.) Rash Bihari Dubey, Department of Electrical & Electronics Engineering, SRMUH Member
		
Mr Vikram Barara SRM University, Delhi-NCR, Sonapat, Haryana Controller of Examinations	Dr. D.V. Singh SRM University Delhi-NCR, Sonapat, Librarian	Dr. Pawan K. Singh Associate Professor & Academic Coordinator, Dept. of ECE SRM University Delhi-NCR, Sonapat. Representative of Dean Academics
		
Prof. Ranjit Roy Department of EEE SRM University Delhi-NCR, Sonapat. Member	Mr. Murali S. Assistant Professor, EEE SRM University Delhi-NCR, Sonapat, Haryana Member	Dr. Deepika Yadav Assistant Professor, EEE SRM University Delhi-NCR, Sonapat. Convenor-BoS








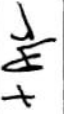



Dean Academic Affairs

**Electrical & Electronics Engineering Department  
Faculty of Engineering and Technology**

**SRM University, Delhi-NCR, Sonapat, Haryana**

**10<sup>th</sup> August, 2023**

**Attendance Sheet of Board of Studies (BoS) Meeting**

SL.No	Name of Member	Signature
1	Prof.(Dr.) Ranjit Roy Dean, Faculty of Engineering & Technology, SRM University Delhi-NCR, Sonapat., Chairman	
2	Prof. Purna Gaur Instrumentation and Control and Electrical Engineering Department NSUT, New Delhi, External Expert-Member	
3	Prof. Ranjit Roy Department of EEE SRM University Delhi-NCR, Sonapat., Member	
4	Prof (Dr.) Rash Bihari Dubey Department of EEE SRM University Delhi-NCR, Sonapat., Member	
5	Mr. Murali.S Assistant Professor, Department of EEE SRM University Delhi-NCR, Sonapat, Member	
6	Mr Vikram Barara SRM University, Delhi-NCR, Sonapat, Controller of Examinations	
7	Dr. D.V. Singh SRM University Delhi-NCR, Sonapat, Librarian	
8	Dr. Pawan Kumar Singh Associate Professor, Dept. of ECE SRM University, Delhi-NCR, Sonapat, Haryana, Representative of Dean Academic Affairs	
9	Dr. Deepika Yadav, Assistant Professor, Department of EEE SRM University Delhi-NCR, Sonapat	

## ANNEXURE-II

### SRM UNIVERSITY DELHI-NCR, SONEPAT

**TABLE 4: PROGRAM CREDIT STRUCTURE SEMESTERWISE FOR BACHELOR OF TECHNOLOGY (ELECTRICAL & ELECTRONICS ENGINEERING)**

SL. No	Course Category	Course Code	Credits Per Semester								Total Credits	% AGE
			I	II	III	IV	V	VI	VII	VIII		
1	Basic Applied Sciences	BAS	9	9	3	3	3	-	-	-	27	14.91
2	Engineering Sciences	ES	9	9	-	-	-	-	-	-	18	9.94
3	Professional Core	PC	-	-	12	9	6	6	6	-	39	21.54
4	Professional Electives -Program Specific Specialized Elective Courses	PE	-	-	3	3	9	9	9	-	33	18.25
5	Ability Enhancement Courses	AEC	5	2	-	-	-	-	-	-	7	3.86
6	Skill Enhancement courses (Technical and Soft skills)	SEC	-	-	2	2	2	2	2	-	10	5.52
7	Value Added Courses	VAC	2	2	2	-	-	-	-	-	6	3.31
8	Practical / Workshop	P/W	-	-	2	3	2	2	1	-	10	5.52
9	Live Project & Industrial Visit and Summer Internship	LP/SI	-	-	-	1	2	1	6	12	22	12.15
10	Multidisciplinary (Humanities and Social Sciences Courses) Courses	MDC	-	-	-	3	3	3	-	-	9	5
<b>TOTAL</b>			25	22	24	24	27	23	24	12	181	100

### ANNEXURE-III

SLNo	Semester	Course Code	Category	Course Name
1	I	23AS101	(BAS)	Engineering Mathematics-I (Revised)
2	I/II	23EE101/201	(ES)	Basic Electrical Engineering (Revised)
3	I/II	23AEC101/201	(AEC)	Professional English (* 50% of students will be offered) (New Course)
4	I	23AEC102/23AEC103/23AEC104	(AEC)	Hindi-I/German-I/French-I(New Courses)
4	II	23AEC202/23AEC203/AEC204	(AEC)	Hindi-II/German-II/French-II(New Courses)
5	I/II	23ESEB101/201	(VAC)	Environmental Bioengineering(New Course)
6	I/II	23AEC151*	(AEC)	Professional English Lab (50% of students will be offered) (New Course)
7	II	23AS201	(BAS)	Engineering Mathematics-II (Revised)
8	III	23AS301	(BAS)	Engineering Mathematics-III (Revised)
9	III	23VAC 103	(VAC)	Sports, Yoga & Fitness (Revised)
10	IV	23MDC4XX	(MDC)	Multidisciplinary Elective-I (New Courses)
11	V	23MDC5XX	(MDC)	Multidisciplinary Elective-II (New Courses)
12	V	23EE0361	(LP/ST)	Industrial Training-I(New Courses)
13	VI	23MDC6XX	(MDC)	Multidisciplinary Elective-III (New Courses)
14	VII	23EE0461	(LP/ST)	Industrial Training-II(New Course)
15	VII	23SS755	(SEC)	Aptitude & Reasoning (New Course)

**ANNEXURE-IV**  
**Multidisciplinary (Humanities and Social Sciences Courses) Courses (MDC))**

<b>Code</b>	<b>Category</b>	<b>Course</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
23MDC401 / 23MDC402 / 23MDC403 /23MDC404/23MDC405	<b>(MDC-I)</b>	Statistical Methods	3	0	0	3
		Environmental Geosciences & Disaster Management	3	0	0	3
		IPR in Business	3	0	0	3
		Library Information Sciences & Media Literacy	3	0	0	3
		Management Process & Organizational Behaviour	3	0	0	3
23MDC501 / 23MDC502 / 23MDC503 /23MDC504/23MDC505	<b>(MDC-II)</b>	Photonics	3	0	0	3
		Chemistry & Society	3	0	0	3
		Psychology and Emotional Intelligence	3	0	0	3
		Indian Economy	3	0	0	3
		Creating an Entrepreneurial Mind	3	0	0	3
23MDC601 / 23MDC602 / 23MDC603 /23MDC604	<b>(MDC-III)</b>	Life Sciences & Public Health	3	0	0	3
		Electoral Literacy in India	3	0	0	3
		Personal Financial Planning	3	0	0	3
		Interior Design	3	0	0	3

**ANNEXURE-V**  
**Department Elective Courses of Specialization in Major Degree of Electrical and Electronics Engineering**  
**Department Professional Elective Courses**

## 1.Specialization in Electrical and Electronics Engineering

SL.No	Code	Category	Course	L	T	P	C
1	23EEPE01	(PE)	Data acquisition and Telemetry	3	0	0	3
2	23EEPE02	(PE)	Instrumentation System	3	0	0	3
3	23EEPE03	(PE)	Sensors and Transducers	3	0	0	3
4	23EEPE04	(PE)	Wind and Solar Energy Systems	3	0	0	3
5	23EEPE05	(PE)	Python Programming	3	0	0	3
6	23EEPE06	(PE)	Solar Photovoltaic System	3	0	0	3
7	23EEPE07	(PE)	Design of Hydro Power Station	3	0	0	3
8	23EEPE08	(PE)	PLC, DCS and SCADA	3	0	0	3
9	23EEPE09	(PE)	Programming with Java	3	0	0	3
10	23EEPE10	(PE)	Mechatronics	3	0	0	3
11	23EEPE11	(PE)	Advanced Topics in Electrical Insulation	3	0	0	3
12	23EEPE12	(PE)	Reactive Power control & FACT Devices	3	0	0	3
13	23EEPE13	(PE)	Micro Electro Mechanical Systems	3	0	0	3
14	23EEPE14	(PE)	Electrical Power Utilization and Illumination	3	0	0	3
15	23EEPE15	(PE)	Design of Electrical Machines	3	0	0	3
16	23EEPE16	(PE)	Special Electrical Machines	3	0	0	3
17	23EEPE17	(PE)	Electrical Safety and Safety Management	3	0	0	3
18	23EEPE18	(PE)	Electrical Systems Design for Building	3	0	0	3
19	23EEPE19	(PE)	Communication Systems	3	0	0	3
20	23EEPE20	(PE)	Wireless Communication Systems	3	0	0	3
21	23EEPE21	(PE)	Switched Mode Power Conversion	3	0	0	3
22	23EEPE22	(PE)	Power Converter Analysis and Design	3	0	0	3
23	23EEPE23	(PE)	Advanced Control Theory	3	0	0	3
24	23EEPE24	(PE)	Aircraft Electronic Systems	3	0	0	3
25	23EEPE25	(PE)	Power System Harmonics	3	0	0	3
26	23EEPE26	(PE)	Vehicular Power Systems	3	0	0	3
27	23EEPE27	(PE)	Industrial Power System	3	0	0	3
28	23EEPE28	(PE)	Smart Grid	3	0	0	3
29	23EEPE29	(PE)	Micro Grid	3	0	0	3
30	23EEPE30	(PE)	Power System Deregulation	3	0	0	3
31	23EEPE31	(PE)	Modern Power System Analysis	3	0	0	3
32	23EEPE32	(PE)	High Voltage Engineering	3	0	0	3
33	23EEPE33	(PE)	Power Quality	3	0	0	3
34	23EEPE34	(PE)	Power System Optimization	3	0	0	3
35	23EEPE35	(PE)	Energy Storage Technology	3	0	0	3
36	23EEPE36	(PE)	Power Electronics for Renewable Energy Systems	3	0	0	3
37	23EEPE37	(PE)	Substation Design	3	0	0	3
38	23EEPE38	(PE)	Hybrid Electric Vehicles	3	0	0	3
39	23EEPE39	(PE)	Energy Management and Audit	3	0	0	3
40	23EEPE40	(PE)	Power System operation and Control	3	0	0	3
41	23AS701	(PE)	Operation Research	3	0	0	3
42	23EEPE42	(PE)	Modern Optimization Techniques	3	0	0	3
43	23EEPE43	(PE)	Soft Computing	3	0	0	3
44	23EEPE44	(PE)	Production to Robotics & Industrial Automation	3	0	0	3
45	23EEPE45	(PE)	Cyber Security	3	0	0	3
46	23EEPE46	(PE)	Smart Grid Technologies & IoT	3	0	0	3
47	23EEPE47	(PE)	Distributed Generation and Microgrids	3	0	0	3
48	23EEPE48	(PE)	Infrastructure For Smart Cities	3	0	0	3
49	23EEPE49	(PE)	Electric Vehicle Machines and Drives.	3	0	0	3

50	23EEPE50	(PE)	Real-Time Control of Power Systems and Energy Management	3	0	0	3
51	23EEPE51	(PE)	Distributed System Planning and Automation	3	0	0	3
52	23EEPE52	(PE)	Digital Communication	3	0	0	3
53	23EEPE53	(PE)	Optical Fiber Communication	3	0	0	3
54	23EEPE54	(PE)	Mobile Communication	3	0	0	3
55	23EEPE55	(PE)	Data Communication Networks	3	0	0	3
56	23EEPE56	(PE)	Wireless Communication	3	0	0	3
57	23EEPE57	(PE)	Satellite Communication	3	0	0	3
58	23EEPE58	(PE)	Embedded Systems Design	3	0	0	3
59	23EEPE59	(PE)	Radar and Imaging systems	3	0	0	3
60	23EEPE60	(PE)	Virtual Instrumentation	3	0	0	3
61	23EEPE61	(PE)	Microelectronics	3	0	0	3
62	23EEPE62	(PE)	Computer Architecture and very large-scale Integration	3	0	0	3
63	23EEPE63	(PE)	Biomedical Engineering	3	0	0	3
64	23EEPE64	(PE)	Computer Aided Design and Manufacturing	3	0	0	3
65	23EEPE65	(PE)	Electrical & Electronics, Measurements and Instrumentation	3	0	0	3
66	23EEPE66	(PE)	Electron Devices and Circuits	3	0	0	3
67	23EEPE67	(PE)	Discrete Transform and Signal Processing	3	0	0	3
68	23EEPE68	(PE)	Renewable Energy Sources	3	0	0	3
69	23EEPE69	(PE)	Modern Control Systems				

## 2. Specialization in Hybrid Electric Vehicle and Energy Management

SLNo	Code	Category	Course	L	T	P	C
			<b>Professional Elective- I/II/III/IV/V</b>				
1	23EEPE65	(PE)	Electronic Measurements and Instrumentation	3	0	0	3
2	23EEPE66	(PE)	Electron Device s and Circuits	3	0	0	3
3	23EEPE67	(PE)	Discrete Transform and Signal Processing	3	0	0	3
4	23EEPE60	(PE)	Virtual Instrumentation	3	0	0	3
5	23EEPE09	(PE)	Programming with Java	3	0	0	3
6	23EEPE68	(PE)	Renewable Energy Sources	3	0	0	3
7	23EEPE03	(PE)	Sensors and Transducers	3	0	0	3
8	23EEPE51	(PE)	Distributed System Planning and Automation	3	0	0	3
9	23EEPE45	(PE)	Cyber Security	3	0	0	3
10	23AS701	(PE)	Operation Research	3	0	0	3
			<b>Professional Elective- VI/VII/VIII</b>				
1	23EEPE38	(PE)	Hybrid Electric Vehicles	3	0	0	3
2	23EEPE35	(PE)	Energy Storage Technology	3	0	0	3
3	23EEPE49	(PE)	Electric Vehicle Machines and Drives.	3	0	0	3
4	23EEPE26	(PE)	Vehicular Power Systems	3	0	0	3
5	23EEPE18	(PE)	Electrical Systems Design for Building	3	0	0	3
6	23EEPE21	(PE)	Switched Mode Power Conversion	3	0	0	3
7	23EEPE39	(PE)	Energy Management and Audit	3	0	0	3
8	23EEPE64	(PE)	Computer Aided Design and Manufacturing	3	0	0	3
9	23EEPE17	(PE)	Electrical Safety and Safety Management	3	0	0	3
			<b>Professional Elective- IX/X/XI</b>				
1	23EEPE05	(PE)	Python Programming	3	0	0	3
2	23EEPE42	(PE)	Modern Optimization Techniques	3	0	0	3
3	23EEPE48	(PE)	Energy Management for Smart cities	3	0	0	3
4	23EEPE50	(PE)	Real-Time Control of Power Systems and Energy Management	3	0	0	3
5	23EEPE08	(PE)	PLC, DCS and SCADA	3	0	0	3

### 3.Specialization in Renewable & Sustainable Energy Engineering

SL No	Code	Category	Course	L	T	P	C
			<b>Professional Elective- I/II/III/IV/V</b>				
1	23EEPE65	(PE)	Electronic Measurements and Instrumentation	3	0	0	3
2	23EEPE66	(PE)	Electron Device s and Circuits	3	0	0	3
3	23EEPE67	(PE)	Discrete Transform and Signal Processing	3	0	0	3
4	23EEPE60	(PE)	Virtual Instrumentation	3	0	0	3
5	23EEPE09	(PE)	Programming with Java	3	0	0	3
6	23EEPE68	(PE)	Renewable Energy Sources	3	0	0	3
7	23EEPE03	(PE)	Sensors and Transducers	3	0	0	3
8	23EEPE51	(PE)	Distributed System Planning and Automation	3	0	0	3
9	23EEPE45	(PE)	Cyber Security	3	0	0	3
10	23AS701	(PE)	Operation Research	3	0	0	3
			<b>Professional Elective- VI/VII/VIII</b>				
1	23EEPE06	(PE)	Solar Photovoltaic System	3	0	0	3
2	23EEPE35	(PE)	Energy Storage Technology	3	0	0	3
3	23EEPE36	(PE)	Power Electronics for Renewable Energy Systems	3	0	0	3
4	23EEPE42	(PE)	Modern Optimization Techniques	3	0	0	3
5	23EEPE05	(PE)	Solar Energy system and Maintenance	3	0	0	3
6	23EEPE29	(PE)	Micro Grid	3	0	0	3
7	23EEPE50	(PE)	Programming with JAWA	3	0	0	3
8	23EEPE47	(PE)	Distributed Generation and Microgrids	3	0	0	3
9	23EEPE28	(PE)	Smart Grid	3	0	0	3
10	23EEPE49	(PE)	Electric Vehicle Machines and Drives.	3	0	0	3
			<b>Professional Elective- IX/X/XI</b>				
1	23EEPE07	(PE)	Design of Hydro Power Station	3	0	0	3
2	23EEPE04	(PE)	Wind and Solar Energy Systems	3	0	0	3
3	23EEPE50	(PE)	Real-Time Control of Power Systems and Energy Management	3	0	0	3
4	23EEPE39	(PE)	Energy Management and Audit	3	0	0	3
5	23EEPE46	(PE)	Smart Grid Technologies & IoT	3	0	0	3
6	23EEPE48	(PE)	Infrastructure For Smart Cities	3	0	0	3
7	23EEPE48	(PE)	Python Programming	3	0	0	3

#### 4. Specialization in IoT based Industrial Automation & Smart Grid

SLNo	Code	Category	Course	L	T	P	C
<b>Professional Elective- I/II/III/IV/V</b>							
1	23EEPE65	(PE)	Electronic Measurements and Instrumentation	3	0	0	3
2	23EEPE66	(PE)	Electron Device s and Circuits	3	0	0	3
3	23EEPE67	(PE)	Discrete Transform and Signal Processing	3	0	0	3
4	23EEPE60	(PE)	Virtual Instrumentation	3	0	0	3
5	23EEPE09	(PE)	Programming with Java	3	0	0	3
6	23EEPE68	(PE)	Renewable Energy Sources	3	0	0	3
7	23EEPE03	(PE)	Sensors and Transducers	3	0	0	3
8	23EEPE51	(PE)	Distributed System Planning and Automation	3	0	0	3
9	23EEPE45	(PE)	Cyber Security	3	0	0	3
10	23AS701	(PE)	Operation Research	3	0	0	3
<b>Professional Elective- VI/VII/VIII/ IX/X/XI</b>							
1	23EEPE44	(PE)	Introduction to Robotics & Industrial Automation	3	0	0	3
2	23EEPE46	(PE)	Smart Grid Technologies & IoT	3	0	0	3
3	23EEPE48	(PE)	Energy Management for Smart cities	3	0	0	3
4	23EEPE10	(PE)	Mechatronics	3	0	0	3
5	23EEPE18	(PE)	Electrical Systems Design for Building	3	0	0	3
6	23EEPE51	(PE)	Distributed System Planning and Automation	3	0	0	3
7	23EEPE42	(PE)	Modern Optimization Techniques	3	0	0	3
8	23EEPE43	(PE)	Python Programming	3	0	0	3
9	23EEPE45	(PE)	Programming with JAWA	3	0	0	3
10	23EEPE47	(PE)	Industrial Power System	3	0	0	3
11	23EEPE33	(PE)	Power Quality	3	0	0	3
12	23EEPE29	(PE)	Micro Grid	3	0	0	3
13	23EEPE50	(PE)	Real-Time Control of Power Systems and Energy Management	3	0	0	3

## **ANNEXURE-VI**

<b>Faculty Name</b>	<b>Email ID</b>	<b>Phone No</b>
Dr. R. B. Dubey	rbdubey@srmuniversity.ac.in	+91 99718 33006
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Dr.Surender Dahiya	<u>surenderdahiya.ee@dcrustm.org</u>	+91 94162 94032
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Dr.Veena Sharma	veenanaresh@gmail.com	+91 94180 25184

**ANNEXURE-VII**  
**Faculty of Engineering & Technology**  
**Batch 23-24 (Onwards)**

The bifurcation of Continuous Evaluation (Internal) and End Semester Evaluation marks are as under:

<b>S. No</b>	<b>Course</b>	<b>Continuous Evaluation ( Internal)</b>	<b>End Semester</b>
1	Professional (PC) : Theory	40	60
2	Professional Electives –Programme Specific Electives-Theory	40	60
3	Ability Enhancement Courses-Theory	40	60
4	Value Added Courses-Theory	40	60
5	Multidisciplinary (Humanities and Social Sciences Courses) Courses - Theory	40	60
6	Practical /Workshop - Practical	60	40
7	Skill Enhancement Courses (SEC)	70	30
8	Technical Enhancement Courses (TEC)	70	30
9	Live Projects & Industry Visits (LP/IV) and Internship	60	40
10	Dissertation/Project	60	40

**Note: Marks are in percentage**

Different parameters for CONTINUOUS EVALUATION

**Theory Papers of 40 Marks**

<b>S. No.</b>	<b>Parameters</b>	<b>Numbers</b>	<b>Marks</b>
1	Mid Semester Tests (MST)	2	20 (10 marks each)
2	Assignments	3 (Minimum)	10
3	Assignment based presentation/ Project Based Presentation	1 (Minimum)	5
4	Class Test/ Quizzes/ Surprise Tests/ Class Participation		5
<b>TOTAL</b>			<b>40</b>

**Practical/Workshop Papers of 60 Marks**

Each experiment would be evaluated out of 10 (Ten) marks and average of all the experiments conducted should be taken and marks may be calculated /awarded out of 60.

<b>S. No.</b>	<b>Parameters</b>	<b>Marks</b>
1	Conducting experiment	3
2	Written test on already defined questions	2
3	Viva Voce	3
4	Lab record	2
<b>TOTAL</b>		<b>10</b>

**End Semester Practical/Workshop Papers of 40 Marks**

<b>S. No.</b>	<b>Parameters</b>	<b>Marks</b>
1	Conducting experiment & validation	15
2	Write up	10
3	Viva Voce	10
4	Lab record	5
<b>TOTAL</b>		<b>40</b>

**Soft Skills 70:30 Marks**

**Internal (Continuous Assessment & Evaluation) & End Term (Assessment & Evaluation) for all the 4 courses are as under:**

**1. Effective Communication Skill Course**

Unit No.	Unit Name	Internal Assessment Parameter	Internal Marks (70)	End Term Assessment Parameters	End Term Marks (30)
1	Verbal Communication Skills	Speech Activity	15	Written Test	10
2	Non Verbal Communication Skills	Role Play	15		
3	Listening Skills	Oral Assessment	10		
4	Reading Skills		10		
5	Written Skills	Written Assignment	10	Viva	20
6	Visual Communication		10		
TOTAL			70		30

## 2. Teamwork & Interpersonal Skills

Unit No.	Unit Name	Internal Assessment Parameter	Internal Marks (70)	End Term Assessment Parameters	End Term Marks (30)
1	Team Management	Role Play / Group Activity	10	Written Test	10
2	Time Management		10		
3	Leadership		10		
4	Stress Management	Assignment	10	Viva	20
5	Emotional Intelligence	Written Test	10		
6	Critical Thinking		10		
7	Problem Solving	Case Story Telling	10		
<b>TOTAL</b>			<b>70</b>		<b>30</b>

## 3. Teamwork & Interpersonal Skills

Unit No.	Unit Name	Internal Assessment Parameter	Internal Marks (70)	End Term Assessment Parameters	End Term Marks (30)
1	Presentation Skills	Presentation Activity	20	Written Test	10
2	Story Telling Skills	Speech Activity	15		
3	Corporate Culture Etiquettes	Assignment	10		
4	Debate/Extempore	Speech Activity	15	Viva	20
5	Art of Creating Impression		10		
TOTAL			70		30

## 4. Writing Skills & Interpersonal Skills: Strategies

Unit No.	Unit Name	Internal Assessment Parameter	Internal Marks (70)	End Term Assessment Parameters	End Term Marks (30)
1	Email Writing	Written Assignment	10	Written Test	10
2	Resume Writing		10		
3	Cover Letter Writing		10		
4	Group Discussion	Group Discussion Activity	15	Viva	20

5	Interview Skills	Mock Interview Activity	15		
6	Negotiation Skills	Role Play	10		
<b>TOTAL</b>			<b>70</b>		<b>30</b>

**EVALUATION PARAMETER FOR SUMMER INTERNSHIP PROJECT  
(SIP) 60:40 Marks**

**1. Evaluation Parameter for Formative Assessment (Summer Internship Project)**

Continuous Assessment will perform by respective faculty & Industry coordinators within stipulated time period. Evaluation Parameter classified as follows:

S. No.	Time frame	Basis of Evaluation Parameter with	Marks
1.	Synopsis Presentation (Week 1 <sup>st</sup> )		20
2.	Relevance and linkage of the Identify issue with functional area of discipline (Week 1 <sup>st</sup> )		10
3.	Survey of Literature (Week 2 <sup>nd</sup> )		10
4.	Research Methodology & Data collection(3 <sup>rd</sup> to 4 <sup>th</sup> Week)		10
5.	Overall understanding of the area of study(3 <sup>rd</sup> to 4 <sup>th</sup> Week onwards)		10
<b>Total Marks</b>			<b>60</b>

**2. Evaluation Parameter for End Term Assessment (Summer Internship Project)**

S. No.	Basis of Evaluation Parameter	Marks
1.	Quality Of Content Design	10
2.	Identification of Contemporary Issue	10
3.	Innovation in learning Process	10
4.	Presentation of Content & Delivery Mechanism	10
<b>Total Marks</b>		<b>40</b>

**LIVE PROJECTS & INDUSTRIAL INTERNSHIPS (60:40 Marks)**

<b>Industrial Internship Continuous Assessment &amp; Evaluation Details</b>					
Assessment tool	Use of Technology/ Identification of Projects	Project Presentation	Viva - voce	Project Report	Total
Weightage	10	20	15	15	<b>60</b>

**YOGA (80:20 Marks)**

<b>Continuous Evaluation Parameters &amp; Marks Distribution (80)</b>				
Internal	MCQ Based Test	Assignment	Skill Performance	Total
I	10	5	5	20
II	10	5	5	20
III	10	5	5	20
IV	10	5	5	20
<b>Total</b>				<b>80</b>

<b>End Semester Evaluation Parameters &amp; Marks Distribution (20)</b>				
MCQ Based Test	Assignment	Skill Performance	Viva-Voce	Total
5	5	5	5	<b>20</b>



**Annexure-I**

**SRM University, Delhi-NCR, Sonapat,  
Haryana**

**Faculty of Engineering and Technology  
Department of Electrical & Electronics  
Engineering**

**Minutes of the Meeting (MoM) of Board of Studies (BoS) of  
Department of Electrical & Electronics Engineering held on  
30<sup>th</sup> July, 2022 at 2:00 pm. The meeting was held in the Fifth  
Floor Conference Hall, Engineering block.**

**SRM University, Delhi-NCR, Sonapat, Haryana**  
**Faculty of Engineering and Technology**  
**Department of Electrical & Electronics Engineering**

The following members were present:

Prof.(Dr.) Ranjit Roy Dean, Faculty of Engineering & Technology, SRMUH	Chairman
Prof.(Dr.) Surender Dahiya, Department of Electrical Engineering. D.C.R. University of Science & Technology, Murthal, Sonapat	External Expert- Member
Prof.(Dr.)Rajiva Dwivedi, Department of Electrical & Electronics Engineering, SRMUH	Member
Prof.(Dr.) Rash Bihari Dubey, Department of Electrical & Electronics Engineering, SRMUH	Member
Mr.Murali.S, Assistant Professor, Department of Electrical & Electronics Engineering, SRMUH	Member
Mr Vikram Barara SRM University , Delhi-NCR, Sonapat, Haryana	Controller of Examinations
Dr. D.V. Singh Librarian SRM University Delhi-NCR, Sonapat.	Other officials of the University
Dr.Pawan Kumar Singh Associate Professor , Dept. of ECE SRM University , Delhi-NCR, Sonapat, Haryana	Representative of Dean Academic Affairs
Dr.Deepika Yadav, Assistant Professor, Department of Electrical & Electronics Engineering, SRMUH	Convenor

Dr.Ranjit Roy , Dean ( Engineering and Technology) chaired the meeting and welcomed all the members to the BoS meeting of Department of Electrical and Electronics Engineering and thanked each of them for sparing their valuable time to attend the meeting.

**Agenda:**

1. To approve the minutes of the meeting of BoS held in 2022.
2. To approve revision of existing curriculum of B.Tech. (EEE) as per Choice Based Credit System (CBCS) for Academic year (2022-23).
3. Possible modifications in the curriculum and syllabi of various subjects of B.Tech(EEE) program for Academic year (2022-23)
4. Approval of New Professional Elective Courses to B.Tech (EEE) Program for academic year 2021-22 as per university guidelines.
5. Approval of New Departmental Elective Courses to B.Tech (EEE) Program for academic year 2020-21 as per university guidelines.
6. Ratification of the various policy decisions with respect to curriculum taken during the academic year (2021-22) as per university guidelines
7. Ratification of the various policy decisions with respect to curriculum taken during the academic year (2020-21) as per university guidelines
8. To approve the examiners list for the purpose of Examination.
9. To approve the Scheme of examination, Assessment and evaluation of the choice based credit system (CBCS) for various courses for the Academic year 2021-22 & 2022-23
10. Any other related agenda.

The agenda items listed above were taken up for discussion and the following resolutions were passed.

S.No.	Agenda Item	Discussion/Recommendations	Status/Remarks
	To approve the minutes of the meeting of BoS held in 2021	Recommended	Approved
1	Revision of existing curriculum of B.Tech. (EEE) program as per Choice Based Credit System (CBCS)	Board discussed semester wise subjects in the curriculum. They recommended all the subjects as presented	Approved
2	To confirm and approve Inclusion of more elective subjects in professional elective category to existing B.Tech (EEE) Regulation of 2021-22	Recommended	Approved
3	To confirm and approve Inclusion of more elective subjects in professional elective category to existing B.Tech (EEE) Regulation of 2022-23	Recommended	Approved
4	Possible updates/modifications in the proposed curriculum & Syllabi of various subjects of B. Tech (Electrical and Electronics Engineering) program for Academic year (2022-2023)	<p>Comments/Suggestions by BoS Members:</p> <p>Course objectives to be framed as per revised Blooms Taxonomy</p> <p>To modify Technical Skill Enhancement Course Structure i.e.,(Data Structure and C++ to be offered in 3<sup>rd</sup> Semester and remaining courses to be aligned accordingly)</p> <p>To include theory hours for Technical Skill Enhancement Course Category</p>	<p>May be considered for future course of action.</p> <p>May be considered for future course of action.</p> <p>May be considered for future course of action.</p>

		Board discussed semester wise subjects in the curriculum. They recommended all the subjects as presented	Approved
		To confirm and approve revised syllabus of Engineering Mathematics-I & Engineering Mathematics-II offered to Semester I & II	Revision approved by Committee.
5	To approve the Scheme of examination, Assessment and evaluation of the choice based credit system (CBCS) for various courses for the academic year 2021-22	Recommended	Approved
6	To approve the Scheme of examination, Assessment and evaluation of the choice based credit system (CBCS) for various courses for the academic year 2022-23	Recommended	Approved
7	To approve paper setter/Evaluator for University Examination	Board recommends subject teachers to be paper setters and evaluators for the academic session 2022-23(As per university ordinance Chapter 7, section 7.21)	Approved
8	Ratification of the various policy decisions with respect to curriculum taken during the academic year (2021-22) as per university guidelines	As recommended was approved is attached as Annexure I.	Approved
9	Ratification of the various policy decisions with respect to curriculum taken during the academic year (2020-21) as per university guidelines	As recommended was approved is attached as Annexure II.	Approved

**The Hon'ble Vice Chancellor is authorised to make changes mutatis mutandis in the syllabi on the recommendations of concerned Dean/Associate Dean and Dean Academic Affairs.**

The meeting concluded with a vote of thanks by Prof. (Dr.) Ranjit Roy, Chairman of the BoS.

### ANNEXURE-I

#### I. Changes incorporated in EEE CBCS 2021-22 Regulation.

**Table 1.**

SL.No	Semester	Revision areas pertaining to 2021-22 Regulation	Revised 2021-22 Regulation
1.	V/VI/VII	Inclusion of New Professional Elective courses with 3 credits.	Inclusion of New Professional Elective course with 3 credits. <ul style="list-style-type: none"> <li>• Introduction to Robotics &amp; Industrial Automation</li> <li>• Cyber Security</li> <li>• Smart Grid Technologies &amp; IoT</li> <li>• Distributed Generation and Microgrids</li> <li>• Infrastructure For Smart Cities</li> <li>• Electric Vehicle Machines and Drives.</li> <li>• Real-Time Control of Power Systems and Energy Management</li> <li>• Distributed System Planning and Automation</li> <li>• Digital Communication</li> <li>• Optical Fiber Communication</li> <li>• Mobile Communication</li> <li>• Data Communication Networks</li> <li>• Wireless Communication</li> <li>• Satellite Communication</li> <li>• Embedded Systems Design</li> <li>• Radar and Imaging systems</li> <li>• Virtual Instrumentation</li> <li>• Microelectronics</li> <li>• Computer Architecture and very large-scale Integration</li> <li>• Biomedical Engineering</li> <li>• Computer Aided Design and Manufacturing</li> <li>• Modern Control System</li> </ul>
2	IV	Inclusion of Computer Aided Design Laboratory	Inclusion of Computer Aided Design Laboratory with 1 credit
3	I/II	Inclusion of Environmental Bioengineering/Basic Civil Engineering and Earth Sciences	Inclusion of Environmental Bioengineering/Basic Civil Engineering and Earth Sciences with 2 credits

4	VI	Modification of Laboratory Name: Electrical Measurement & Control Laboratory	Name replaced with Control & Instrumentation Lab with 1 credit
5	III	Course on Electrical & Electronics, Measurements and Instrumentation (EEMI) has been removed	EEMI Course has been replaced by EMI i.e., Electronic Measurements & Instrumentation.

## ANNEXURE II.

### II. Changes incorporated in EEE CBCS 2020-21 Regulation.

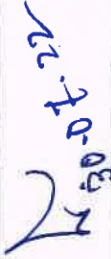



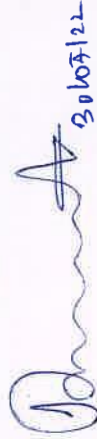




**Table 2.**

SL.No	Semester	Revision areas pertaining to 2020-21 Regulation	Revised 2020- 21 Regulation
1	V	Introduced New Departmental Elective Course	Inclusion of New Departmental Elective course on Digital Communication with 3 credits
2	V	Course on Comprehension-I has been removed	Comprehension-I course is replaced with inclusion of new Digital Communication Lab course with 1 credit
3	VII	Introduced New Open Elective Course	Inclusion of New Open Elective Course of Operation Research with 3 credits
4	VI	Introduced New Departmental Elective Course	Inclusion of New Departmental Elective course with 3 credits on <ul style="list-style-type: none"> <li>• Optical fiber communication</li> <li>• Mobile Communication</li> <li>• Modern Control System~</li> </ul>
5	VII	Introduced New Departmental Elective Course	Inclusion of New Departmental Elective course with 3 credits on <ul style="list-style-type: none"> <li>• Data Communication Networks</li> <li>• Wireless Communication</li> <li>• Satellite Communication</li> <li>• Embedded Systems Design</li> <li>• Renewable Energy Sources</li> </ul>
6	VII	Course on Comprehension-II has been removed	More emphasis is given to Major Project, Credits pertaining to Major project is increased from 4 to 5

**Electrical & Electronics Engineering Department**  
**Faculty of Engineering & Technology**  
**SRM University, Delhi-NCR Sonapat, Haryana**

**30<sup>th</sup> July 2022**

**Attendance Sheet of Board of Studies (BoS) Meeting**

SL.No	Name of Members	Signature
1	Prof.(Dr.) Ranjit Roy (Chairman) Dean, Faculty of Engineering & Technology, SRMUH	 30.07.22
2	Prof.(Dr.) Surender Dahiya, (External Expert Member) Department of Electrical Engineering. D.C.R. University of Science & Technology, Murthal, Sonapat	
3	Prof.(Dr.) Rajiva Dwivedi, Department of Electrical & Electronics Engineering, SRMUH	 30.07.22
4	Prof.(Dr.) Rash Bihari Dubey, Department of Electrical & Electronics Engineering, SRMUH	 30.07.2022
5	Mr.Murali.S, Assistant Professor, Department of Electrical & Electronics Engineering, SRMUH	 30/07/22
6	Mr.Vikram Barara, Controller of Examination, SRMUH	
7	Dr.D.V.Singh, Librarian, SRMUH	 30.07.22
8	Dr.Pawan Kumar Singh, (Representative of Dean Academic Affairs), Associate Professor, Department of Electronics & Communication Engineering, SRMUH	 30.07.2022
9	Dr.Deepika Yadav, Assistant Professor, Convenor, Department of Electrical & Electronics Engineering, SRMUH	 30/07/22