



MAR BASELIOS COLLEGE OF ENGINEERING AND TECHNOLOGY
THIRUVANANTHAPURAM-695015

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

APPROVAL OF MOOC COURSES FOR B.TECH HONOURS AND MINORS

LIST OF APPROVED MOOC COURSES FOR B.TECH MINOR IN ENGINEERING (EEE)

Sl. No	Course	Course Type	Duration	Offering Platform
BASKET-I DRIVES AND POWER ELECTRONICS				
1	Fundamentals of Power Electronics	MINOR MOOC	12 weeks	NPTEL/SWAYAM
2	E-Mobility and Charging Infrastructure	MINOR MOOC	12 weeks	NPTEL/SWAYAM
3	Introduction to Embedded System Design	MINOR MOOC	12 weeks	NPTEL/SWAYAM
4	Semiconductor Devices and Circuits	MINOR MOOC	12 Weeks	NPTEL/SWAYAM
5	Fuzzy Sets, Logic and Systems & Applications	MINOR MOOC	12 weeks	NPTEL/SWAYAM
6	Industrial Automation and Control	MINOR MOOC	12 weeks	NPTEL/SWAYAM
7	Introduction to Industry 4.0 and Industrial Internet of Things	MINOR MOOC	12 weeks	NPTEL/ SWAYAM
8	Advance power electronics and Control	MINOR MOOC	8 weeks	NPTEL/SWAYAM
9	Fundamentals of Electric vehicles: Technology & Economics	MINOR MOOC	8 weeks	NPTEL/ SWAYAM
10	Fundamentals of Electric Drives	MINOR MOOC	8 weeks	NPTEL/SWAYAM
11	Fundamentals of Electric vehicles: Technology & Economics	MINOR MOOC	8 weeks	NPTEL/SWAYAM

12	Advanced Power Electronics and Control	MINOR MOOC	12 weeks	NPTTEL/SWAYAM
BASKET-II POWER ENGINEERING				
1	Power System Engineering	MINOR MOOC	12 Weeks	NPTTEL/ SWAYAM
2	Power System Dynamics, Control and Monitoring	MINOR MOOC	12 Weeks	NPTTEL/ SWAYAM
3	Energy Resources, Economics and Environment	MINOR MOOC	12 Weeks	NPTTEL/ SWAYAM
4	Power Management Integrated Circuits	MINOR MOOC	12 Weeks	NPTTEL/ SWAYAM
5	Elements of Solar Energy Conversion	MINOR MOOC	12 Weeks	NPTTEL/ SWAYAM
6	Non-Conventional Energy Resources	MINOR MOOC	12 Weeks	NPTTEL/ SWAYAM
7	Waste to Energy Conversion	MINOR MOOC	8 Weeks	NPTTEL/ SWAYAM
8	Solar Photovoltaics: Principles, Technologies & Materials	MINOR MOOC	8 Weeks	NPTTEL/ SWAYAM
9	Power Quality Improvement Technique	MINOR MOOC	8 Weeks	NPTTEL/ SWAYAM
10	Renewable Energy Engineering: Solar, Wind and Biomass Energy Systems	MINOR MOOC	8 Weeks	NPTTEL/ SWAYAM
11	Power System Protection and Switchgear	MINOR MOOC	8 weeks	NPTTEL/ SWAYAM
12	Power System Protection	MINOR MOOC	12 weeks	NPTTEL/ SWAYAM
13	Power System Engineering	MINOR MOOC	12 weeks	NPTTEL/ SWAYAM
14	Power Quality Improvement Technique	MINOR MOOC	8 Weeks	NPTTEL/ SWAYAM
15	Advances in UHV Transmission and Distribution	MINOR MOOC	8 weeks	NPTTEL/ SWAYAM
16	Power Quality	MINOR MOOC	12 weeks	NPTTEL/ SWAYAM
17	Design of Photovoltaic Systems	MINOR MOOC	13 weeks	NPTTEL/ SWAYAM

18	Renewable Energy Engineering: Solar, Wind and Biomass Energy Systems-	MINOR MOOC	8 weeks	NPTTEL/ SWAYAM
BASKET-III CONTROL ENGINEERING				
1	Control engineering	MINOR MOOC	12 Weeks	NPTTEL
2	Power System Dynamics, Control and Monitoring	MINOR MOOC	12 Weeks	NPTTEL
3	Sensors and Actuators	MINOR MOOC	12 Weeks	NPTTEL
4	Nonlinear System Analysis	MINOR MOOC	12 Weeks	NPTTEL
5	Linear Dynamical Systems	MINOR MOOC	8 Weeks	NPTTEL
6	Modelling and Simulation of Dynamic Systems	MINOR MOOC	8 Weeks	NPTTEL

LIST OF APPROVED MOOC COURSES FOR B.TECH HONOURS (EEE)

Sl. No	Course	Course Type	Duration	Offering Platform
GROUP I				
1	Computational Electromagnetics	HONOURS MOOC	12 weeks	NPTTEL/ SWAYAM
2	Electric vehicles and Renewable energy	HONOURS MOOC	12 weeks	NPTTEL/SWAYAM
3	Fundamentals of Electric vehicles: Technology & Economics	HONOURS MOOC	8 weeks	NPTTEL/SWAYAM
4	Advanced Electric Drives	HONOURS MOOC	8 weeks	NPTTEL/SWAYAM
5	Basics Of Finite Element Analysis - I	HONOURS MOOC	8 weeks	NPTTEL/SWAYAM
6	Basics Of Finite Element Analysis - II	HONOURS MOOC	8 weeks	NPTTEL/SWAYAM
7	Electrical Equipment and Machines: Finite Element Analysis	HONOURS MOOC	8 weeks	NPTTEL/SWAYAM

8	Power Quality Improvement Technique	HONOURS MOOC	8 Weeks	NPTEL/SWAYAM
9	Fuzzy Sets, Logic and Systems & Applications	HONOURS MOOC	12 weeks	NPTEL/SWAYAM
10	Advanced Power Electronics and Control	HONOURS MOOC	12 weeks	NPTEL/SWAYAM
11	Scientific Computing Using MATLAB	HONOURS MOOC	12 weeks	NPTEL/SWAYAM
GROUP II				
1	Applied Electromagnetics For Engineers	HONOURS MOOC	12 weeks	NPTEL/SWAYAM
2	E-Mobility and Charging Infrastructure	HONOURS MOOC	12 weeks	NPTEL/SWAYAM
3	Introduction to Embedded System Design	HONOURS MOOC	12 weeks	NPTEL/SWAYAM
4	Semiconductor Devices and Circuits	HONOURS MOOC	12 Weeks	NPTEL/SWAYAM
5	Fuzzy Sets, Logic and Systems & Applications	HONOURS MOOC	12 weeks	NPTEL/SWAYAM
6	Industrial Automation and Control	HONOURS MOOC	12 weeks	NPTEL/ SWAYAM
7	Introduction to Industry 4.0 and Industrial Internet of Things	HONOURS MOOC	12 weeks	NPTEL/SWAYAM
8	Advance power electronics and Control	HONOURS MOOC	8 weeks	NPTEL/SWAYAM
9	Fundamentals of Electric vehicles: Technology & Economics	HONOURS MOOC	8 weeks	NPTEL/SWAYAM
10	Power Management Integrated Circuits	HONOURS MOOC	12 Weeks	NPTEL/SWAYAM
11	Electronic Modules for Industrial Applications using Op-Amps	HONOURS MOOC	8 weeks	NPTEL/SWAYAM
12	Modelling and Simulation of Dynamic Systems	HONOURS MOOC	8 weeks	NPTEL/SWAYAM
13	High Power Multilevel Converters- Analysis, Design and Operational Issues	HONOURS MOOC	12 weeks	NPTEL/ SWAYAM

14	Integrated Circuits, MOSFETs, Op-Amps and Their Applications	HONOURS MOOC	12 weeks	NPTEL/SWAYAM
15	Microelectronics: Devices to Circuits	HONOURS MOOC	12 weeks	NPTEL/SWAYAM
16	Op-Amp Practical Applications: Design, Simulation And Implementation	HONOURS MOOC	12 weeks	NPTEL/ SWAYAM
17	Electric vehicles and Renewable energy	HONOURS MOOC	12 Weeks	NPTEL/SWAYAM
18	Advanced Electric Drives	HONOURS MOOC	8 weeks	NPTEL/SWAYAM
19	Scientific Computing Using MATLAB	HONOURS MOOC	12 Weeks	NPTEL/SWAYAM
20	Design of Power Electronic Converters	HONOURS MOOC	8 Weeks	NPTEL/SWAYAM
GROUP III				
1	Power System Dynamics, Control and Monitoring	HONOURS MOOC	12 Weeks	NPTEL/SWAYAM
2	Energy Resources, Economics and Environment	HONOURS MOOC	12 Weeks	NPTEL/SWAYAM
3	Power System Protection	HONOURS MOOC	12 weeks	NPTEL/SWAYAM
4	Elements of Solar Energy Conversion	HONOURS MOOC	12 Weeks	NPTEL/ SWAYAM
5	Non-Conventional Energy Resources	HONOURS MOOC	12 Weeks	NPTEL/ SWAYAM
6	Waste to Energy Conversion	HONOURS MOOC	8 Weeks	NPTEL/ SWAYAM
7	Introduction To Industry 4.0 and Industrial Internet of Things	HONOURS MOOC	12 weeks	NPTEL/SWAYAM
8	Power Quality Improvement Technique	HONOURS MOOC	8 Weeks	NPTEL/ SWAYAM
9	Renewable Energy Engineering: Solar, Wind and Biomass Energy Systems	HONOURS MOOC	8 Weeks	NPTEL/ SWAYAM
10	DC Microgrid and Control System	HONOURS MOOC	8 Weeks	NPTEL/SWAYAM

11	Introduction to Smart Grid	HONOURS MOOC	8 Weeks	NPTEL/ SWAYAM
12	Electrochemical Energy Storage	HONOURS MOOC	12 weeks	NPTEL/SWAYAM
13	Solar Energy Engineering and Technology	HONOURS MOOC	12 Weeks	NPTEL/ SWAYAM
14	Electrical Distribution System Analysis	HONOURS MOOC	8 weeks	NPTEL/SWAYAM
15	Fundamentals of Electric vehicles: Technology & Economics	HONOURS MOOC	8 weeks	NPTEL/SWAYAM
16	Power Quality Improvement Technique	HONOURS MOOC	8 Weeks	NPTEL/SWAYAM
17	Computer Aided Power System Analysis	HONOURS MOOC	12 weeks	NPTEL/ SWAYAM
18	Advances In UHV Transmission and Distribution	HONOURS MOOC	8 weeks	NPTEL/SWAYAM
19	Facts Device	HONOURS MOOC	8 weeks	NPTEL/ SWAYAM
20	Power System Protection and Switchgear	HONOURS MOOC	8 weeks	NPTEL/ SWAYAM
21	Solar Energy Engineering and Technology	HONOURS MOOC	12 weeks	NPTEL/ SWAYAM
22	Solar Photovoltaics Fundamentals, Technology and Applications	HONOURS MOOC	8 weeks	NPTEL/SWAYAM
23	Scientific Computing Using MATLAB	HONOURS MOOC	12 Weeks	NPTEL/SWAYAM
24	Operation and Planning of Power Distribution Systems	HONOURS MOOC	12 Weeks	NPTEL/SWAYAM

Mek
31/08/23

Head of Department
Chairman, Board of Studies

WST
31/08/2023
Principal

Chairman, Academic Council

