

**APJ Abdul Kalam Technological University
Thiruvananthapuram**

Abstract

APJAKTU-Academics-List of Approved MOOC Courses for B.Tech Minor in Engineering (B.Tech 2019 Regulations)-
Orders issued-Reg.

ACADEMIC SECTION

U.O.No. 2034/2021/KTU

Thiruvananthapuram, Dated: 04.12.2021

- Read:-*1. Rule R.11.5 of B.Tech 2019 Regulations.
2. U.O.No.1988/2021/KTU Dated: 27.11.2021
3. U.O.No.2009/2021/KTU Dated 01.12.2021
4. List of Minor MOOC Courses recommended by the various Board of Studies

ORDER

Vide paper read as (1) above, students registering for the B. Tech Degree with **Minor** programme can earn 8 credits by undergoing 2 Massive Open Online Courses (MOOC) relevant to the concerned subjects in the respective minor basket offered by agencies namely AICTE/ NPTEL/ SWAYAM/ NITTTR with the recommendation by the Board of studies and approval of the Academic Council.

Vide University Orders read as (2) & (3) above, 187 nos. of MOOCs that can be registered by the students of B.Tech (2019 Scheme), to earn credits for **Minor** Programme, were approved.

Vide paper read as (4) above, Various Board of Studies, after verifying the syllabus content and duration of the courses, has recommended to approve **36 Massive Online Open Courses**.

Considering the urgency, sanction has been accorded by the Vice Chancellor to approve the list of 36 MOOC Courses offered by agencies namely AICTE/ NPTEL/ SWAYAM/ NITTTR that can be registered by the students of **B.Tech Minor in Engineering** Programme to earn credits, as appended herewith (*refer attachment*), subject to reporting and ratification of the matter in the Academic Council .

Students will not be permitted to register for MOOCs other than those approved and published by the University, to earn credits for their Honours / Minor.

Orders are issued accordingly.

Sd/-

Dr. Sadiq A. *
Dean (Academic)

Copy to:-

1. All affiliated Institutions.
2. IT(section) for updating s/w and to publish in the website.
3. PS to VC & PVC, Dean (Acad)
4. JR(Acad) / JD(Acad) / Section
- 5.. SF / FC.

Forwarded / By Order



Section Officer

* This is a computer system (Digital File) generated letter. Hence there is no need for a physical signature.



List of Approved MOOC Courses for B.Tech Minor in Engineering

ELECTRICAL AND ELECTRONICS ENGINEERING

SL. No	Course	Course Code	Course Type	Duration	Offering Platform	B.Tech Regulation	Course Institution	Remarks
BASKET-I DRIVES AND POWER ELECTRONICS								
1	Fundamentals of power electronics	EEM100	MINOR MOOC	12 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IISC	
2	E-Mobility and Charging Infrastructure	EEM101	MINOR MOOC	12 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IIT Guwahati	
3	Introduction to Embedded System Design	EEM102	MINOR MOOC	12 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IIT Jammu	
4	Semiconductor Devices and Circuits	EEM103	MINOR MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IISC	
5	Fuzzy Sets, Logic and Systems & Applications	EEM104	MINOR MOOC	12 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IIT Kanpur	
6	Industrial Automation and Control	EEM105	MINOR MOOC	12 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IIT Kharagpur	
7	Introduction to Industry 4.0 and Industrial Internet of Things	EEM106	MINOR MOOC	12 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IIT Kharagpur	
8	Advance power electronics and Control	EEM107	MINOR MOOC	8 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IIT Roorkee	
9	Fundamentals of Electric vehicles: Technology & Economics	EEM108	MINOR MOOC	8 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IIT Madras	
10	Fundamentals of Electric Drives	EEM109	MINOR MOOC	8 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IIT Kanpur	
11	Fundamentals of Electric vehicles: Technology & Economics	EEM110	MINOR MOOC	8 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IIT Madras	
BASKET-II POWER ENGINEERING								
1	Power System Engineering	EEM200	MINOR MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IIT KGP	
2	Power System Dynamics, Control and Monitoring	EEM201	MINOR MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IIT KGP	

3	Energy Resources, Economics and Environment	EEM202	MINOR MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IITB	
4	Power Management Integrated Circuits	EEM203	MINOR MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IITM	
5	Elements of Solar Energy Conversion	EEM204	MINOR MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IITK	
6	Non-Conventional Energy Resources	EEM205	MINOR MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IITM	
7	Waste to Energy Conversion	EEM206	MINOR MOOC	8 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IITR	
8	Solar Photovoltaics: Principles, Technologies & Materials	EEM207	MINOR MOOC	8 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IITK	
9	Power Quality Improvement Technique	EEM208	MINOR MOOC	8 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IITR	
10	Renewable Energy Engineering: Solar, Wind and Biomass Energy Systems	EEM209	MINOR MOOC	8 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IITG	
BASKET-III CONTROL ENGINEERING								
1	Control engineering	EEM300	MINOR MOOC	12 Weeks	NPTEL	B.Tech Regulation 2019	IITM	(In lieu of EET385 Control Systems)
2	Power System Dynamics, Control and Monitoring	EEM301	MINOR MOOC	12 Weeks	NPTEL	B.Tech Regulation 2019	IIT KGP	
3	Sensors and Actuators	EEM302	MINOR MOOC	12 Weeks	NPTEL	B.Tech Regulation 2019	IISc	
4	Nonlinear System Analysis	EEM303	MINOR MOOC	12 Weeks	NPTEL	B.Tech Regulation 2019	IITM	
5	Linear Dynamical Systems	EEM304	MINOR MOOC	8 Weeks	NPTEL	B.Tech Regulation 2019	IIT Mandi	
6	Modelling and Simulation of Dynamic Systems	EEM305	MINOR MOOC	8 Weeks	NPTEL	B.Tech Regulation 2019	IITR	

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INFORMATION TECHNOLOGY

SL. No	Course	Course Code	Course Type	Duration	Offering Platform	B.Tech Regulation	Course Institution	Remarks
BASKET-I WEB AND ANDROID DEVELOPMENT								
1	Data Base Management System	ITM102	MINOR MOOC	12 Weeks	NPTEL	B.Tech Regulation 2019	IIT Kharagpur	
BASKET-III SOFTWARE ENGINEERING								
1	Software Engineering	ITM302	MINOR MOOC	12 Weeks	NPTEL	B.Tech Regulation 2019	University of Madras	

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MECHANICAL ENGINEERING

SL. No	Course	Course Code	Course Type	Duration	Offering Platform	B.Tech Regulation	Course Institution	Remarks
BASKET-I MECHANISMS AND MACHINES ENGINEERING								
1	Mechanics of material	MEM100	MINOR MOOC	12 Weeks	NPTEL	B.Tech Regulations 2019	IITM	
2	Mechanics of Solids	MEM101	MINOR MOOC	12 weeks	NPTEL	B.Tech Regulations 2019	IIT Kanpur	
3	Kinematics of mechanisms and machines	MEM102	MINOR MOOC	8 weeks	NPTEL	B.Tech Regulations 2019	IIT Kharagpur	
BASKET - II FLUID AND THERMAL ENGINEERING								
1	Concept of Thermodynamics	MEM200	MINOR MOOC	12 Weeks	NPTEL	B.Tech Regulations 2019	IIT KGP	
2	Heat Transfer	MEM201	MINOR MOOC	12 weeks	NPTEL	B.Tech Regulations 2019	IITKGP	
BASKET-III MATERIALS AND MANUFACTURING ENGINEERING								
1	Basics of Material Engineering	MEM306	MINOR MOOC	13 Weeks	NPTEL	B.Tech Regulations 2019	IIT M	
2	Mechanics of Machining	MEM307	MINOR MOOC	8 weeks	NPTEL	B.Tech Regulations 2019	IIT Guwahati	