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APJ Abdul Kalam Technological University
Thiruvananthapuram

Abstract

APJAKTU–Academics- List of Approved MOOC Courses for B.Tech Honours (B.Tech 2019 Regulations) - Orders issued - Reg.

ACADEMIC SECTION

U.O.No. 2033/2021/KTU   Thiruvananthapuram, Dated: 04.12.2021

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*Read:-*1. Rule R.12.5 of B.Tech 2019 Regulations.

2. U.O.No.1987/2021/KTU Dated: 27.11.2021

3. U.O.No.2010/2021/KTU Dated 01.12.2021

4. List of Honour MOOC courses recommended by the various Board of Studies.

ORDER

Vide paper read as (1) above, students registering for the B. Tech **Honours** Degree programme can earn 8 credits by undergoing 2 Massive Open Online Courses (MOOC) relevant to the concerned subjects in the respective honours group 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, 265 nos. of MOOCs that can be registered by the students of B.Tech (2019 Scheme), to earn credits for **Honours** Programme, were approved.

Vide paper read (4) above, various Board of Studies, after verifying the syllabus content and duration of the courses, has recommended to approve **63 Massive Online Open Courses.**

Considering the urgency, sanction has been accorded by the Vice Chancellor to approve the list of 63 MOOC Courses offered by agencies namely AICTE/ NPTEL/ SWAYAM/ NITTTR that can be registered by the students of **B.Tech Honours** 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 Honours 2019 Regulations

ELECTRICAL AND ELECTRONICS ENGINEERING

SL. No	Course	Course Code	Course Type	Duration	Offering Platform	B.Tech Regulation	Course Institution	Remarks
GROUP I								
1	Computational Electromagnetics	EEH100	HONOURS MOOC	12 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IIT Madras	
2	Electric vehicles and Renewable energy	EEH101	HONOURS MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IITM	
3	Fundamentals of Electric vehicles: Technology & Economics	EEH102	HONOURS MOOC	8 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IIT Madras	
4	Advanced Electric Drives	EEH103	HONOURS MOOC	8 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IIT Kanpur	
5	Basics Of Finite Element Analysis - I	EEH104	HONOURS MOOC	8 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IIT Kanpur	
6	Basics Of Finite Element Analysis - II	EEH105	HONOURS MOOC	8 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IIT Kanpur	
7	Electrical Equipment And Machines: Finite Element Analysis	EEH106	HONOURS MOOC	8 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IIT Bombay	
8	Power Quality Improvement Technique	EEH107	HONOURS MOOC	8 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IITR	
9	Fuzzy Sets, Logic and Systems & Applications	EEH108	HONOURS MOOC	12 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IIT Kanpur	
GROUP II								
1	Applied Electromagnetics For Engineers	EEH200	HONOURS MOOC	12 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IITK	
2	E-Mobility and Charging Infrastructure	EEH201	HONOURS MOOC	12 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IIT Guwahati	
3	Introduction to Embedded System Design	EEH202	HONOURS MOOC	12 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IIT Jammu	
4	Semiconductor Devices and Circuits	EEH203	HONOURS MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IISC	
5	Fuzzy Sets, Logic and Systems & Applications	EEH204	HONOURS MOOC	12 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IIT Kanpur	
6	Industrial Automation and Control	EEH205	HONOURS MOOC	12 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IIT Kharagpur	

7	Introduction to Industry 4.0 and Industrial Internet of Things	EEH206	HONOURS MOOC	12 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IIT Kharagpur	
8	Advance power electronics and Control	EEH207	HONOURS MOOC	8 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IIT Roorkee	
9	Fundamentals of Electric vehicles: Technology & Economics	EEH208	HONOURS MOOC	8 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IIT Madras	
10	Power Management Integrated Circuits	EEH209	HONOURS MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IITM	
11	Electronic Modules For Industrial Applications Using Op-Amps	EEH210	HONOURS MOOC	8 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IISc Bangalore	
12	Modelling And Simulation Of Dynamic Systems	EEH211	HONOURS MOOC	8 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IIT Roorkee	
13	High Power Multilevel Converters-Analysis, Design And Operational Issues	EEH212	HONOURS MOOC	12 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IIT Delhi	
14	Integrated Circuits, MOSFETs, Op-Amps And Their Applications	EEH213	HONOURS MOOC	12 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IISc Bangalore	
15	Microelectronics: Devices To Circuits	EEH214	HONOURS MOOC	12 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IIT Roorkee	
16	Op-Amp Practical Applications: Design, Simulation And Implementation	EEH215	HONOURS MOOC	12 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IISc Bangalore	
17	Electric vehicles and Renewable energy	EEH216	HONOURS MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IITM	
18	Advanced Electric Drives	EEH217	HONOURS MOOC	8 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IIT Kanpur	
GROUP III								
1	Power System Dynamics, Control and Monitoring	EEH300	HONOURS MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IIT KGP	
2	Energy Resources, Economics and Environment	EEH301	HONOURS MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IITB	
3	Power System Protection	EEH302	HONOURS MOOC	12 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IIT Kharagpur	
4	Elements of Solar Energy Conversion	EEH303	HONOURS MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IITK	(If not registering for EET458 Solar PV Systems under KTU)

5	Non-Conventional Energy Resources	EEH304	HONOURS MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IITM	(If not registering for EET322 Renewable Energy Systems under KTU)
6	Waste to Energy Conversion	EEH305	HONOURS MOOC	8 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IITR	
7	Introduction To Industry 4.0 And Industrial Internet Of Things	EEH306	HONOURS MOOC	12 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IIT Kharagpur	
8	Power Quality Improvement Technique	EEH307	HONOURS MOOC	8 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IITR	
9	Renewable Energy Engineering: Solar, Wind and Biomass Energy Systems	EEH308	HONOURS MOOC	8 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IITG	(If not registering for EET322 Renewable Energy Systems under KTU)
10	Dc Microgrid and Control System	EEH309	HONOURS MOOC	8 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IITR	
11	Introduction to Smart Grid	EEH310	HONOURS MOOC	8 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IITR	(If not registering for EET434 Smart Grid Technologies under KTU)
12	Electrochemical Energy Storage	EEH311	HONOURS MOOC	12 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IIT Kharagpur	
13	Solar Energy Engineering and Technology	EEH312	HONOURS MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IITG	(If not registering for EET458 Solar PV Systems under KTU)
14	Electrical Distribution System Analysis	EEH313	HONOURS MOOC	8 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IIT Roorkee	
15	Fundamentals of Electric vehicles: Technology & Economics	EEH314	HONOURS MOOC	8 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IIT Madras	
16	Power Quality Improvement Technique	EEH315	HONOURS MOOC	8 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IITR	

17	Computer Aided Power System Analysis	EEH316	HONOURS MOOC	12 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IIT Roorkee	(If not registering for EET464 Computer Aided Power System Analysis under KTU)
18	Advances In UHV Transmission And Distribution	EEH317	HONOURS MOOC	8 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IISc Bangalore	
19	Facts Device	EEH318	HONOURS MOOC	8 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IIT Roorkee	(If not registering EET466 HVDC & Facts under KTU)
20	Power System Protection And Switchgear	EEH319	HONOURS MOOC	8 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IIT Roorkee	
21	Solar Energy Engineering And Technology	EEH320	HONOURS MOOC	12 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IIT Guwahati	(If not registering for EET458 Solar PV Systems under KTU)
22	Solar Photovoltaics Fundamentals, Technology And Applications	EEH321	HONOURS MOOC	8 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IIT Roorkee	

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INFORMATION TECHNOLOGY

SL. No	Course	Course Code	Course Type	Duration	Offering Platform	B.Tech Regulation	Course Institution	Remarks
GROUP II								
1	Computational Number Theory and Algebra	ITH205	HONOURS MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IIT Kanpur	
2	A basic course in number theory	ITH206	HONOURS MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IIT Bombay	
GROUP III								
1	Microprocessors and Interfacing	ITH305	HONOURS MOOC	12 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IITG	
2	Microprocessors And Microcontrollers	ITH306	HONOURS MOOC	12 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IITKGP	
3	Advanced Computer Architecture	ITH307	HONOURS MOOC	08 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IITG	
4	Introduction To Embedded System Design	ITH308	HONOURS MOOC	12 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	Netaji Subhas University of Technology and IIT Jammu	
5	Introduction To Robotics	ITH309	HONOURS MOOC	12 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IIT Madras	
6	Introduction To Robotics	ITH310	HONOURS MOOC	12 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IIT Kanpur	
7	Robotics	ITH311	HONOURS MOOC	08 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IIT Kharagpur	
8	Robotics And Control : Theory And Practice	ITH312	HONOURS MOOC	08 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IIT Roorkee	
9	Robotics: Basics And Selected Advanced Concepts	ITH313	HONOURS MOOC	12 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2019	IISc Bangalore	

List of Approved MOOC Courses for B.Tech Honours
MECHANICAL ENGINEERING

SL. No	Course	Course Code	Course Type	Duration	Offering Platform	B.Tech Regulation	Course Institution	Remarks
GROUP 1								
1	Mechanics of material	MEH100	HONOUR MOOC	12 Weeks	NPTEL	B.Tech Regulations 2019	IITM	
2	Experimental stress analysis	MEH101	HONOUR MOOC	13 Weeks	NPTEL	B.Tech Regulations 2019	IITM	
GROUP 2								
1	Applied thermodynamics	MEH200	HONOUR MOOC	12 Weeks	NPTEL	B.Tech Regulations 2019	IITG	