

**APJ Abdul Kalam Technological University
Thiruvananthapuram**

Abstract

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

ACADEMIC SECTION

U.O.No. 2010/2021/KTU

Thiruvananthapuram, Dated: 01.12.2021

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

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

2. Minutes of the Board of Studies Electronics and Communication meeting held on 19.11.2021

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 Order read as (2) above, 222 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 (3) above, Board of Studies Electronics and Communication Engineering, after verifying the syllabus content and duration of the courses, has recommended to approve **43 Massive Online Open Courses**.

Considering the urgency, sanction has been accorded by the Vice Chancellor to approve the list of 43 MOOC Courses offered by agencies namely AICTE/ NPTEL/ SWAYAM/ NITTTR that can be registered by the students of **B.Tech Honours in Electronics and Communication 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)

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****ELECTRONICS AND COMMUNICATION ENGINEERING**

SL. No	Course	Course Code	Course Type	Duration	Offering Platform	B.Tech Regulation	Course Institution	Remarks
GROUP I								
1	Analog IC Design	ECH100	HONOURS MOOC	8/12 Weeks	NPTEL	B.Tech Regulation 2019	IIT Madras	
2	Architectural Design of Digital Integrated Circuits	ECH101	HONOURS MOOC	8/12 Weeks	NPTEL	B.Tech Regulation 2019	IIT Kharagpur	
3	CMOS Digital VLSI Design	ECH102	HONOURS MOOC	8/12 Weeks	NPTEL	B.Tech Regulation 2019	IIT Roorkee	
4	Design For Internet of Things	ECH103	HONOURS MOOC	8/12 Weeks	NPTEL	B.Tech Regulation 2019	IISc Bangalore	
5	Digital Circuits and Systems	ECH104	HONOURS MOOC	8/12 Weeks	NPTEL	B.Tech Regulation 2019	IIT Madras	
6	Digital IC Design	ECH105	HONOURS MOOC	8/12 Weeks	NPTEL	B.Tech Regulation 2019	IIT Madras	
7	Digit al VLSI Testing	ECH106	HONOURS MOOC	8/12 Weeks	NPTEL	B.Tech Regulation 2019	IIT Kharagpur	
8	Optimization Techniques for Digital VLSI Design	ECH107	HONOURS MOOC	8/12 Weeks	NPTEL	B.Tech Regulation 2019	IIT Guwahati	
9	VLSI Design Verification and Test	ECH108	HONOURS MOOC	8/12 Weeks	NPTEL	B.Tech Regulation 2019	IIT Guwahati	
10	VLSI Signal Processing	ECH109	HONOURS MOOC	8/12 Weeks	NPTEL	B.Tech Regulation 2019	IIT Kharagpur	
GROUP II								
1	Advanced Topics in Probability and Random Processes	ECH200	HONOURS MOOC	8/12 Weeks	NPTEL	B.Tech Regulation 2019	IIT Guwahati	
2	Analysis and Design Principles of Microwave Antennas	ECH201	HONOURS MOOC	8/12 Weeks	NPTEL	B.Tech Regulation 2019	IIT Kharagpur	
3	Applied Linear Algebra	ECH202	HONOURS MOOC	8/12 Weeks	NPTEL	B.Tech Regulation 2019	IIT Madras	
4	Applied Linear Algebra for Signal Processing, Data Analytics and Machine Learning	ECH203	HONOURS MOOC	8/12 Weeks	NPTEL	B.Tech Regulation 2019	IIT Kanpur	
5	Applied Optimization for Wireless , Machine Learning, Big Data	ECH204	HONOURS MOOC	8/12 Weeks	NPTEL	B.Tech Regulation 2019	IIT Kanpur	
6	Basic Building Blocks of Microwave Engineering & Design Principles of RF and Microwave Filters and Amplifiers.	ECH205	HONOURS MOOC	8/12 Weeks	NPTEL	B.Tech Regulation 2019	IIT Kharagpur	

7	Bayesian / MMSE Estimation for Wireless Communications -MIMO/ OFDM	ECH206	HONOURS MOOC	8/12 Weeks	NPTEL	B.Tech Regulation 2019	IIT Kanpur	
8	Computational Electromagnetics	ECH207	HONOURS MOOC	8/12 Weeks	NPTEL	B.Tech Regulation 2019	IIT Madras	
9	Computational Electromagnetics & Applications	ECH208	HONOURS MOOC	8/12 Weeks	NPTEL	B.Tech Regulation 2019	IIT Madras	
10	Electromagnetic Compatibility, EMC	ECH209	HONOURS MOOC	8/12 Weeks	NPTEL	B.Tech Regulation 2019	KTH Royal Institute of Technology, Sweden	
11	Electromagnetic Waves in Guided And Wireless Media	ECH210	HONOURS MOOC	8/12 Weeks	NPTEL	B.Tech Regulation 2019	IIT Kanpur	
12	Estimation For Wireless Communications: MIMO-OFDM Cellular and Sensor Networks	ECH211	HONOURS MOOC	8/12 Weeks	NPTEL	B.Tech Regulation 2019	IIT Kanpur	
13	Evolution of Air Interface Towards 5G	ECH212	HONOURS MOOC	8/12 Weeks	NPTEL	B.Tech Regulation 2019	IIT Kharagpur	
14	Fiber-Optic Communication Systems and Techniques	ECH213	HONOURS MOOC	8/12 Weeks	NPTEL	B.Tech Regulation 2019	IIT Kanpur	
15	Microwave Integrated Circuits	ECH214	HONOURS MOOC	8/12 Weeks	NPTEL	B.Tech Regulation 2019	IIT Bombay	
16	Millimeter Wave Technology	ECH215	HONOURS MOOC	8/12 Weeks	NPTEL	B.Tech Regulation 2019	IIT Kharagpur	
17	Principles And Techniques of Modern Radar Systems	ECH216	HONOURS MOOC	8/12 Weeks	NPTEL	B.Tech Regulation 2019	IIT Kharagpur	
18	Principles of Signal Estimation for MIMO / OFDM Wireless Communication	ECH217	HONOURS MOOC	8/12 Weeks	NPTEL	B.Tech Regulation 2019	IIT Kanpur	
19	Signal Processing for mm Wave Communication for 5G and Beyond	ECH218	HONOURS MOOC	8/12 Weeks	NPTEL	B.Tech Regulation 2019	IIT Kharagpur	
20	Spread Spectrum Communications and Jamming	ECH219	HONOURS MOOC	8/12 Weeks	NPTEL	B.Tech Regulation 2019	IIT Kharagpur	

GROUP III

1	Advanced Topics in Probability And Random Processes	ECH300	HONOURS MOOC	8/12 Weeks	NPTEL	B.Tech Regulation 2019	IIT Guwahati	
2	Applied Linear Algebra for Signal Processing, Data Analytics and Machine Learning	ECH301	HONOURS MOOC	8/12 Weeks	NPTEL	B.Tech Regulation 2019	IIT Kanpur	
3	Applied Optimization for Wireless, Machine Learning, Big Data	ECH302	HONOURS MOOC	8/12 Weeks	NPTEL	B.Tech Regulation 2019	IIT Kanpur	

4	Biomedical Signal Processing	ECH303	HONOURS MOOC	8/12 Weeks	NPTEL	B.Tech Regulation 2019	IIT Kharagpur	
5	Deep Learning for Visual Computing	ECH304	HONOURS MOOC	8/12 Weeks	NPTEL	B.Tech Regulation 2019	IIT Kharagpur	
6	Digital Speech Processing	ECH305	HONOURS MOOC	8/12 Weeks	NPTEL	B.Tech Regulation 2019	IIT Kharagpur	
7	Mapping Signal Processing Algorithms to Architectures	ECH306	HONOURS MOOC	8/12 Weeks	NPTEL	B.Tech Regulation 2019	IIT Madras	
8	Mathematical Methods and Techniques in Signal Processing	ECH307	HONOURS MOOC	8/12 Weeks	NPTEL	B.Tech Regulation 2019	IISc Bangalore	
9	Medical Image Analysis	ECH308	HONOURS MOOC	8/12 Weeks	NPTEL	B.Tech Regulation 2019	IIT Kharagpur	
10	Neural Networks for Signal Processing - I	ECH309	HONOURS MOOC	8/12 Weeks	NPTEL	B.Tech Regulation 2019	IISc Bangalore	
11	Principles of Signal Estimation for MIMO / OFDM Wireless Communication	ECH310	HONOURS MOOC	8/12 Weeks	NPTEL	B.Tech Regulation 2019	IIT Kanpur	
12	Statistical Signal Processing	ECH311	HONOURS MOOC	8/12 Weeks	NPTEL	B.Tech Regulation 2019	IIT Guwahati	
13	VLSI Signal Processing	ECH312	HONOURS MOOC	8/12 Weeks	NPTEL	B.Tech Regulation 2019	IIT Kharagpur	