

**DEPARTMENT OF ELECTRONICS COMMUNICATION AND INSTRUMENTATION ENGINEERING**

No. **26/** ECIED/B.Tech-ECI/KITS/2024

Date: 25.06.2024

**Submitted to the Prof. I/c Honors & Minor Programme:**

**Sub:** Submission of identified Equivalent SWAYAM-MOOC courses for B.Tech.(ECI) Programmes- Reg.

**Ref:** No.03 /HMP/KITS/2024/dated; 24.06.2024

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It is bring to your kind notice that following are the details of SWAYAM-NPTEL MOOC Courses identified from the department end based on the circular released from your office vide reference cited above. The document is submitted for favour of information.

**Honors Programme- B.Tech.(ECI) :**

S. No	Honours curriculum course Identified by the Dept	Equivalent SWAYAM - MOOC course	Online Course Link
1.	U18HCI1001: Advanced Sensors and Actuators	-	-
2.	U18HCI1002 Mathematical Foundation for Machine Learning	Essential Mathematics for Machine Learning	<a href="https://onlinecourses.nptel.ac.in/noc24_ma87/preview">https://onlinecourses.nptel.ac.in/noc24_ma87/preview</a>
3.	U18HCI1003 Advanced IoT and its Applications	Introduction to Industry 4.0 and Industrial Internet of Things	<a href="https://onlinecourses.nptel.ac.in/noc24_cs95/preview">https://onlinecourses.nptel.ac.in/noc24_cs95/preview</a>
4.	U18HCI1004 Artificial Intelligence Applications	An Introduction to Artificial Intelligence	<a href="https://onlinecourses.nptel.ac.in/noc24_cs08/preview">https://onlinecourses.nptel.ac.in/noc24_cs08/preview</a>
5.	U18HCI1005 Op-Amp Applications: Design and Implementation	-	-
6.	U18HCI1006 Advanced communication systems	-	-
7.	U18HCI1007 Data Science for Engineers	Data Science for Engineers	<a href="https://onlinecourses.nptel.ac.in/noc24_cs133/preview">https://onlinecourses.nptel.ac.in/noc24_cs133/preview</a>
8.	U18HCI1008 Biomedical signal and Image processing	Introduction to Biomedical Imaging Systems	<a href="https://onlinecourses.nptel.ac.in/noc24_bt69/preview">https://onlinecourses.nptel.ac.in/noc24_bt69/preview</a>
9.	U18HCI1009 Advanced Digital Signal Processing	Real-Time Digital Signal Processing	<a href="https://onlinecourses.nptel.ac.in/noc24_ee136/preview">https://onlinecourses.nptel.ac.in/noc24_ee136/preview</a>
10.	U18HCI1010 Photonics and Applications	Introduction to Photonics	<a href="https://onlinecourses.nptel.ac.in/noc24_ee144/preview">https://onlinecourses.nptel.ac.in/noc24_ee144/preview</a>
11.	U18HCI1011 Microelectronics	Microelectronics: Devices to Circuits	<a href="https://onlinecourses.nptel.ac.in/noc24_ee139/preview">https://onlinecourses.nptel.ac.in/noc24_ee139/preview</a>
12.	U18HCI1012 Digital VLSI Testing	Digital VLSI Testing	<a href="https://onlinecourses.nptel.ac.in/noc24_ee134/preview">https://onlinecourses.nptel.ac.in/noc24_ee134/preview</a>
13.	U18HCI1013 Software Defined Radio	-	-
14.	U18HCI1014 mm Wave communication	-	-
15.	U18HCI1015 Deep Learning for Computer Vision	Deep Learning for Computer Vision	<a href="https://onlinecourses.nptel.ac.in/noc24_cs89/preview">https://onlinecourses.nptel.ac.in/noc24_cs89/preview</a>

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MINOR Programme \_ B.Tech.(ECI):

S. No	MINOR curriculum course Identified by the Dept	Equivalent SWAYAM - MOOC course	Online Course Link
1.	U18MCI1001 Analog Electronic Circuits	Analog Electronic Circuits	<a href="https://onlinecourses.nptel.ac.in/noc24_ee106/preview">https://onlinecourses.nptel.ac.in/noc24_ee106/preview</a>
2.	U18MCI1002 Signals and Systems	Signals and Systems	<a href="https://nptel.ac.in/courses/108104100/">https://nptel.ac.in/courses/108104100/</a>
3.	U18MCI1003 Electrical Measurement and Electronic Instruments	Electrical Measurement and Electronic Instruments	<a href="https://onlinecourses.nptel.ac.in/noc24_ee117/preview">https://onlinecourses.nptel.ac.in/noc24_ee117/preview</a>
4.	U18MCI1004 Digital Circuits	Digital Circuits	<a href="https://onlinecourses.nptel.ac.in/noc24_ee147/preview">https://onlinecourses.nptel.ac.in/noc24_ee147/preview</a>
5.	U18MCI1005 Sensors & Actuators	-	-
6.	U18MCI1006 Communication Engineering	Analog Communication	<a href="https://onlinecourses.nptel.ac.in/noc24_ee135/preview">https://onlinecourses.nptel.ac.in/noc24_ee135/preview</a>
7.	U18MCI1007 Integrated Circuits	-	-
8.	U18MCI1008 Digital Signal Processing	-	-
9.	U18MCI1009 Microprocessors and Interfacing	-	-
10.	U18MCI1010 Industrial Internet of Things	Introduction to Internet of Things	<a href="https://onlinecourses.nptel.ac.in/noc24_cs115/preview">https://onlinecourses.nptel.ac.in/noc24_cs115/preview</a>
11.	U18MCI1011 Introduction to Embedded System Design	-	-
12.	U18MCI1012 Mathematical Foundation for Machine Learning	Introduction to Machine Learning	<a href="https://onlinecourses.nptel.ac.in/noc24_cs101/preview">https://onlinecourses.nptel.ac.in/noc24_cs101/preview</a>
13.	U18MCI1013 Artificial Intelligence and Applications	Fundamentals of Artificial Intelligence	<a href="https://onlinecourses.nptel.ac.in/noc24_ge47/preview">https://onlinecourses.nptel.ac.in/noc24_ge47/preview</a>
14.	U18MCI1014 Wireless and Cellular Communications	Principles of Modern CDMA/ MIMO/ OFDM Wireless Communications	<a href="https://onlinecourses.nptel.ac.in/noc24_ee151/preview">https://onlinecourses.nptel.ac.in/noc24_ee151/preview</a>
15.	U18MCI1015 FiberOptic Communications	Optical Engineering	<a href="https://onlinecourses.nptel.ac.in/noc24_ee145/preview">https://onlinecourses.nptel.ac.in/noc24_ee145/preview</a>
16.	U18MCI1016 Digital Image Processing	Digital Image Processing	<a href="https://onlinecourses.nptel.ac.in/noc24_ee133/preview">https://onlinecourses.nptel.ac.in/noc24_ee133/preview</a>
17.	U18MCI1017 VLSI Design	VLSI Design Flow: RTL to GDS	<a href="https://onlinecourses.nptel.ac.in/noc24_ee102/preview">https://onlinecourses.nptel.ac.in/noc24_ee102/preview</a>
18.	U18MCI1018 Biomedical Instrumentation	--	--

*S. Sumanth*

Professional Electives: B.Tech .VI & VIII Sem

S. No	Sem	PE	Professional Electives/ MOOCs	Equivalent SWAYAM - MOOC course	Online Course Link
1.	VI	PE-II	U18CI 603A: Antennas and Wave Propagation	-	-
			U18CI 603B:	-	-
			U18CI 603C: Biomedical Instrumentation	-	-
			Other Equivalent MOOC course in EVEN semester	U18CI 603M: Fuzzy sets, logic & Systems and Applications	-
				U18CI 603M: Fundamentals Of MIMO Wireless Communication	<a href="https://nptel.ac.in/courses/17105132">https://nptel.ac.in/courses/17105132</a>
2.	VIII	PE-V	U18CI801A: IoT Industrial Applications	U18CI801M: Introduction to Industry 4.0 and Industrial Internet of Things	<a href="https://onlinecourses.nptel.ac.in/no_c24_cs95/preview">https://onlinecourses.nptel.ac.in/no_c24_cs95/preview</a>
			U18CI801B: Satellite communications	-	-
			U18CI801C: Cyber Security	-	-
			Other Equivalent MOOC course in EVEN semester	U18CI801M:	-
				U18CI801M:	-
3.	VIII	PE-VI	U18 CI802A: Cloud Computing	U18CI802M: Cloud Computing	<a href="https://onlinecourses.nptel.ac.in/no_c24_cs118/preview">https://onlinecourses.nptel.ac.in/no_c24_cs118/preview</a>
			U18CI802B: Mobile and Wireless Networks	-	-
			U18CI802C: Robotics	U18CI802M: Robotics	<a href="https://onlinecourses.nptel.ac.in/noc24_me88/preview">https://onlinecourses.nptel.ac.in/noc24_me88/preview</a>
			Other Equivalent MOOC course in EVEN semester	U18CI802M: Optical fiber sensors	<a href="https://onlinecourses.nptel.ac.in/noc24_ee145/preview">https://onlinecourses.nptel.ac.in/noc24_ee145/preview</a>
				U18CI802M: Deep learning	<a href="https://onlinecourses.nptel.ac.in/no_c24_cs114/preview">https://onlinecourses.nptel.ac.in/no_c24_cs114/preview</a>

Self Learning Mode- B.Tech (ECI):

Professional Elective-V (offered by Department)	SWAYAM-NPTEL Equivalent Course	Online Course Link	Professional Elective- V (offered by Department)	SWAYAM-NPTEL Equivalent Course	Online Course Link
U18CI80A IoT Industrial Applications	-	-	U18CI802A Cloud Computing	Cloud Computing	<a href="https://onlinecourses.nptel.ac.in/noc24_cs118/preview">https://onlinecourses.nptel.ac.in/noc24_cs118/preview</a>
U18CI80B Satellite communications	-	-	U18CI802B Mobile and Wireless Networks	-	-

U18CI80C	Cyber Security	Foundations of Cyber Physical Systems	-	U18CI802C	Robotics	Advanced Robotics	<a href="https://nptel.ac.in/courses/112104316">https://nptel.ac.in/courses/112104316</a>
MOOCs-V:U18CI801M SWAYAM-MOOC course	(i)VLSI Signal Processing	(i) VLSI Signal Processing	-	MOOCs-VI:U18CI802M SWAYAM-MOOC course	i. Optical fiber sensors	-	-
	(i) Computer Vision and Image-Fundamentals and Applications	-	-		ii. Deep learning	Deep Learning - IIT Ropar	<a href="https://onlinecourses.nptel.ac.in/noc24_cs89/preview">https://onlinecourses.nptel.ac.in/noc24_cs89/preview</a>

**Acceleration Programme -B.Tech (ECI):**

Professional Elective-V: (offered by department)		SWAYAM-NPTEL Equivalent course	ONLINE COURSE LINK	Professional Elective-VI: (offered by department)		SWAYAM-NPTEL Equivalent course	ONLINE COURSE LINK
U18CI801A:	IoT Industrial Applications	Introduction to Internet of Things	-	U18CI802A:	Cloud Computing	Cloud Computing	<a href="https://onlinecourses.nptel.ac.in/noc24_cs118/preview">https://onlinecourses.nptel.ac.in/noc24_cs118/preview</a>
U18CI801B:	Low Power VLSI Design	VLSI Interconnects	<a href="https://onlinecourses.nptel.ac.in/noc24_ee93/preview">https://onlinecourses.nptel.ac.in/noc24_ee93/preview</a>	U18CI802B:	Mobile and Wireless Networks	-	-
U18CI801C:	FPGA Design	-	-	U18CI802C:	Robotics	Advanced Robotics	<a href="https://nptel.ac.in/courses/112104316">https://nptel.ac.in/courses/112104316</a>
-	-	-	-	-	-	-	-
		(i)VLSI Signal Processing	-	MOOCs-VI: U18CI802M SWAYAM-MOOC course		Optical fiber sensors	-
		(ii) Computer Vision and Image - Fundamentals and Applications	-			Deep learning	<a href="https://onlinecourses.nptel.ac.in/noc24_cs89/preview">https://onlinecourses.nptel.ac.in/noc24_cs89/preview</a>

*R. Nirmala Devi*  
Smt. R.Nirmala Devi 25/06/2024  
Dept. NPTEL Coordinator

*K. Sivani*  
Prof. K. Sivani 25/6/24  
Head, Dept. of ECIE

**Copy to:**

1. The Dean AA
2. The Institute MOOCs Coordinator
3. For Posting in website department page
4. ECED-ECI Stack file (HMP/MOOCs)