VISVESVARAYA TECHNOLOGICAL UNIVERSITY
Jnana Sangama, Belagavi

**VTU Regulations governing the award of
'Honours' at B.E./B.Tech. Degree Programmes
and
List of National Programme for Technology Enhanced Learning (NPTEL)
Massive Open Online Courses (MOOCs) approved by the University
for the programme
B.E. Electrical and Electronics Engineering**
for earning additional 18 or more credits to become eligible for the award of BE degree with Honours.
Ref: **(i)** Executive Council Resolution. No.2.2.1 dated May 27, 2020
(ii) VTU Notification:VTU/BGM/OS –Aca/2020-21/369 dated June 3, 2020

NOTE: The list of MOOCs presented in this document is tentative as per NPTEL/SWAYAM. There may be addition and deletion of courses for the upcoming NPTEL semester. Students are solely responsible for all the NPTEL terms and conditions prescribed for online courses (regarding starting of the dates of course/s, additions / deletions of courses, cancellation/postponement/ changes in the conduct of proctored examination/s, etc.,) and VTU has no role in all the activities of NPTEL/SWAYAM and is not in any way bound by legal terms.

VTU Regulations governing the award of 'Honours' at B.E./B.Tech. Degree Programmes
(Applicable to 2018 – 19 batch and onwards)

Introduction:

(a) Honours Degree

An increasingly interconnected global economy (the economies of the world's individual countries considered together as a single economic system.) as the result of globalization is creating collaborative opportunities and competitive pressures requiring broadly educated engineers and business professionals. Also, the next generation engineers have to practice an interdisciplinary approach to problem solving.

The objectives of decorating the students with superior academic ability with Honours (Honours: British, Honors: US) are to

- Encourage the advanced levels of study and multidisciplinary learning,
- Specialize in a focused area of their interest,
- Learn new skills and methodologies pertaining to their area of interest,
- Enable personal creativity,
- Cultivate a sustaining interest in advanced education and research,
- Enhance professional development, and
- Provide opportunities to gain recognition at the time of graduation for advanced, distinguished work as an undergraduate.

The Bachelor of Engineering degree with Honours earned with experiences, both inside and outside the classroom, will enhance, after graduation, all types of opportunities as professional engineers in the competitive world.

To encourage and groom engineering students during their engineering programme to become self-motivated independent investigators, critical thinkers, problem solvers, good communicators, team players, effective managers, life-long learners, as well as economically, environmentally and socially aware AICTE has introduced a scheme wherein each students has to earn 18 or more additional credits through Massive Open Online Courses (MOOCs).

To cater the engineering skill requirements of the next-generation due to continuously changing expectations of the industry, society, and global stakeholder community owing to technology growth and globalization, VTU intends to prepare graduates equipped with interdisciplinary knowledge.

To embody the intentions of AICTE, VTU has instituted the award of Bachelor of Engineering /Technology degree with Honours from 2018 – 19 batch.

(b) SWAYAM (https://swayam.gov.in/about, © 2019 SWAYAM.)

Study Webs of Active Learning for Young Aspiring Minds (SWAYAM) is India's national MOOC portal to provide the best teaching learning resources to all, including the most disadvantaged. It is a programme initiated by Government of India and designed to achieve the three cardinal principles of Education Policy viz., access, equity and quality.

SWAYAM offers at free of cost the best quality courses developed by the following nine National Coordinators.
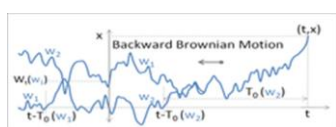
(1) All India Council for Technical Education (AICTE), (2) National Programme on Technology Enhanced Learning (NPTEL), (3) University Grants Commission (UGC), (4) Consortium for Educational Communication (CEC), (5) National Council of Educational Research and Training (NCERT), (6) National Institute of Open Schooling (NIS), (7) Indira Gandhi National Open University (IGNOU), (8) Indian Institute of Management (IIMB), Bangalore, and (9) National Institute of Technical Teachers Training and Research (NITTTR).

(c) National Programme for Technology Enhanced Learning (NPTEL)

National Programme on Technology Enhanced Learning (NPTEL), funded by the Ministry of Human Resource Development, Government of India is an online E-learning model for furthering technical knowledge. The online courses in engineering, technology, science, arts and humanities are designed and executed by IIT Bombay, IIT Delhi, IIT Guwahati, IIT Kanpur, IIT Kharagpur, IIT Madras, IIT Roorkee, and Indian Institute of Science (IISc), Bengaluru.

There are primarily two types of courses, web-based and video based. The former consists of lecture notes while the latter has segmented videos based on each topic within the course. Students can register for the online courses as per dates in academic calendar published by each institutes (i.e., 7 IIT's and IISc) participating in NPTEL. There are 4 week, 8 week, as well as 12 week courses offered twice a year (January – June, July – December). Students can register/join for any number of courses, however only a maximum of four (04) examinations can be written per semester/session. Students can sign up (register) for the course/s every time the course/s are offered. Joining a course is free and has no pre-requisites, no age limit, and no entrance criteria to enroll. Not all courses on NPTEL are available for certification.

A separate portal "https://onlinecourses.nptel.ac.in/explorer" exists to handle certified courses. Clicking of the above given link and the resulting nptel – Swayam under *swayam.gov.in › NPTEL* leads to https://swayam.gov.in/NPTEL course catalogue to display, as illustrated below, the courses upcoming (Enrolment open) and Ongoing (Enrolment closed). [Illustration is as available on 18 May 2020]

A basic course in number theory
Prof. Shripad Garge IIT Bombay

NPTEL

12 Weeks (Starts: 20-07-2020)

Advance Aircraft Maintenance
Prof. A.K. Ghosh, Prof. Vipul Mathur IIT Kanpur

NPTEL

Advanced Concrete Technology
Prof. Manu Santhanam IIT Madras

NPTEL

12 Weeks (Starts: 20-07-2020)

The link - https://onlinecourses.nptel.ac.in can be used to enroll/register for NPTEL online course/courses. After enrolling to a course, watching videos and submission of weekly assignments, students can get a certificate from the IITs/IISc by appearing in-person to the proctored (proctor refers to invigilate) certification examination (for a nominal fee of about Rs.1000.00/-) and Passing the examination with a consolidated score of 40% or above. 25 % of the final marks comes from the assignments and 75 % from the final examination. The examination score is the 75 % of the proctored certification examination score out of 100. The final score is the sum of average assignment score and examination score.

Students will be eligible for a certificate only if average assignment score ≥10/25 and Examination Score ≥ 30/75. The students will not get the certificate if one of the 2 criteria is not met, even if the Final score ≥ 40/100.

Certificate will have student name, photograph, and the score in the final examination with the breakup. It will have the logos of NPTEL and IIT/IISc. It will be e-verifiable at nptel.ac.in/noc. Only the e-certificate will be made available. Hard copies will not be dispatched.

The availability NPTEL course/s, of course, keeps on changing as it depends on the request made by the number of institution, requirement of respective course, faculties [subject matter experts (SMEs)]and various other factors.

The NPTEL courses are also part of a lifelong learning process.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY
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VTU Regulations governing the award of 'Honours' at
B.E./B.Tech. Degree Programmes

18UG HONRS 1.0 Preamble

These Regulations governing the award of 'Honours' at B.E. / B.Tech. degree programmes have been framed in pursuance of the provisions for this qualification in AICTE model curriculum for undergraduate programmes in Engineering and Technology, Vol. I and II, January 2018 and in the UGC Notification on the Specification of Degrees, March 2014. These provisions aim at facilitating the award of higher qualifications and recognition to well-performing undergraduate students of the University on their acquiring additional credits in the same time period for the programmes. In adopting these provisions, the University has taken steps to ensure that the quality and standard of the Degree awards are not compromised in any way and they continue to be maintained at a high level.

18UG HONRS 2.0 Short title, Applicability and Commencement

(a) These Regulations shall be called 'VTU Regulations Governing the award of 'Honours' at B.E./B.Tech. Degree Programmes, 2019.

(b) These Regulations shall be applicable to all B.E./B.Tech. Degree Programmes being conducted by the University and Autonomous Colleges under the University.

(c) These Regulations shall come into force from the date of their notification by the University.

18UG HONRS 3.0 Definitions

In these Regulations, unless the context requires otherwise or it is specified so defined:
(a) 'Academic Senate (AS)', 'Executive Council (EC)' mean the respective Authorities of the University.
(b) 'AICTE' means the All India Council for Technical Education established at New Delhi by an act of Parliament in 1987.
(c) 'Coursework' means the courses prescribed for the relevant programme, which the candidate shall successfully complete in the specified time period for the Degree award.
(d) 'e - resources' mean learning material saved electronically in on – line storage platforms/ devices for use any – where and any-time accessed online or after being downloaded from the relevant sources.
(e) 'Honours' means a higher recognition awarded to a well performing UG student on earning the specific extra credits after satisfying the relevant Degree award conditions.
(f) 'Intake' means the number of students sanctioned for admission in a year to a Programme/ Department / College as the case may be.
(g) 'MOOCs' mean Massive Open Online Courses in a variety of disciplines available at both introductory and advanced levels, accessible from e-resources in India and abroad.
(h) 'Principal' means the executive head of an affiliated / constituent / autonomous college under the University.
(i) 'Registrar' and 'Registrar (Evaluation)' mean respectively the Registrar and Registrar (Evaluation) of the University.
(j) 'UGC' means the University Grants Commission established at New Delhi by an act of Parliament in 1956.

(k) 'University' means the Visvesvaraya Technological University (VTU) with its headquarters at Belagavi.
(l) 'Vice Chancellor' means the Vice Chancellor of the University.

18UG HONRS 4.0 Eligibility Criteria for Registration

Every student of the University intending to register for the 'Honours' qualification shall fulfil the following academic requirements:

(a) Registration to 'Honours' qualification shall start from fifth semester onwards.
(b) The Registrants shall have obtained a grade $\geq$ D in all the courses in first attempt only, in the semesters until this stage.
(c) The Registrants shall have obtained a CGPA $\geq$ 8.50 at the end of fourth semester.
(d) The lateral enrty Diploma students shall have completed Additional Mathemathics I and II during 3rd and 4th semesters in first attempt only.
(e) The lateral enrty B.Sc students shall have completed Engineering Graphics and Design, and Civil Engineering and Mechanics of First Year Engineering Programme, by the end of IV semster in first attempt only.

18UG HONRS 5.0 Registration Procedure

(a) Any student meeting the eligibilty criteria specified above and intending to register for the Honours qualification shall apply to the University through the Principal of his/her College in the prescribed form along with the prescribed application fees within 15 working days after notification by the University.
(b) There shall be no limit on the intake of students for registration for the Honours qualification. All the applicants fulfilling the eligibility shall be free to register for the Honours qualification.
(c) The Registrar shall notify the registration, or otherwise, of the student/s within the next 15 working days on the University Notice Boards with copies to the Colleges concerned.
(d) If registered, the students shall pay a onetime non-refundable registration fee as prescribed by the University to confirm the registration.

18UG HONRS 6.0 Additional Coursework

(a) In addition to the courses prescribed by the University to be completed successfully in the remaining semesters, that is, fifth to eight for the relevant Degree award, each student registered for the Honours qualification shall have to take up the NPTEL coursework and complete each coursework successfully irrespective of the number of attempts, with a final score (Online assignments: 25% + Proctored exam: 75%) leading to NPTEL Elite (60 to 75 %) / Elite + Silver (76 to 89 %) / Elite-Gold ($\geq$ 90 %)certificate, within the minimum prescribed duration for the award of degree. [To be read with 18UG HONRS 6.0 (c)]

(b) Students shall be permitted to drop the registered NPTEL coursework/s and select alternative coursework/s in case they cannot appear for proctored examination/s or complete the examination as per 18UG HONRS 6 (a).
(c) The University shall announce the BOS approved list of MOOCs (chosen from NPTEL/SWAYAM) corresponding to each engineering programme. The University shall have the freedom to review and approve additional online platforms from time to time.

(d) (i) Students shall choose, online courses totaling to 18 or more credits from the bouquet of approved online courses as defined in 6(a).

(ii) Students shall select, in consultation with the concerned Faculty Advisor, the MOOCs such that the content/syllabus of them are not similar to that of the programmes first to eighth semesters core courses, professional electives or open electives that the student chooses at later semesters of the programme.

In case of violations, the credits earned by the students in such course/s shall not be considered for the summation of prescribed 18 or more credits and hence for the award of Honours degree.

(e) The students shall earn the credits by only appearing in person to the proctored examination conducted by NPTEL.

No autonomous or non-autonomous colleges under the University can conduct examination and award credits in lieu of NPTEL to accrue 18 or more credits for the award of Honours degree.

(f) The method of assessment shall be as per the NPTEL online platform.

(g) The credit equivalence for online NPTEL courses shall be determined based on following table.

Table: Assigned credits	
Online course duration	Assigned credits
04 weeks	01
08 weeks	02
12 weeks	03

18UG HONRS 7. Award of Honours Qualification

All the students who successfully complete the online NPTEL courses as prescribed under 18UG HONRS 6 and submit their certificates to the University through Principal of their respective colleges against the notification issued by the Registrar (Evaluation) in time before closure of eight semester as per calendar shall be eligible for the 'Honours' qualification.

(a) The Principals of the colleges under VTU shall submit the list of students who are eligible for the award of Honours degree along with the total credit earned by each student and the corresponding MOOC certificates to the University, programme wise, together with the CIE marks of 8th semester.

The list shall be validated by the Faculty Advisor of the students under consideration and endorsed by the Head/Chairperson of the Department.

(b) Those students who cannot/do not submit the certificates on or before the last date prescribed by the University shall not be considered for the award of ''Honours' qualification, irrespective of the number of credits earned by them. However, they shall be awarded only B.E./B.Tech. Degree.

(c) The 'Honours' qualification shall be suffixed to the respective degrees and shown in the Degree certificates as a recognition of higher achievement by the student concerned.

(d) The CGPA earned by the students shall be only on the basis of students' performance in the various semester level examinations conducted by the University/ Autonomous colleges, as the case may be.

(e) (i) Students shall maintain a grade $\geq$ D in all the courses of fifth to eight semesters in first attempt only.

(ii) Students failing to maintain a grade ≥ D in all the courses of fifth to eight semesters in first attempt only shall discontinue the attempt to earn additional credits.

(iii) Students not having a CGPA ≥8.50 at the end of programme shall not be eligible for the award of Honours even if they have satisfied the additional credits consideration prescribed for Honours degree.

(iv) The Principals of respective colleges shall submit to the University the list of such students who fail to satisfy 18UG HONRS 7 (e) (i) from time to time.

(v) The Registrar shall notify the list of deregistered students from time to time.

(f) (i) The Honours degree shall be awarded only if the CGPA at end of the B.E. / B.Tech. programme is equal to or greater than 8.50.

(ii) Additional credits earned through NPTEL shall not be considered for CGPA of B.E. / B.Tech. programme as well as rank declaration.

(g) All the students fulfilling 18UG HONS 6 (b) and (c) and 18UG HONS 7 (e) (i) and (f) shall be entitled to receive their transcripts indicating both the achievements of the student concerned.

(h) The award of the Honours degree shall be recommended by the Academic Senate and approved by the Executive Council of the University.

18UG HONRS 8. Repeal and Savings

(a) Notwithstanding anything contained in these Regulations, the provisions of any guidelines, orders, rules or regulations in force at the University shall be inapplicable to the extent of their inconsistency with these Regulations.

(b) The University shall issue such orders / instructions, and prescribe such format / procedure, as it may deem fit to implement the provisions of these Regulations.

18UG HONRS 9. Interpretation

(a) Any question as to the interpretation of these Regulations shall be decided by the Vice Chacellor, whose decision shall be final and binding.

(b) The University shall have the powers to issue clarifications to remove any doubt, difficulty or anomaly which may arise during the implementation of the provisions of these Regulations.

University approved list of NPTEL Massive Open Online Courses (MOOCs) suggested by BOS (EEE) for earning of additional 18 or more credits to become eligible for the award of
B.E. Electrical and Electronics Engineering degree with Honours.

Note:
(1) The following is an excerpt (selection) of tentative course list proposed by NPTEL for the upcoming semester/session. There may be addition and deletion of courses. For confirmation regarding courses offered, registration, dates for course start, end date and proctored examination, please visit the NPTEL/SWAYAM website.
(2) For Rerun courses NPTEL has given course link in NPTEL website for reference to view syllabus and videos. For New courses NPTEL will update the syllabus link in due course.
(3) Expansion of some of the abbreviated terms;
NOC**:** NPTEL Open Online Course. SME: Subject Matter expert.

IIT: Indian Institute of Science	IITB: IIT Bombay	IITBBS: IIT Bhuvaneswar	IITBH: IIT Bhilai	IIT(BHU): IIT (BHU) Varanasi	IITD: IIT Delhi
IITDH: IIT Dharawada	IITGN: IIT Gandhinagar	IITGOA: IIT Goa	IITG: IIT Guwahati	IITH: IIT Hyderabad	IITI: IIT Indore
IIT(ISM): IIT (ISM) Dhanbad	IITJ: IIT Jodphur	IITJMU: IIT Jammu	IITK: IIT Kanpur	IITKGP: IIT Kharagpur	IITM: IIT Madras
IITP: IIT Patna	IITPKD: IIT Palakkad	IITR: IIT Roorkee	IITRPR: IIT Ropar	IITTP: IIT Tirupati	

	IISER – BPR: IISER Berhampur	IISER – B: IISER Bhopal	IISER – K: IISER Kolkata	IISER – M: IISER Mohali
IISER:Indian Institutes of Science Education and Research	IISER – P: IISER Pune	IISER – TVM: IISER Thiruvananthapuram		IISER – T: IISER Tirupati

Sl No	Sl No	Course Name	Duration in weeks	Course			UG/PG	Swayam URL
	Course Id	SME Name		Start Date	End Date	Exam Date		NOC URL
	Discipline	Institute						NPTEL URL
1	73, noc20-ch37 Chemical Engineering	Technologies For Clean And Renewable Energy Production. Prof. P. Mondal, IITR.	08	July 20, 2020	September 11, 2020	September 27, 2020	UG	https://swayam.gov.in/nd1_noc20_ch37/preview https://nptel.ac.in/noc/courses/noc19/SEM2/noc19-ch26 https://nptel.ac.in/courses/103/107/103107157/
								Type: Rerun

2	136 noc20-cs65 Computer Science and Engineering	Cloud computing. Prof. Soumya Kanti Ghosh IIT KGP.	08	July 20, 2020	September 11, 2020	September 27, 2020	UG	https://swayam.gov.in/nd1_noc20_cs65/preview https://nptel.ac.in/noc/courses/noc20/SEM1/noc20-cs20 https://nptel.ac.in/courses/106/105/106105167/
								Type: Rerun
3	137 noc20-cs66 Computer Science and Engineering	Introduction to internet of things. Prof. Sudip Misra, IIT KGP.	12	July 20, 2020	October 9, 2020	October 18, 2020	UG	https://swayam.gov.in/nd1_noc20_cs66/preview https://nptel.ac.in/noc/courses/noc20/SEM1/noc20-cs22 https://nptel.ac.in/courses/106/105/106105166/
				This course appears as rerun in the tentative Course list of courses offered during Jan - April 2021.				Type: Rerun
4	139 noc20-cs68 Computer Science and Engineering	Software Engineering. Prof. Rajib Mall, IIT KGP	12	July 20, 2020	October 9, 2020	October 18, 2020	PG	https://swayam.gov.in/nd1_noc20_cs68/preview https://nptel.ac.in/noc/courses/noc19/SEM2/noc19-cs69 https://nptel.ac.in/courses/106/105/106105182/
								Type: Rerun
5	144 noc20-cs73 Computer Science and Engineering	Introduction to Machine Learning Prof. Balaraman Ravindran IITM	12	July 20, 2020	October 9, 2020	October 18, 2020	UG/ PG	https://swayam.gov.in/nd1_noc20_cs73/preview https://nptel.ac.in/noc/courses/noc20/SEM1/noc20-cs29 https://nptel.ac.in/courses/106/106/106106139/
								Type: Rerun
6	151 noc20-cs80 Computer Science and Engineering	Python for Data Science Prof. Ragunathan Rengasamy IITM	04	July 20, 2020	August 14, 2020	September 27, 2020	UG	https://swayam.gov.in/nd1_noc20_cs80/preview https://nptel.ac.in/noc/courses/noc20/SEM1/noc20-cs36 https://nptel.ac.in/courses/106/106/106106212/
								Type: Rerun

7	168 noc20-de08 Design Engineering	Innovation by Design Prof. B. K. Chakravarthy IITB	04	August 17, 2020	September 11, 2020	October 18, 2020	UG	https://swayam.gov.in/nd1_noc20_de08/preview https://nptel.ac.in/noc/courses/noc20/SEM1/noc20-de02 https://nptel.ac.in/courses/107/101/107101086/
								Type: Rerun
8	171 noc20-de11 Design Engineering	Introduction to robotics Prof. Asokan T Prof. Balaraman Ravindran Prof. Krishna Vasudevan IITM.	12	July 20, 2020	October 9, 2020	October 18, 2020	UG/ PG	https://swayam.gov.in/nd1_noc20_de11/preview
								Type: New
9	173 noc20-ee55 Electrical and Electronics Engineering	Op-Amp Practical Applications: Design, Simulation and Implementation Prof. Hardik Pandya IISc	12	July 20, 2020	October 9, 2020	October 18, 2020	UG/ PG	https://swayam.gov.in/nd1_noc20_ee55/preview https://nptel.ac.in/noc/courses/noc19/SEM2/noc19-ee39 https://nptel.ac.in/courses/108/108/108108114/
								Type: Rerun
10	175 noc20-ee57 Electrical and Electronics Engineering	Design of photovoltaic systems Prof. L Umanand IISc	12	July 20, 2020	October 9, 2020	October 18, 2020	UG	https://swayam.gov.in/nd1_noc20_ee57/preview https://nptel.ac.in/noc/courses/noc18/SEM2/noc18-ee35 https://nptel.ac.in/courses/117/108/117108141/
								Type: Rerun
11	179 noc20-ee61 Electrical and Electronics Engineering	Introduction to Wireless and Cellular Communications Prof. David Koilpillai IITM	12	July 20, 2020	October 9, 2020	October 18, 2020	PG	https://swayam.gov.in/nd1_noc20_ee61/preview https://nptel.ac.in/noc/courses/noc19/SEM2/noc19-ee48 https://nptel.ac.in/courses/106/106/106106167/
								Type: Rerun
12								

University approved list of NPTEL Massive Open Online Courses (MOOCs) suggested by BOS (EEE) for earning of additional 18 or more credits to become eligible for the award of
B.E. Electrical and Electronics Engineering degree with Honours.

List of courses selected from the
NPTEL proposed tentative course list scheduled for Jan - April 2021.

Sl No	Discipline	Course Name	SME Name	Institute	Duration	Type of course
27	Chemical Engineering	Waste to Energy Conversion	Prof. P. Mondal	IITR	8 weeks	Rerun
63	Computer Science and Engineering	Deep Learning	Prof. Prabir Kumar Biswas	IIT KGP	12 weeks	Rerun
76		Computer Networks and Internet Protocol	Prof. Soumya Kanti Ghosh Prof. Sandip Chakraborty	IIT KGP	12 weeks	Rerun
82		Introduction to Machine Learning	Prof. Balaraman Ravindran	IITM	12 weeks	Rerun
83		Artificial Intelligence: Knowledge Representation and Reasoning	Prof. Deepak Khemani	12 Weeks	IITM	Rerun
101	Electrical and Electronics Engineering	Principles of Communication Systems - I	Prof. Aditya K. Jagannatham	IITK	12 weeks	Rerun
114		Modern digital communication techniques	Prof. Suvra Sekhar Das	IIT KGP	12 weeks	Rerun
122		Computational Electromagnetics	Prof. Uday Khankhoje	IITM	12 weeks	Rerun
129	Humanities and Social Science	Enhancing Soft Skills and Personality	Prof. T. Ravichandran	IITK	8 weeks	Rerun
131		Emotional Intelligence	Prof. Rabindra Kumar Pradhan	IIT KGP	8 weeks	Rerun
132		Speaking Effectively	Prof. Anjali Gera Roy	IIT KGP	8 weeks	Rerun
157		German - I	Prof. Milind Brahme	IITM	12 weeks	Rerun
158		German - II	Prof. Milind Brahme	IITM	12 weeks	Rerun
172	Management	Financial Institutions and Markets	Prof. Jitendra Mahakud	IIT KGP	12 weeks	Rerun
176		Consumer Behaviour	Prof. Srabanti Mukherjee	IIT KGP	8 weeks	Rerun
214	Mechanical Engineering	Optimization from fundamentals	Prof. Ankur A. Kulkarni	IITB	12 Weeks	New

238	Metallurgical Engineering and Materials Sciences	Materials Science and Engineering	Prof. Vivek Pancholi	IITR	8 weeks	Rerun

University approved list of NPTEL Massive Open Online Courses (MOOCs) suggested by BOS (EEE) for earning of additional 18 or more credits to become eligible for the award of
B.E. Electrical and Electronics Engineering degree with Honours.
List of courses selected from the
NPTEL proposed tentative course list scheduled for July - Dec 2021.

Sl No	Discipline	Course Name	SME Name	Institute	Duration	Type of course
77	Computer Science and Engineering	Introduction to Industry 4.0 and Industrial Internet of Things	Prof. Sudip Misra	IIT KGP	12 weeks	Rerun
81		Introduction to Machine Learning	Prof. Balaraman Ravindran	IITM	12 weeks	Rerun
84		Software Testing	Prof. Meenakshi D'souza	IIITB	12 weeks	Rerun
88		Python for Data Science	Prof. Ragunathan Rengasamy	IITM	4 weeks	Rerun
89		Artificial Intelligence Search Methods For Problem Solving	Prof. Deepak Khemani	IITM	12 weeks	repurposed
99	Electrical and Electronics Engineering	Design of photovoltaic systems	Prof. L Umanand	IISc	12 Weeks	Rerun
138	Humanities and Social Science	Energy Economics and Policy	Prof. Shyamasree Dasgupta	IIT Mandi	8 weeks	Rerun
150	Management	Industrial Safety Engineering	Prof. Jhareswar Maiti	IIT KGP	12 weeks	Rerun
151		Ethics in Engineering Practice	Prof. Susmita Mukhopadhyay	IIT KGP	8 weeks	Rerun
188	Metallurgical and Materials Engineering	Physics of Materials	Prof. Prathap Haridoss	IITM	12 weeks	Rerun