

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY ANANTAPUR

List of SWAYAM Courses as Electives for the Academic Year 2022-23

R20 Regulations - B.Tech. III Year II Semester

Professional Elective-II

S.No.	Discipline	Title of Course	Duration	Link to access course
1.	Civil Engineering	Experimental STRESS Analysis	12 weeks	https://onlinecourses.nptel.ac.in/noc23_me11/preview
		Foundation Engineering	12 weeks	https://onlinecourses.nptel.ac.in/noc23_ce32/preview
		Environmental Impact Assessment	12 weeks	https://onlinecourses.nptel.ac.in/noc23_ar04/preview
2.	EEE	High Power Multilevel Converters - Analysis design and operational issues	12 weeks	https://onlinecourses.nptel.ac.in/noc23_ee20/preview
		Industrial Automation and Control	12 weeks	https://onlinecourses.nptel.ac.in/noc23_ee56/preview
		Power Quality	12 weeks	https://onlinecourses.nptel.ac.in/noc23_ee63/preview
3.	Mechanical Engineering	Advanced Robotics	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_me51/preview
		Fundamentals of Combustion	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_me27/preview
		Mechanical Behaviour of Materials (Part – I)	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_mm19/preview
4.	ECE	Embedded System Design	12 weeks	https://onlinecourses.nptel.ac.in/noc23_cs54/preview
		Biomedical Signal Processing	12 weeks	https://onlinecourses.nptel.ac.in/noc23_ee49/preview
		Optical Engineering	12 weeks	https://onlinecourses.nptel.ac.in/noc23_ee76/preview
5.	CSE	Advanced Computer Architecture	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_cs07/preview
		Object Oriented System Development Using UML, Java and Patterns	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_cs46/preview
6.	IT	Introduction to Machine Learning	12 weeks	https://onlinecourses.nptel.ac.in/noc23_cs18/preview
		Computer Vision and Image Processing – Fundamentals and Applications	12 weeks	https://onlinecourses.nptel.ac.in/noc23_ee39/preview
		Compiler Design	12 weeks	https://onlinecourses.nptel.ac.in/noc23_cs57/preview
7.	AI & DS	Data Analytics with Python	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_cs08/preview
		Introduction to Internet of Things	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_cs51/preview
		Computer Vision and Image Processing – Fundamentals and Applications	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ee39/preview

8.	CSE (AI & ML)	Robotics: Basics and Selected Advanced Concepts	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_me67/preview
		Artificial Intelligence for Investments	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_mg63/preview
		Computer Vision and Image Processing – Fundamentals and Applications	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ee39/preview
9.	CSE (AI)	Robotics: Basics and Selected Advanced Concepts	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_me67/preview
		Introduction to Internet of Things	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_cs51/preview
		Computer Vision and Image Processing – Fundamentals and Applications	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ee39/preview
10.	CSE (DS)	Predictive Analytics- Regression and Classification	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ma46/preview
		Introduction to Internet of Things	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_cs51/preview
		Computer Vision and Image Processing – Fundamentals and Applications	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ee39/preview
11.	CSE (IOT)	Introduction to Machine Learning. <i>Note: Advised to check the syllabus before taking the course. The course is highly mathematical in nature.</i>	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_cs18/preview
		Ethical Hacking	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_cs44/preview
		An Introduction to Artificial Intelligence	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_cs05/preview
12.	Food Technology	Membrane Technology	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ch08/preview
		Novel Technologies for Food Processing and Shelf-Life Extension	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ag02/preview
		Cooling Technology: Why and How utilized in Food Processing and allied Industries	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ag05/preview

Note:

1. Student registration for the above courses shall be only through the institution, it is mandatory for the student to share necessary information with the institution.
2. The institution shall select the courses to be permitted for credit transfer as per the list given in the table. However, while selecting courses the institution would essentially avoid the courses offered or already studied as part of the curriculum as it may otherwise lead to duplication and repetition of the same course.
3. A student is permitted to opt for any Professional Elective Course offered by his/her own department.
4. The institution shall designate a faculty member as a Mentor for each course to guide the students from registration till completion of the credit course. Student pursuing MOOC course through SWAYAM shall acquire the required credits only after successful completion of the course and submitting a certificate issued by the competent authority.

Open Elective-II

S.No.	Offered by the Department	Title of Course	Duration	Link to access course
1	Civil Engineering	Introduction to Environmental Economics	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_hs40/preview
2	EEE/Mathematics	Fuzzy Sets Logic and Systems & Applications	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ee21/preview
3	EEE/ECE	Sensors and Actuators	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ee66/preview
4	Mechanical Engineering	Entrepreneurship Essentials	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ge16/preview
5	ECE	Principles of Signals and Systems	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ee04/preview
6	CSE /IT/CSE (AI), CSE (AI&ML), CSE (DS) AI &DS, CSE (IOT)	Data Analytics with Python	12 Week	https://onlinecourses.nptel.ac.in/noc23_cs08/preview
		Introduction to Internet of Things	12 weeks	https://onlinecourses.nptel.ac.in/noc23_cs51/preview
		An Introduction to Artificial Intelligence	12 weeks	https://onlinecourses.nptel.ac.in/noc23_cs05/preview
7	Food Technology	Functional Foods and Nutraceuticals	15 weeks	https://onlinecourses.swayam2.ac.in/cec23_ag02/preview
		Food Microbiology and Food Safety	15 weeks	https://onlinecourses.swayam2.ac.in/cec23_ag03/preview
8	Mathematics	Computational Mathematics with SageMath	12 weeks	https://onlinecourses.nptel.ac.in/noc23_ma16/preview
		A Primer to Mathematical Optimization	12 weeks	https://onlinecourses.nptel.ac.in/noc23_ma45/preview
9	Chemistry	Medicinal Chemistry	12 weeks	https://onlinecourses.nptel.ac.in/noc23_cy10/preview
		Nuclear and Radiochemistry	12 weeks	https://onlinecourses.nptel.ac.in/noc23_cy21/preview
10	Physics	Electronic Theory of Solids	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ph18/preview
		Atomic And Molecular Physics	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ph16/preview

Note:

1. Student registration for the above courses shall be only through the institution, it is mandatory for the student to share necessary information with the institution.
2. The institution shall select the courses to be permitted for credit transfer as per the list given in the table. However, while selecting courses the institution would essentially avoid the courses offered or already studied as part of the curriculum as it may otherwise lead to duplication and repetition of the same course
3. A student is permitted to opt for any Open Elective Course other than open elective offered by his/her own department.
4. The institution shall designate a faculty member as a Mentor for each course to guide the students from registration till completion of the credit course. Student pursuing MOOC course through SWAYAM shall acquire the required credits only after successful completion of the course and submitting a certificate issued by the competent authority.

Sd/-
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