

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY ANANTAPUR

List of SWAYAM Courses as Electives for the Academic Year 2023-24

R20 REGULATIONS–ODD SEMESTER

PROFESSIONAL ELECTIVES

S.No.	Discipline	Elective	Title of Course	Duration	Link to access course
1	Civil Engineering	Professional Elective - I	Admixtures And Special Concretes	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ce61/preview
			Availability And Management of Groundwater Resources	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ce82/preview
			Integrated Waste Management for a Smart City	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ce89/preview
		Professional Elective - III	Ground Improvement	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ce78/preview
			Sustainable Transportation Systems	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ce91/preview
			Finite Element Method and Computational Structural Dynamics	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ce100/preview
		Professional Elective - IV	Wastewater Treatment and Recycling	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ce85/preview
			Advanced Geomatics Engineering	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ce96/preview
			Advanced Reinforced Concrete Design	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ce109/preview
		Professional Elective - V	Bridge Engineering	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ce81/preview
			Earthquake Seismology	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ce104/preview
		2	EEE	Professional Elective - I	Power System Protection
Linear Systems Theory	12 Weeks				https://onlinecourses.nptel.ac.in/noc23_ee144/preview
Probability Foundations for Electrical Engineers	12 Weeks				https://onlinecourses.nptel.ac.in/noc23_ee85/preview
Professional Elective - III	Economic Operations and Control of Power Systems			12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ee128/preview
	Electrical Measurement and Electronic Instruments			12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ee112/preview
	Analog Communication			12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ee117/preview
Professional Elective - IV	Smart Grid: Basics to Advanced Technologies			12 weeks	https://onlinecourses.nptel.ac.in/noc23_ee124/preview
	Analog VLSI Design			12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ee142/preview

			Machine Learning and Deep Learning - Fundamentals and Applications	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ee87/preview
		Professional Elective - V	Design of Photovoltaic systems	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ee107/preview
			VLSI Design Flow: RTL to GDS	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ee137/preview
			Non-Linear Adaptive Control	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_me137/preview
3	Mechanical Engineering	Professional Elective - I	Sustainable Power Generation Systems	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ge47/preview
			Mathematical Modeling of Manufacturing Processes	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_me109/preview
			Automation in Manufacturing	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_me105/preview
		Professional Elective - III	Computational Fluid Dynamics	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_me119/preview
			Elements of Mechanical Vibrations	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ae08/preview
			Advanced Materials and Processes	12Weeks	https://onlinecourses.nptel.ac.in/noc23_mm29/preview
		Professional Elective - IV	Advanced Thermodynamics and Combustion	12Weeks	https://onlinecourses.nptel.ac.in/noc23_me101/preview
			Fundamentals of Additive Manufacturing Technologies	12Weeks	https://onlinecourses.nptel.ac.in/noc23_me112/preview
			Techniques of Materials Characterization	12Weeks	https://onlinecourses.nptel.ac.in/noc23_mm26/preview
		Professional Elective - V	Joining Technologies for Metals	12Weeks	https://onlinecourses.nptel.ac.in/noc23_me130/preview
			Design of Mechatronic Systems	12Weeks	https://onlinecourses.nptel.ac.in/noc23_me136/preview
			Mechanical Behaviour of Materials	12Weeks	https://onlinecourses.nptel.ac.in/noc23_mm38/preview
4	ECE	Professional Elective - I	Machine Learning and Deep Learning - Fundamentals and Applications	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ee87/preview
			Introduction To Machine Learning	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_cs98/preview
			Computer Architecture	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_cs67/preview
		Professional Elective - III	Introduction To Internet Of Things	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_cs83/preview
			Linear Systems Theory	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ee144/preview
			Enclosure Design of Electronics Equipment	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ee108/preview
		Professional Elective - IV	Digital Image Processing	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ee118/preview
			Principles and Techniques of Modern Radar Systems	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ee133/preview
			Cloud Computing	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_cs89/preview
		Professional Elective - V	Introduction To Wireless and Cellular	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_cs83/preview

			Communications		
			Fundamentals of Nano and Quantum Photonics	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ee86/preview
			Transducers for Instrumentation	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ee105/preview
5	CSE	Professional Elective - I	Digital Image Processing	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ee118/preview
			Data Analysis & Decision Making – III	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_mg78/preview
		Professional Elective - III	Cloud Computing	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_cs89/preview
		Professional Elective - IV	Natural Language Processing	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_cs80/preview
		Professional Elective - V	Deep Learning	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ee131/preview
6	IT	Professional Elective - I	Software Testing	12 weeks	https://onlinecourses.nptel.ac.in/noc23_cs91/preview
			Applied Optimization for Wireless, Machine Learning, Big Data	12 weeks	https://onlinecourses.nptel.ac.in/noc23_ee99/preview
			Introduction to Industry 4.0 and Industrial Internet of Things	12 weeks	https://onlinecourses.nptel.ac.in/noc23_cs82/preview
		Professional Elective - III	Secure Computation: Part II	12 weeks	https://onlinecourses.nptel.ac.in/noc23_cs119/preview
			Privacy and Security in Online social media	12 weeks	https://onlinecourses.nptel.ac.in/noc23_ee99/preview
			Reinforcement Learning	12 weeks	https://onlinecourses.nptel.ac.in/noc23_cs100/preview
		Professional Elective - IV	Cyber Security and Privacy	12 weeks	https://onlinecourses.nptel.ac.in/noc23_cs127/preview
			Design & Implementation of Human Computer Interfaces	12 weeks	https://onlinecourses.nptel.ac.in/noc23_cs116/preview
			Natural Language Processing	12 weeks	https://onlinecourses.nptel.ac.in/noc23_cs80/preview
		Professional Elective - V	Introduction to Game Theory and Mechanism Design	12 weeks	https://onlinecourses.nptel.ac.in/noc23_cs117/preview
	Deep Learning for Computer Vision	12 weeks	https://onlinecourses.nptel.ac.in/noc23_cs126/preview		
	Computer Vision	12 weeks	https://onlinecourses.nptel.ac.in/noc23_cs77/preview		
7	AI & DS	Professional Elective - I	Software Engineering	12 weeks	https://onlinecourses.nptel.ac.in/noc23_cs122/preview
		Professional Elective - IV	Medical Image Analysis	12 weeks	https://onlinecourses.nptel.ac.in/noc23_bt40/preview
			Deep Learning	12 weeks	https://onlinecourses.nptel.ac.in/noc23_ee131/preview
		Professional Elective - V	Reinforcement Learning	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_cs100/preview
8	CSE (AI & ML)	Professional Elective - I	Data Analysis & Decision Making – III	12 weeks	https://onlinecourses.nptel.ac.in/noc23_mg78/preview
		Professional Elective - III	Medical Image Analysis	12 weeks	https://onlinecourses.nptel.ac.in/noc23_bt40/preview
		Professional Elective - V	Reinforcement Learning	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_cs100/preview

9	AI & ML	Professional Elective - I	Introduction to Robotics	12 weeks	https://onlinecourses.nptel.ac.in/noc23_de12/preview
			Data Analysis & Decision Making – III	12 weeks	https://onlinecourses.nptel.ac.in/noc23_mg78/preview
		Professional Elective - III	Medical Image Analysis	12 weeks	https://onlinecourses.nptel.ac.in/noc23_bt40/preview
		Professional Elective -V	Reinforcement Learning	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_cs100/preview
Cloud Computing	12 Weeks		https://onlinecourses.nptel.ac.in/noc23_cs89/preview		
10	CSE (AI)	Professional Elective - I	Data Analysis & Decision Making – III	12 weeks	https://onlinecourses.nptel.ac.in/noc23_mg78/preview
		Professional Elective - IV	Medical Image Analysis	12 weeks	https://onlinecourses.nptel.ac.in/noc23_bt40/preview
		Professional Elective -V	Reinforcement Learning	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_cs100/preview
11	CSE (DS)	Professional Elective - I	Programming in JAVA	12 weeks	https://onlinecourses.nptel.ac.in/noc23_cs74/preview
			Data Analysis & Decision Making – III	12 weeks	https://onlinecourses.nptel.ac.in/noc23_mg78/preview
		Professional Elective - III	Cyber Security and Privacy	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_cs127/preview
			Design & Implementation of Human-Computer Interfaces	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_cs116/preview
		Professional Elective - IV	Natural Language Processing	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_cs80/preview
			Social Network Analysis	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_cs106/preview
		Professional Elective - V	Deep Learning	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ee131/preview
12	CSE (IOT)	Professional Elective - I	Introduction to Industry 4.0 and Industrial Internet of Things	12 weeks	https://onlinecourses.nptel.ac.in/noc23_cs82/preview
		Professional Elective - IV	Cyber Security and Privacy	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_cs127/preview
13	Food Technology	Professional Elective - I	Dairy Food Process and Products Technology	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ag18/preview
		Professional Elective - III	Thermal Operations in Food Process Engineering: Theory and Applications	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ag14/preview
		Professional Elective - IV	Dairy And Food Process and Products Technology	12 Weeks	https://onlinecourses.nptel.ac.in/noc22_ag06/preview
		Professional Elective - V	Fundamentals of Food Process Engineering	12 Weeks	https://onlinecourses.nptel.ac.in/noc22_ag08/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. While opting the courses listed above, 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 the parent 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 ELECTIVES

S.No.	Offered by the department	Offered to the students of the departments	Open Elective	Title of Course	Duration	Link to access course
1	Civil Engineering	All Engg. disciplines other than Civil Engineering	Open Elective - I	Municipal Solid Waste Management	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ce66/preview
			Open Elective - III	Environmental Modelling and Simulation	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ce98/preview
				Water Economics and Governance	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ce86/preview
			Open Elective - IV	Basic Environmental Engineering and Pollution Abatement	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ch72/preview
2	EEE/ECE	All Engg. disciplines other than EEE/ECE	Open Elective - I	Control Engineering	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ee143/preview
				Electromagnetic Theory	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ee97/preview
	EEE	All Engg. disciplines other than EEE	Open Elective - III	Sustainable Power Generation Systems	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ge47/preview
				Transducers for Instrumentation	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ee105/preview
EEE/ECE	All Engg. disciplines other than EEE/ECE					

	EEE	All Engg. disciplines other than EEE	Open Elective - IV	Stochastic Control and Communication	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ee103/preview
				Solar Energy Engineering and Technology	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ge41/preview
3	Mechanical Engineering	All Engg. disciplines other than Mechanical Engineering	Open Elective - I	Energy Conservation and Waste Heat Recovery	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_me122/preview
				Basics of Materials Engineering	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_me78/preview
			Open Elective- III	Engineering Metrology	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_me83/preview
				Social Innovation in Industry4.0	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_me71/preview
			Open Elective - IV	Fundamentals of Additive Manufacturing Technologies	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_me112/preview
				Techniques of Materials Characterization	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_mm26/preview
4	ECE	All Engg. disciplines other than EEE/ECE	Open Elective - I	Digital Circuits	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ee115/preview
5	ECE/CSE	All Engg. disciplines other than ECE/CSE & Allied/IT	Open Elective - III	Computer Architecture	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_cs67/preview
6	CSE & Allied, IT	All Engg. disciplines other than CSE & Allied/IT	Open Elective - I	Programming In Java	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_cs74/preview
				Fundamentals of Artificial Intelligence	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ge40/preview
			Open Elective - III	Getting Started with Competitive Programming	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_cs103/preview
				Software Engineering	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_cs122/preview
				Ethical Hacking	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_cs75/preview
			Open Elective - IV	Cyber Security and Privacy	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_cs127/preview
				Introduction to Industry 4.0 and Industrial Internet of Things	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_cs82/preview
				Introduction To Algorithms		https://onlinecourses.nptel.ac.in/noc23_cs88/preview

				and Analysis		
7	Food Technology	All Engg. disciplines other than Food Technology	Open Elective - III	Food Oils and Fats: Chemistry and Technology	12 weeks	https://onlinecourses.nptel.ac.in/noc23_ag19/preview
			Open Elective - IV	Post Harvest Operations and Processing of Fruits, Vegetables, Spices and Plantation Crop Products	12 weeks	https://onlinecourses.nptel.ac.in/noc23_ag16/preview
8	Mathematics	All Engg. disciplines	Open Elective - I	Matrix Computation and Its Applications	12 weeks	https://onlinecourses.nptel.ac.in/noc23_ma78/preview
				Foundations of R Software	12 weeks	https://onlinecourses.nptel.ac.in/noc23_ma96/preview
			Open Elective - III	Essential Mathematics for Machine Learning	12 weeks	https://onlinecourses.nptel.ac.in/noc23_ma93/preview
				Approximate Reasoning Using Fuzzy Set Theory	12 weeks	https://onlinecourses.nptel.ac.in/noc23_ma60/preview
			Open Elective - IV	Applied Linear Algebra for Signal Processing, Data Analytics and Machine Learning	12 weeks	https://onlinecourses.nptel.ac.in/noc23_ee100/preview
9	Physics	All Engg. disciplines	Open Elective - I	Introduction to Laser	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ph33/preview
				Physics of Materials	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_mm36/preview
			Open Elective - III	Nuclear and Particle Physics	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ph28/preview
				X-Ray Crystallography & Diffraction	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_mm39/preview
			Open Elective - IV	Physics Of Functional Materials & Devices	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ph34/preview
Techniques of Materials Characterization	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_mm26/preview				
10	Multidisciplinary/Interdisciplinary	All Engg. disciplines	Open Elective - I	Learning Analytics Tools	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ge42/preview
			Open Elective - III	Statistical Learning for Reliability Analysis	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_cs84/preview
			Open Elective - IV	Functional And Conceptual Design	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_de11/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. While opting the courses listed above, 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.

HONOURS

S.No	Discipline	Title of the Course	Duration	Link to access course
1	Civil Engineering	River Engineering	8 Weeks	https://onlinecourses.nptel.ac.in/noc23_ce68/preview
		Sustainable Engineering Concepts and Life Cycle Analysis	8 Weeks	https://onlinecourses.nptel.ac.in/noc23_ce90/preview
2	EEE	Design of Electric Motors	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ee140/preview
		Digital Control in Switched Mode Power Converters and FPGA-based Prototyping	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ee134/preview
3	Mechanical Engineering	Thermo dynamics and Kinetics of Materials	12Weeks	https://onlinecourses.nptel.ac.in/noc23_mm48/preview
		Metal Additive Manufacturing	12Weeks	https://onlinecourses.nptel.ac.in/noc23_me92/preview
4	ECE	Sensor Technologies: Physics, Fabrication, and Circuits	8 Weeks	https://onlinecourses.nptel.ac.in/noc23_ee95/preview
		Design Of Photovoltaic Systems	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ee107/preview
		Nanophotonics, Plasmonics, And Metamaterials	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_ee141/preview
5	CSE	Introduction to Haskell Programming	8 Weeks	https://onlinecourses.nptel.ac.in/noc23_cs94/preview
6	IT	Computational Complexity	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_cs111/preview
		Multi-Core Computer Architecture	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_cs113/preview
7	CSE(IoT)	Distributed Systems	8 Weeks	https://onlinecourses.nptel.ac.in/noc23_cs72/preview
		Google Cloud Computing Foundations	8 Weeks	https://onlinecourses.nptel.ac.in/noc23_cs90/preview
8	CSE (AI), CSE (AI & ML), CSE (DS), AI & DS	Introduction to Haskell Programming	8 Weeks	https://onlinecourses.nptel.ac.in/noc23_cs94/preview
		Google Cloud Computing Foundations	8 Weeks	https://onlinecourses.nptel.ac.in/noc23_cs90/preview

Note:

- i) A Student is eligible to opt for Honours program offered by the parent department.
- ii) The enrolment of student into Honours is based on the percentage of marks obtained in the major degree program. Percentage of marks shall be taken up to III semester in case of regular entry students and only III semester in case of lateral entry students. Students having 70% without any backlog subjects will be permitted to register for Honours. The institution shall seek registrations in IV Semester, after the results of III Semester are announced.
- iii) The students enrolled in the Honours courses will be monitored continuously. An advisor/mentor from parent department shall be assigned to a group of students to monitor the progress.
- iv) 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.
- v) While opting for the courses listed above, 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.

MINORS

S.No	Offered by the department	Title of the Minor	Title of the Course	Duration	Link to access course
1	Civil Engineering	Construction Technology	Remote Sensing and GIS	8 Weeks	https://onlinecourses.nptel.ac.in/noc23_ce64/preview
			Project Planning & Control	8 Weeks	https://onlinecourses.nptel.ac.in/noc23_ce59/preview
2	EEE	Energy Systems	Energy Conversion Technologies	8 Weeks	https://onlinecourses.nptel.ac.in/noc23_ch76/preview
			Sustainable Energy Technology	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_me138/preview
3	Mechanical Engineering	3D Printing	Metal Additive Manufacturing	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_me92/preview
			Introduction to Composites	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_me89/preview
		Industrial Engineering	Work System Design	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_me124/preview
			Strategic Management for Competitive Advantage	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_mg93/preview
4	ECE/CSE	Internet of Things	Big data Computing	8 Weeks	https://onlinecourses.nptel.ac.in/noc23_cs112/preview
			Introduction to Machine Learning	8 Weeks	https://onlinecourses.nptel.ac.in/noc23_cs87/preview
5	CSE	Artificial Intelligence and Data Science	Business Analytics & Text Mining Modelling Using Python	8 Weeks	https://onlinecourses.nptel.ac.in/noc23_mg104/preview
			Data Science for Engineers	8 Weeks	https://onlinecourses.nptel.ac.in/noc23_cs97/preview
		Virtual & Augmented Reality	Computer Graphics	8 Weeks	https://onlinecourses.nptel.ac.in/noc23_cs115/preview
			STRATEGY: An introduction to Game Theory	8 Weeks	https://onlinecourses.nptel.ac.in/noc23_mg79/preview
		Cyber Security and	Privacy And Security in Online social	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_cs69/preview

		Blockchain Technologies	media		
			Ethical Hacking	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_cs75/preview
			Cyber Security and Privacy	12 Weeks	https://onlinecourses.nptel.ac.in/noc23_cs127/preview

Note:

- i) A Student is eligible to opt for a Minor offered by a department other than the parent department or as defined by the respective department which is offering Minor program.
- ii) The enrolment of student into a Minor is based on the percentage of marks obtained in the major degree program. Percentage of marks shall be taken up to III semester in case of regular entry students and only III semester in case of lateral entry students. Students having 60% without any backlog subjects will be permitted to register for a Minor. The institution shall seek registrations in IV Semester, after the results of III Semester are announced.
- iii) The students enrolled in for the Minor courses will be monitored continuously. An advisor/mentor from parent department shall be assigned to a group of students to monitor the progress.
- iv) 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.
- v) While opting for the courses listed above, 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.