CHAITANYA BHARATHI
INSTITUTE OF TECHNOLOGY (A)
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COMMITTED TO RESEARCH, INNOVATION AND EDUCATION
44 years

Department of Information Technology

COURSES IDENTIFIED FOR ADDITIONAL MINOR ENGINEERING 2023-2024 (July - December)

Date: 14/06/2023

Additional Minor Engineering Degree In

I. Artificial Intelligence
II. Data Science
III. Augmented Reality- Virtual Reality
IV. Information Security

The Tentative list of courses for **Additional Minor Engineering** approved by IT Department for AY: 2022-23 (January - April) is as follows:

List of Swayam /NPTEL courses for the award of Additional Minor Engineering-Artificial Intelligence

I & III Semester							
Course Code	**Course Name**	**Duration**	**Start date**	**End date**	**Exam date**	**Enrollment End date**	**Click here to join the course**
noc23-cs121	Problem Solving Through Programming In C (Only for R22 regulation)	12 Weeks	July 24, 2023	October 13, 2023	October 28, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs121/preview
noc23-cs78	Programming In Modern C++	12 Weeks	July 24, 2023	October 13, 2023	October 28, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs78/preview
noc23-cs95	Programming, Data Structures And Algorithms Using Python	8 Weeks	July 24, 2023	September 15, 2023	September 24, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs95/preview
noc23-	The Joy Of Computing Using	12 Weeks	July 24,	October 13,	October 28,	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs108/preview

cs108	Python		2023	2023	2023		
noc23-cs109	Discrete Mathematics	12 Weeks	July 24, 2023	October 13, 2023	October 28, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs109/preview
noc23-cs101	Introduction To Operating Systems	8 Weeks	July 24, 2023	September 15, 2023	September 24, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs101/preview
noc23-cs96	Design And Analysis Of Algorithms	8 Weeks	July 24, 2023	September 15, 2023	September 24, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs96/preview
noc23-cs74	Programming In Java	12 Weeks	July 24, 2023	October 13, 2023	October 29, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs74/preview
			V Semester				
noc23-cs79	Data Base Management System	8 Weeks	July 24, 2023	September 15, 2023	September 24, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs79/preview
noc23-cs70	Theory Of Computation	8 Weeks	July 24, 2023	September 15, 2023	September 24, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs70/preview
noc23-cs92	Artificial Intelligence : Search Methods For Problem Solving	12 Weeks	July 24, 2023	October 13, 2023	October 28, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs92/preview
noc23-cs87	Introduction To Machine Learning - IITKGP	8 Weeks	July 24, 2023	September 15, 2023	September 24, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs87/preview
noc23-cs98	Introduction To Machine Learning	12 Weeks	July 24, 2023	October 13, 2023	October 29, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs98/preview
noc23-cs100	Reinforcement Learning	12 Weeks	July 24, 2023	October 13, 2023	October 29, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs100/preview
noc23-cs126	Deep Learning for Computer Vision	12 Weeks	July 24, 2023	October 13, 2023	October 28, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs126/preview
noc23-ee131	Deep Learning	12 Weeks	July 24, 2023	October 13, 2023	October 29, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_ee131/preview
			VII Semester				
noc23-cs80	Natural Language Processing	12 Weeks	July 24, 2023	October 13, 2023	October 28, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs80/preview

noc23-cs107	Social Networks	12 Weeks	July 24, 2023	October 13, 2023	October 28, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs107/preview
noc23-cs110	Deep Learning - IIT Ropar	12 Weeks	July 24, 2023	October 13, 2023	October 28, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs110/preview
noc23-mg104	Business Analytics & Text Mining Modeling Using Python	8 Weeks	July 24, 2023	September 15, 2023	September 24, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_mg104/preview
noc23-cs89	Cloud Computing	12 Weeks	July 24, 2023	October 13, 2023	October 28, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs89/preview
noc23-cs90	Google Cloud Computing Foundations	8 Weeks	August 21, 2023	October 13, 2023	October 29, 2023	August 21, 2023	https://onlinecourses.nptel.ac.in/noc23_cs90/preview
noc23-cs97	Data Science For Engineers	8 Weeks	July 24, 2023	September 15, 2023	September 24, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs97/preview

List of Swayam/NPTEL courses for the award of Additional Minor Engineering in Data Science:

				II Semester			
Course Code	**Course Name**	**Duration**	**Start date**	**End date**	**Exam date**	**Enrollment End date**	**Click here to join the course**
noc23-cs121	Problem Solving Through Programming In C (Only for R22 regulation)	12 Weeks	July 24, 2023	October 13, 2023	October 28, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs121/preview
noc23-cs78	Programming In Modern C++	12 Weeks	July 24, 2023	October 13, 2023	October 28, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs78/preview
noc23-cs95	Programming, Data Structures And Algorithms Using Python	8 Weeks	July 24, 2023	September 15, 2023	September 24, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs95/preview
noc23-cs108	The Joy Of Computing Using Python	12 Weeks	July 24, 2023	October 13, 2023	October 28, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs108/preview
noc23-cs96	Design And Analysis Of Algorithms	8 Weeks	July 24, 2023	September 15, 2023	September 24, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs96/preview
noc23-cs109	Discrete Mathematics	12 Weeks	July 24, 2023	October 13, 2023	October 28, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs109/preview

| noc23-cs101 | Introduction To Operating Systems | 8 Weeks | July 24, 2023 | September 15, 2023 | September 24, 2023 | July 31, 2023 | https://onlinecourses.nptel.ac.in/noc23_cs101/preview |
| noc23-cs74 | Programming In Java | 12 Weeks | July 24, 2023 | October 13, 2023 | October 29, 2023 | July 31, 2023 | https://onlinecourses.nptel.ac.in/noc23_cs74/preview |

V Semester							
noc23-cs79	Data Base Management System	8 Weeks	July 24, 2023	September 15, 2023	September 24, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs79/preview
noc23-cs92	Artificial Intelligence : Search Methods For Problem Solving	12 Weeks	July 24, 2023	October 13, 2023	October 28, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs92/preview
noc23-cs97	Data Science For Engineers	8 Weeks	July 24, 2023	September 15, 2023	September 24, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs97/preview
noc23-cs87	Introduction To Machine Learning - IITKGP	8 Weeks	July 24, 2023	September 15, 2023	September 24, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs87/preview
noc23-cs98	Introduction To Machine Learning	12 Weeks	July 24, 2023	October 13, 2023	October 29, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs98/preview
noc23-cs99	Python For Data Science	4 Weeks	July 24, 2023	August 18, 2023	September 24, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs99/preview
noc23-cs100	Reinforcement Learning	12 Weeks	July 24, 2023	October 13, 2023	October 29, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs100/preview
noc23-cs89	Cloud Computing	12 Weeks	July 24, 2023	October 13, 2023	October 28, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs89/preview
noc23-cs90	Google Cloud Computing Foundations	8 Weeks	August 21, 2023	October 13, 2023	October 29, 2023	August 21, 2023	https://onlinecourses.nptel.ac.in/noc23_cs90/preview
noc23-cs80	Natural Language Processing	12 Weeks	July 24, 2023	October 13, 2023	October 28, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs80/preview
noc23-mg104	Business Analytics & Text Mining Modeling Using Python	8 Weeks	July 24, 2023	September 15, 2023	September 24, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_mg104/preview
VII Semester							
noc23-cs107	Social Networks	12 Weeks	July 24, 2023	October 13, 2023	October 28, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs107/preview
noc23-	Deep Learning - IIT Ropar	12 Weeks	July 24, 2023	October 13,	October 28,	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs110/preview

cs110				2023	2023	
noc23-cs126	Deep Learning for Computer Vision	12 Weeks	July 24, 2023	October 13, 2023	October 28, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs126/preview
noc23-ee131	Deep Learning	12 Weeks	July 24, 2023	October 13, 2023	October 29, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_ee131/preview

List of Swayam/NPTEL courses for the award of Additional Minor Engineering in AR-VR Minors:

II Semester						
	Course Name	**Duration**	**Start date**	**End date**	**Exam date**	**Enrollment End date**	**Click here to join the course**
noc23-cs121	Problem Solving Through Programming In C (Only for R22 regulation)	12 Weeks	July 24, 2023	October 13, 2023	October 28, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs121/preview
noc23-cs78	Programming In Modern C++	12 Weeks	July 24, 2023	October 13, 2023	October 28, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs78/preview
noc23-cs95	Programming, Data Structures And Algorithms Using Python	8 Weeks	July 24, 2023	September 15, 2023	September 24, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs95/preview
noc23-cs108	The Joy Of Computing Using Python	12 Weeks	July 24, 2023	October 13, 2023	October 28, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs108/preview
noc23-cs109	Discrete Mathematics	12 Weeks	July 24, 2023	October 13, 2023	October 28, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs109/preview
noc23-cs101	Introduction To Operating Systems	8 Weeks	July 24, 2023	September 15, 2023	September 24, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs101/preview
noc23-cs74	Programming In Java	12 Weeks	July 24, 2023	October 13, 2023	October 29, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs74/preview

	V & VII Semester						
	Course Name	**Duration**	**Start date**	**End date**	**Exam date**	**Enrollment End date**	**Click here to join the course**
noc23-cs79	Data Base Management System	8 Weeks	July 24, 2023	September 15, 2023	September 24, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs79/preview
noc23-cs126	Deep Learning for Computer Vision	12 Weeks	July 24, 2023	October 13, 2023	October 28, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs126/preview
noc23-cs89	Cloud Computing	12 Weeks	July 24, 2023	October 13, 2023	October 28, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs89/preview
noc23-cs90	Google Cloud Computing Foundations	8 Weeks	August 21, 2023	October 13, 2023	October 29, 2023	August 21, 2023	https://onlinecourses.nptel.ac.in/noc23_cs90/preview
noc23-cs115	Computer Graphics	8 Weeks	July 24, 2023	September 15, 2023	September 24, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs115/preview
noc23-cs116	Design & Implementation Of Human-Computer Interfaces	12 Weeks	July 24, 2023	October 13, 2023	October 28, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs116/preview
noc23-cs77	Computer Vision	12 Weeks	July 24, 2023	October 13, 2023	October 28, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs77/preview
noc23-cs80	Natural Language Processing	12 Weeks	July 24, 2023	October 13, 2023	October 28, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs80/preview
noc23-cs126	Deep Learning for Computer Vision	12 Weeks	July 24, 2023	October 13, 2023	October 28, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs126/preview
noc23-cs107	Social Networks	12 Weeks	July 24, 2023	October 13, 2023	October 28, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs107/preview

List of Swayam/NPTEL courses for the award of Additional Minor Engineering in Information Security:

	Course Name	Duration	Start date	End date	Exam date	Enrollment End date	Click here to join the course
II Semester							
noc23-cs121	Problem Solving Through Programming In C (Only for R22 regulation)	12 Weeks	July 24, 2023	October 13, 2023	October 28, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs121/preview
noc23-cs78	Programming In Modern C++	12 Weeks	July 24, 2023	October 13, 2023	October 28, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs78/preview
noc23-cs95	Programming, Data Structures And Algorithms Using Python	8 Weeks	July 24, 2023	September 15, 2023	September 24, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs95/preview
noc23-cs108	The Joy Of Computing Using Python	12 Weeks	July 24, 2023	October 13, 2023	October 28, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs108/preview
noc23-cs109	Discrete Mathematics	12 Weeks	July 24, 2023	October 13, 2023	October 28, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs109/preview
noc23-cs101	Introduction To Operating Systems	8 Weeks	July 24, 2023	September 15, 2023	September 24, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs101/preview
noc23-cs74	Programming In Java	12 Weeks	July 24, 2023	October 13, 2023	October 29, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs74/preview

	Course Name	Duration	Start date	End date	Exam date	Enrollment End date	Click here to join the course
V & VII Semester							
noc23-cs79	Data Base Management System	8 Weeks	July 24, 2023	September 15, 2023	September 24, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs79/preview
noc23-cs89	Cloud Computing	12 Weeks	July 24, 2023	October 13, 2023	October 28, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs89/preview

noc23-cs90	Google Cloud Computing Foundations	8 Weeks	August 21, 2023	October 13, 2023	October 29, 2023	August 21, 2023	https://onlinecourses.nptel.ac.in/noc23_cs90/preview
noc23-cs127	Cyber Security and Privacy	12 Weeks	July 24, 2023	October 13, 2023	October 28, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs127/preview
noc23-cs75	Ethical Hacking	12 Weeks	July 24, 2023	October 13, 2023	October 29, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs75/preview
noc23-cs69	Privacy And Security In Online Social Media	12 Weeks	July 24, 2023	October 13, 2023	October 28, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs69/preview
noc23-cs72	Distributed Systems	8 Weeks	July 24, 2023	September 15, 2023	September 24, 2023	July 31, 2023	https://onlinecourses.nptel.ac.in/noc23_cs72/preview

Note:

1. Student has to choose the course if and only if the course is not studied in their respective B.E. Program.

2. The above semester-wise grouping of courses is only suggestive in nature. Hence, Students can pursue and complete the above courses irrespective of the semester in which they are in.

Head of the Department, IT