

## Department of Information Technology

### COURSES IDENTIFIED FOR ADDITIONAL MINOR ENGINEERING 2022-2023 (January - April)

Date: 06/01/2023

### 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 Name	Course Code	Duration	Start date	End date	Exam date	Enrollment End date	Click here to join the course
Problem Solving Through Programming In C (Only for R22 Regulation)	noc23_cs53	12 Weeks	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs53/preview">https://onlinecourses.nptel.ac.in/noc23_cs53/preview</a>
Programming In Modern C++	noc23_cs50	12 Weeks	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs50/preview">https://onlinecourses.nptel.ac.in/noc23_cs50/preview</a>
Programming, Data Structures And Algorithms Using Python	noc23_cs15	8 Weeks	January 23, 2023	March 17, 2023	March 26, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs15/preview">https://onlinecourses.nptel.ac.in/noc23_cs15/preview</a>
The Joy of Computing using Python	noc23_cs20	12 Weeks	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs20/preview">https://onlinecourses.nptel.ac.in/noc23_cs20/preview</a>

Discrete Mathematics	noc23_cs22	12 Weeks	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs22/preview">https://onlinecourses.nptel.ac.in/noc23_cs22/preview</a>
Design and analysis of algorithms	noc23_cs16	8 Weeks	January 23, 2023	March 17, 2023	March 26, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs16/preview">https://onlinecourses.nptel.ac.in/noc23_cs16/preview</a>
Programming In Java	noc23_cs49	12 Weeks	January 23, 2023	April 14, 2023	April 30, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs49/preview">https://onlinecourses.nptel.ac.in/noc23_cs49/preview</a>
Getting Started with Competitive Programming	noc23-cs30	12 Weeks	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs30/preview">https://onlinecourses.nptel.ac.in/noc23_cs30/preview</a>

### V Semester

Course Name	Course Code	Duration	Start date	End date	Exam date	Enrollment End date	Click here to join the course
Data Base Management System	noc23_cs41	8 Weeks	January 23, 2023	March 17, 2023	March 26, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs41/preview">https://onlinecourses.nptel.ac.in/noc23_cs41/preview</a>
Theory of Computation	noc23_cs31	8 Weeks	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs31/preview">https://onlinecourses.nptel.ac.in/noc23_cs31/preview</a>
An Introduction to Artificial Intelligence	noc23_cs05	12 Weeks	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs05/preview">https://onlinecourses.nptel.ac.in/noc23_cs05/preview</a>
Artificial Intelligence : Search Methods For Problem solving	noc23_cs09	12 Weeks	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs09/preview">https://onlinecourses.nptel.ac.in/noc23_cs09/preview</a>
Machine Learning,ML	noc23_cs11	8 Weeks	January 23, 2023	March 17, 2023	March 26, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs11/preview">https://onlinecourses.nptel.ac.in/noc23_cs11/preview</a>
Introduction to Machine Learning	noc23_cs18	12 Weeks	January 23, 2023	April 14, 2023	April 30, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs18/preview">https://onlinecourses.nptel.ac.in/noc23_cs18/preview</a>
Reinforcement Learning	noc23_cs23	12 Weeks	January 23, 2023	April 14, 2023	April 30, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs23/preview">https://onlinecourses.nptel.ac.in/noc23_cs23/preview</a>
Deep Learning	noc23_cs56	12 Weeks	January 23, 2023	April 14, 2023	April 30, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs56/preview">https://onlinecourses.nptel.ac.in/noc23_cs56/preview</a>
Deep Learning For Visual Computing	noc23_ee53	12 Weeks	January 23, 2023	April 14, 2023	April 30, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_ee53/preview">https://onlinecourses.nptel.ac.in/noc23_ee53/preview</a>

Essentials Of Data Science With R Software - 1: Probability And Statistical Inference	noc23_ma39	12 Weeks	January 23, 2023	April 14, 2023	April 30, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_ma39/preview">https://onlinecourses.nptel.ac.in/noc23_ma39/preview</a>
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### VII Semester

Course Name	Course Code	Duration	Start date	End date	Exam date	Enrollment End date	Click here to join the course
Natural Language Processing	noc23_cs45	12 Weeks	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs45/preview">https://onlinecourses.nptel.ac.in/noc23_cs45/preview</a>
Social Networks	noc23_cs19	12 Weeks	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs19/preview">https://onlinecourses.nptel.ac.in/noc23_cs19/preview</a>
Deep Learning - IIT Ropar	noc23_cs24	12 Weeks	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs24/preview">https://onlinecourses.nptel.ac.in/noc23_cs24/preview</a>
Business analytics and data mining Modeling using R	noc23_mg14	12 Weeks	January 23, 2023	April 14, 2023	April 30, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_mg14/preview">https://onlinecourses.nptel.ac.in/noc23_mg14/preview</a>
Cloud Computing	noc23_cs42	12 Weeks	January 23, 2023	April 14, 2023	April 30, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs42/preview">https://onlinecourses.nptel.ac.in/noc23_cs42/preview</a>

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

#### I & III Semester

Course Name	Course Code	Duration	Start date	End date	Exam date	Enrollment End date	Click here to join the course
Problem Solving Through Programming In C (Only for R22 Regulation)	noc23_cs53	12 Weeks	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs53/preview">https://onlinecourses.nptel.ac.in/noc23_cs53/preview</a>
Programming In Modern C++	noc23_cs50	12 Weeks	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs50/preview">https://onlinecourses.nptel.ac.in/noc23_cs50/preview</a>
Programming, Data Structures And Algorithms Using Python	noc23_cs15	8 Weeks	January 23, 2023	March 17, 2023	March 26, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs15/preview">https://onlinecourses.nptel.ac.in/noc23_cs15/preview</a>

The Joy of Computing using Python	noc23_cs20	12 Weeks	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs20/preview">https://onlinecourses.nptel.ac.in/noc23_cs20/preview</a>
Fundamental Algorithms: Design And Analysis	noc23_cs39	4 Weeks	January 23, 2023	February 17, 2023	March 26, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs39/preview">https://onlinecourses.nptel.ac.in/noc23_cs39/preview</a>
Discrete Mathematics	noc23_cs22	12 Weeks	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs22/preview">https://onlinecourses.nptel.ac.in/noc23_cs22/preview</a>
Programming In Java	noc23_cs49	12 Weeks	January 23, 2023	April 14, 2023	April 30, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs49/preview">https://onlinecourses.nptel.ac.in/noc23_cs49/preview</a>
Getting Started with Competitive Programming	noc23-cs30	12 Weeks	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs30/preview">https://onlinecourses.nptel.ac.in/noc23_cs30/preview</a>

#### V Semester

Course Name	Course Code	Duration	Start date	End date	Exam date	Enrollment End date	Click here to join the course
Data Base Management System	noc23_cs41	8 Weeks	January 23, 2023	March 17, 2023	March 26, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs41/preview">https://onlinecourses.nptel.ac.in/noc23_cs41/preview</a>
An Introduction to Artificial Intelligence	noc23_cs05	12 Weeks	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs05/preview">https://onlinecourses.nptel.ac.in/noc23_cs05/preview</a>
Artificial Intelligence : Search Methods For Problem solving	noc23_cs09	12 Weeks	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs09/preview">https://onlinecourses.nptel.ac.in/noc23_cs09/preview</a>
Data Science for Engineers	noc23_cs17	8 Weeks	January 23, 2023	March 17, 2023	March 26, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs17/preview">https://onlinecourses.nptel.ac.in/noc23_cs17/preview</a>
Machine Learning,ML	noc23_cs11	8 Weeks	January 23, 2023	March 17, 2023	March 26, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs11/preview">https://onlinecourses.nptel.ac.in/noc23_cs11/preview</a>
Introduction to Machine Learning	noc23_cs18	12 Weeks	January 23, 2023	April 14, 2023	April 30, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs18/preview">https://onlinecourses.nptel.ac.in/noc23_cs18/preview</a>
Python for Data Science	noc23_cs21	4 Weeks	January 23, 2023	February 17, 2023	March 26, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs21/preview">https://onlinecourses.nptel.ac.in/noc23_cs21/preview</a>

			2023	2023	2023	2023	
Reinforcement Learning	noc23_cs23	12 Weeks	January 23, 2023	April 14, 2023	April 30, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs23/preview">https://onlinecourses.nptel.ac.in/noc23_cs23/preview</a>
Cloud Computing	noc23_cs42	12 Weeks	January 23, 2023	April 14, 2023	April 30, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs42/preview">https://onlinecourses.nptel.ac.in/noc23_cs42/preview</a>
Natural Language Processing	noc23_cs45	12 Weeks	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs45/preview">https://onlinecourses.nptel.ac.in/noc23_cs45/preview</a>
Business analytics and data mining Modeling using R	noc23_mg14	12 Weeks	January 23, 2023	April 14, 2023	April 30, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_mg14/preview">https://onlinecourses.nptel.ac.in/noc23_mg14/preview</a>

#### VII Semester

Course Name	Course Code	Duration	Start date	End date	Exam date	Enrollment End date	Click here to join the course
Social Networks	noc23_cs19	12 Weeks	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs19/preview">https://onlinecourses.nptel.ac.in/noc23_cs19/preview</a>
Deep Learning - IIT Ropar	noc23_cs24	12 Weeks	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs24/preview">https://onlinecourses.nptel.ac.in/noc23_cs24/preview</a>
Deep Learning For Visual Computing	noc23_ee53	12 Weeks	January 23, 2023	April 14, 2023	April 30, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_ee53/preview">https://onlinecourses.nptel.ac.in/noc23_ee53/preview</a>

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

I & III Semester							
Course Name	Course Code	Duration	Start date	End date	Exam date	Enrollment End date	Click here to join the course
Problem Solving Through Programming In C (Only for R22 Regulation)	noc23_cs53	12 Weeks	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs53/preview">https://onlinecourses.nptel.ac.in/noc23_cs53/preview</a>

Programming In Modern C++	noc23_cs50	12 Weeks	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs50/preview">https://onlinecourses.nptel.ac.in/noc23_cs50/preview</a>
Programming, Data Structures And Algorithms Using Python	noc23_cs15	8 Weeks	January 23, 2023	March 17, 2023	March 26, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs15/preview">https://onlinecourses.nptel.ac.in/noc23_cs15/preview</a>
The Joy of Computing using Python	noc23_cs20	12 Weeks	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs20/preview">https://onlinecourses.nptel.ac.in/noc23_cs20/preview</a>
Fundamental Algorithms: Design And Analysis	noc23_cs39	4 Weeks	January 23, 2023	February 17, 2023	March 26, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs39/preview">https://onlinecourses.nptel.ac.in/noc23_cs39/preview</a>
Discrete Mathematics	noc23_cs22	12 Weeks	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs22/preview">https://onlinecourses.nptel.ac.in/noc23_cs22/preview</a>
Programming In Java	noc23_cs49	12 Weeks	January 23, 2023	April 14, 2023	April 30, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs49/preview">https://onlinecourses.nptel.ac.in/noc23_cs49/preview</a>
Getting Started with Competitive Programming	noc23-cs30	12 Weeks	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs30/preview">https://onlinecourses.nptel.ac.in/noc23_cs30/preview</a>

#### V & VII Semester

Course Name	Course Code	Duration	Start date	End date	Exam date	Enrollment End date	Click here to join the course
Data Base Management System	noc23_cs41	8 Weeks	January 23, 2023	March 17, 2023	March 26, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs41/preview">https://onlinecourses.nptel.ac.in/noc23_cs41/preview</a>
Deep Learning For Visual Computing	noc23_ee53	12 Weeks	January 23, 2023	April 14, 2023	April 30, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_ee53/preview">https://onlinecourses.nptel.ac.in/noc23_ee53/preview</a>
Cloud Computing	noc23_cs42	12 Weeks	January 23, 2023	April 14, 2023	April 30, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs42/preview">https://onlinecourses.nptel.ac.in/noc23_cs42/preview</a>
Computer Vision and Image Processing - Fundamentals and Applications	noc23_ee39	12 Weeks	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_ee39/preview">https://onlinecourses.nptel.ac.in/noc23_ee39/preview</a>
Modern Computer Vision	noc23_ee78	12 Weeks	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_ee78/preview">https://onlinecourses.nptel.ac.in/noc23_ee78/preview</a>
Natural Language Processing	noc23_cs45	12 Weeks	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs45/preview">https://onlinecourses.nptel.ac.in/noc23_cs45/preview</a>
User-centric Computing for Human-Computer Interaction	noc23_cs25	8 Weeks	January 23, 2023	March 17, 2023	March 26, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs25/peview">https://onlinecourses.nptel.ac.in/noc23_cs25/peview</a>

Social Networks	noc23_cs19	12 Weeks	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs19/preview">https://onlinecourses.nptel.ac.in/noc23_cs19/preview</a>
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**List of Swayam/NPTEL courses for the award of Additional Minor Engineering in Information Security:**

<b>I &amp; III Semester</b>							
<b>Course Name</b>	<b>Course Code</b>	<b>Duration</b>	<b>Start date</b>	<b>End date</b>	<b>Exam date</b>	<b>Enrollment End date</b>	<b>Click here to join the course</b>
Problem Solving Through Programming In C (Only for R22 Regulation)	noc23_cs53	12 Weeks	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs53/preview">https://onlinecourses.nptel.ac.in/noc23_cs53/preview</a>
Programming In Modern C++	noc23_cs50	12 Weeks	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs50/preview">https://onlinecourses.nptel.ac.in/noc23_cs50/preview</a>
Programming, Data Structures And Algorithms Using Python	noc23_cs15	8 Weeks	January 23, 2023	March 17, 2023	March 26, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs15/preview">https://onlinecourses.nptel.ac.in/noc23_cs15/preview</a>
The Joy of Computing using Python	noc23_cs20	12 Weeks	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs20/preview">https://onlinecourses.nptel.ac.in/noc23_cs20/preview</a>
Fundamental Algorithms: Design And Analysis	noc23_cs39	4 Weeks	January 23, 2023	February 17, 2023	March 26, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs39/preview">https://onlinecourses.nptel.ac.in/noc23_cs39/preview</a>
Discrete Mathematics	noc23_cs22	12 Weeks	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs22/preview">https://onlinecourses.nptel.ac.in/noc23_cs22/preview</a>
Programming In Java	noc23_cs49	12 Weeks	January 23, 2023	April 14, 2023	April 30, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs49/preview">https://onlinecourses.nptel.ac.in/noc23_cs49/preview</a>
Getting Started with Competitive Programming	noc23-cs30	12 Weeks	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs30/preview">https://onlinecourses.nptel.ac.in/noc23_cs30/preview</a>
<b>V &amp; VII Semester</b>							
<b>Course Name</b>	<b>Course Code</b>	<b>Duration</b>	<b>Start date</b>	<b>End date</b>	<b>Exam date</b>	<b>Enrollment End date</b>	<b>Click here to join the course</b>
Data Base Management System	noc23_cs41	8 Weeks	January 23, 2023	March 17, 2023	March 26, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs41/preview">https://onlinecourses.nptel.ac.in/noc23_cs41/preview</a>
Cloud Computing and Distributed Systems	noc23_cs27	8 Weeks	January 23, 2023	March 17, 2023	March 26, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs27/preview">https://onlinecourses.nptel.ac.in/noc23_cs27/preview</a>
Cloud Computing	noc23_cs42	12 Weeks	January 23, 2023	April 14, 2023	April 30, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs42/preview">https://onlinecourses.nptel.ac.in/noc23_cs42/preview</a>
Foundations of Cryptography	noc23_cs03	12 Weeks	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs03/preview">https://onlinecourses.nptel.ac.in/noc23_cs03/preview</a>

			2023	2023	2023	2023	
Ethical Hacking	noc23_cs44	12 Weeks	January 23, 2023	April 14, 2023	April 30, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs44/preview">https://onlinecourses.nptel.ac.in/noc23_cs44/preview</a>
Information Security - 5 - Secure Systems Engineering	noc23_cs10	8 Weeks	January 23, 2023	March 17, 2023	March 26, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs10/preview">https://onlinecourses.nptel.ac.in/noc23_cs10/preview</a>
Privacy and Security in Online Social Media	noc23_cs13	12 Weeks	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs13/preview">https://onlinecourses.nptel.ac.in/noc23_cs13/preview</a>
Blockchain and its Applications	noc23_cs47	12 Weeks	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs47/preview">https://onlinecourses.nptel.ac.in/noc23_cs47/preview</a>
Computer Networks And Internet Protocol	noc23_cs48	12 Weeks	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs48/preview">https://onlinecourses.nptel.ac.in/noc23_cs48/preview</a>
Hardware Security	noc23_cs59	12 Weeks	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs59/preview">https://onlinecourses.nptel.ac.in/noc23_cs59/preview</a>
Foundations of Cyber Physical Systems	noc23_cs62	12 Weeks	January 23, 2023	April 14, 2023	April 29, 2023	January 30, 2023	<a href="https://onlinecourses.nptel.ac.in/noc23_cs62/preview">https://onlinecourses.nptel.ac.in/noc23_cs62/preview</a>

**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.
3. Student has to take permission from coordinator before choosing a course.



**Dr. K. Radhika**  
**Professor & HoD-IT**