



## Department of Information Technology

NPTEL Courses Identified for Additional Minor Engineering (Information Security) Degree for the period of Jan - Apr, 2025

Following are the rules to obtain Additional Minor Engineering Degree in Information Security.

- i) Choose NPTEL courses from the following list which were not studied in your B.E/B.Tech engineering degree.
- (ii) Student shall be permitted to take a maximum of 2 theory courses/courses equivalent to 6 credits during any semester for additional learning towards Honours curriculum.
- (iii) 12 weeks courses carries 3 credits, 8 weeks courses carries 2 credits, 4 weeks courses carries 1 credit.
- (iv) Courses which will be opted from the below list must be registered in the IT department.

The Tentative List of NPTEL Courses for Additional Minor Engineering(Information Security) Degree Approved by IT Department are given below. A.Y: 2024 -25 Course ID Course Name Duration Start date End date Exam date **Enrollment End date** Click here to Join the course https://onlinecourses.nptel.ac.in/noc2 noc25-cs02 **Advanced Computer Networks** 12 Weeks January 20, 2025 April 11, 2025 April 27, 2025 January 27, 2025 5 cs02/preview https://onlinecourses.nptel.ac.in/noc2 2 noc25-cs08 Blockchain and its Applications 12 Weeks January 20, 2025 April 11, 2025 April 27, 2025 January 27, 2025 5 cs08/preview https://onlinecourses.nptel.ac.in/noc2 3 noc25-cs11 Cloud Computing 12 Weeks January 20, 2025 April 11, 2025 May 3, 2025 January 27, 2025 5 cs11/preview Cloud Computing and Distributed https://onlinecourses.nptel.ac.in/noc2 4 noc25-cs12 8 Weeks January 20, 2025 March 14, 2025 March 22, 2025 January 27, 2025 Systems 5 cs12/preview Computer Networks And Internet https://onlinecourses.nptel.ac.in/noc2 5 noc25-cs15 12 Weeks January 20, 2025 April 11, 2025 May 4, 2025 January 27, 2025 Protocol 5 cs15/preview Cryptography and Network https://onlinecourses.nptel.ac.in/noc2 6 noc25-cs16 12 Weeks January 20, 2025 April 11, 2025 April 27, 2025 January 27, 2025 Security 5 cs16/preview Design and Engineering of https://onlinecourses.nptel.ac.in/noc2 7 noc25-cs24 8 Weeks January 20, 2025 March 14, 2025 March 23, 2025 January 27, 2025 Computer Systems 5 cs24/preview https://onlinecourses.nptel.ac.in/noc2 8 noc25-cs31 Foundations of Cryptography 12 Weeks January 20, 2025 April 11, 2025 May 4, 2025 January 27, 2025 5 cs31/preview Foundations of Cyber Physical https://onlinecourses.nptel.ac.in/noc2 9 noc25-cs32 12 Weeks January 20, 2025 April 11, 2025 April 27, 2025 January 27, 2025 Systems 5 cs32/preview Information Security - 5 - Secure https://onlinecourses.nptel.ac.in/noc2 10 noc25-cs39 8 Weeks January 20, 2025 March 14, 2025 March 22, 2025 January 27, 2025 Systems Engineering 5 cs39/preview Introduction To Industry 4.0 And https://onlinecourses.nptel.ac.in/noc2 noc25-cs43 11 12 Weeks January 20, 2025 April 11, 2025 April 27, 2025 January 27, 2025 Industrial Internet Of Things 5 cs43/preview Quantum Algorithms and https://onlinecourses.nptel.ac.in/noc2 12 noc25-cs61 12 Weeks January 20, 2025 April 11, 2025 April 27, 2025 January 27, 2025 Cryptography 5 cs61/preview https://onlinecourses.nptel.ac.in/noc2 13 noc25-cs63 Secure Computation: Part I 12 Weeks January 20, 2025 April 11, 2025 April 27, 2025 January 27, 2025 5 cs63/preview https://onlinecourses.nptel.ac.in/noc2 14 noc25-cs68 Systems and Usable Security 4 Weeks January 20, 2025 February 14, 2025 March 22, 2025 January 27, 2025 5 cs68/preview Wireless Ad Hoc and Sensor https://onlinecourses.nptel.ac.in/noc2 15 noc25-cs74 8 Weeks January 20, 2025 March 14, 2025 March 22, 2025 January 27, 2025 Networks 5 cs74/preview https://onlinecourses.nptel.ac.in/noc2 16 noc25-cs78 Real Time Operating System 4 Weeks February 17, 2025 March 14, 2025 April 26, 2025 February 17, 2025 5 cs78/preview Privacy and Security in Online https://onlinecourses.nptel.ac.in/noc2 17 noc25-cs79 April 11, 2025 12 weeks January 20, 2025 April 27, 2025 January 27, 2025



Social Media

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## **Department of Information Technology**

NPTEL Courses Identified for Additional Minor Engineering (Artificial Intelligence) Degree for the period Jan - Apr, 2025

Following are the rules to obtain Additional Minor Engineering Degree in Artificial Intelligence.

- i) Choose NPTEL courses from the following list which were not studied in your B.E/B.Tech engineering degree.
- (ii) Student shall be permitted to take a maximum of 2 theory courses/courses equivalent to 6 credits during any semester for additional learning towards Honours curriculum.
- (iii) 12 weeks courses carries 3 credits, 8 weeks courses carries 2 credits, 4 weeks courses carries 1 credit.
- (iv) Courses which will be opted from the below list must be registered in the IT department.

The Tentative List of NPTEL Courses for Additional Minor Engineering (Artificial Intelligence) Degree Approved by IT Department are given below.

A.Y: 2024 -25

S.No	Course ID	Course Name	Duration	Start date	End date	Exam date	Enrollment End date	Click here to Join the course
1	noc25-cs06	Algorithms in Computational Biology and Sequence Analysis	12 Weeks	January 20, 2025	April 11, 2025	April 27, 2025	January 27, 2025	https://onlinecourses.nptel.ac.in/noc 25_cs06/preview
2	noc25-cs07	Artificial Intelligence: Knowledge Representation And Reasoning	12 Weeks	January 20, 2025	April 11, 2025	May 3, 2025	January 27, 2025	https://onlinecourses.nptel.ac.in/noc 25_cs07/preview
3	noc25-cs09	Business Intelligence & Analytics	12 Weeks	January 20, 2025	April 11, 2025	April 27, 2025	January 27, 2025	https://onlinecourses.nptel.ac.in/noc 25_cs09/preview
4	noc25-cs17	Data Analytics with Python	12 Weeks	January 20, 2025	April 11, 2025	May 4, 2025	January 27, 2025	https://onlinecourses.nptel.ac.in/noc 25_cs17/preview
5	noc25-cs20	Data Science for Engineers	8 Weeks	January 20, 2025	March 14, 2025	March 22, 2025	January 27, 2025	https://onlinecourses.nptel.ac.in/noc 25 cs20/preview
6	noc25-cs21	Deep Learning - IIT Ropar	12 Weeks	January 20, 2025	April 11, 2025	May 3, 2025	January 27, 2025	https://onlinecourses.nptel.ac.in/noc 25 cs21/preview
7	noc25-cs22	Deep Learning for Natural Language Processing	12 weeks	January 20, 2025	April 11, 2025	April 27, 2025	January 27, 2025	https://onlinecourses.nptel.ac.in/noc 25_cs22/preview
8	noc25-cs37	GPU Architectures and Programming	12 Weeks	January 20, 2025	April 11, 2025	April 27, 2025	January 27, 2025	https://onlinecourses.nptel.ac.in/noc 25_cs37/preview
9	noc25-cs45	Introduction to Large Language Models (LLMs)	12 Weeks	January 20, 2025	April 11, 2025	April 27, 2025	January 27, 2025	https://onlinecourses.nptel.ac.in/noc 25_cs45/preview
10	noc25-cs46	Introduction to Machine Learning	12 Weeks	January 20, 2025	April 11, 2025	April 26, 2025	January 27, 2025	https://onlinecourses.nptel.ac.in/noc 25 cs46/preview

S.No	Course ID	Course Name	Duration	Start date	End date	Exam date	Enrollment End date	Click here to Join the course
11	noc25-cs48	Introduction To Soft Computing	8 Weeks	January 20, 2025	March 14, 2025	March 22, 2025	January 27, 2025	https://onlinecourses.nptel.ac.in/noc 25 cs48/preview
12	noc25-cs49	Machine Learning for Engineering and science applications	12 Weeks	January 20, 2025	April 11, 2025	April 27, 2025	January 27, 2025	https://onlinecourses.nptel.ac.in/noc 25_cs49/preview
13	noc25-cs50	Machine Learning, ML	8 Weeks	January 20, 2025	March 14, 2025	March 22, 2025	January 27, 2025	https://onlinecourses.nptel.ac.in/noc 25 cs50/preview
14	noc25-cs51	Natural Language Processing	12 Weeks	January 20, 2025	April 11, 2025	April 26, 2025	January 27, 2025	https://onlinecourses.nptel.ac.in/noc 25 cs51/preview
15	noc25-cs55	Practical High-Performance Computing	12 Weeks	January 20, 2025	April 11, 2025	April 26, 2025	January 27, 2025	https://onlinecourses.nptel.ac.in/noc 25 cs55/preview
16	noc25-cs60	Python for Data Science	4 Weeks	January 20, 2025	February 14, 2025	March 22, 2025	January 27, 2025	https://onlinecourses.nptel.ac.in/noc 25 cs60/preview
17	noc25-cs62	Reinforcement Learning	12 Weeks	January 20, 2025	April 11, 2025	May 4, 2025	January 27, 2025	https://onlinecourses.nptel.ac.in/noc 25 cs62/preview
18	noc25-cs75	Foundation of Cloud IoT Edge ML	8 Weeks	February 17, 2025	April 11, 2025	April 26, 2025	February 17, 2025	https://onlinecourses.nptel.ac.in/noc 25 cs75/preview

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## **Department of Information Technology**

NPTEL Courses Identified for Additional Minor Engineering(Data Science) Degree for the period of Jan - Apr, 2025

Following are the rules to obtain Additional Minor Engineering Degree in Data Science.

- i) Choose NPTEL courses from the following list which were not studied in your B.E/B.Tech engineering degree.
- (ii) Student shall be permitted to take a maximum of 2 theory courses/courses equivalent to 6 credits during any semester for additional learning towards Honours curriculum.
- (iii) 12 weeks courses carries 3 credits, 8 weeks courses carries 2 credits, 4 weeks courses carries 1 credit.
- (iv) Courses which will be opted from the below list must be registered in the IT department.

The Tentative List of NPTEL Courses for Additional Minor Engineering(Data Science) Degree Approved by IT Department are given below.

A.Y: 2024 -25

S.No	Course ID	Course Name		State Colonide/ Degi	The reperced by IT	Department are gr	7.1.1.2027-20	
0.110			Duration	Start date	End date	Exam date	Enrollment End date	Click here to Join the course
1	noc25-cs07	Artificial Intelligence: Knowledge Representation And Reasoning	12 Weeks	January 20, 2025	April 11, 2025	May 3, 2025	January 27, 2025	https://onlinecourses.nptel.ac.in/no
2	noc25-cs09	Business Intelligence & Analytics	12 Weeks	January 20, 2025	April 11, 2025	April 27, 2025	January 27, 2025	https://onlinecourses.nptel.ac.in/no
3	noc25-cs14	Computational Number Theory and Algebra	12 Weeks	January 20, 2025	April 11, 2025	April 27, 2025	January 27, 2025	25 cs09/preview https://onlinecourses.nptel.ac.in/no
4	noc25-cs17	Data Analytics with Python	12 Weeks	January 20, 2025	April 11, 2025	May 4, 2025	January 27, 2025	25 cs14/preview https://onlinecourses.nptel.ac.in/no
5	noc25-cs18	Data Base Management System	8 Weeks	January 20, 2025	March 14, 2025	March 23, 2025	January 27, 2025	25 cs17/preview https://onlinecourses.nptel.ac.in/no
6	noc25-cs19	Data Mining	8 Weeks	January 20, 2025	March 14, 2025	March 22, 2025		25 cs18/preview https://onlinecourses.nptel.ac.in/no
7	noc25-cs20	Data Science for Engineers	8 Weeks	January 20, 2025	March 14, 2025	March 22, 2025	January 27, 2025	25 cs19/preview https://onlinecourses.nptel.ac.in/no
8	noc25-cs21	Deep Learning - IIT Ropar	12 Weeks	January 20, 2025	April 11, 2025		January 27, 2025	25 cs20/preview https://onlinecourses.nptel.ac.in/noo
9	noc25-cs22	Deep Learning for Natural	12 weeks	January 20, 2025		May 3, 2025	January 27, 2025	25_cs21/preview
10	noc25-cs26	Language Processing  Discrete Mathematics	12 Weeks		April 11, 2025	April 27, 2025	January 27, 2025	https://onlinecourses.nptel.ac.in/noc 25_cs22/preview
11	noc25-cs37	GPU Architectures and		January 20, 2025	April 11, 2025	April 26, 2025		https://onlinecourses.nptel.ac.in/noc 25_cs26/preview
12	noc25-cs44	Programming Introduction To Internet Of	12 Weeks	January 20, 2025	April 11, 2025	April 27, 2025		https://onlinecourses.nptel.ac.in/noc 25 cs37/preview
	110020-0344	Things	12 Weeks	January 20, 2025	April 11, 2025	April 26, 2025	January 27, 2025	https://onlinecourses.nptel.ac.in/noc 25 cs44/preview

S.No	Course ID	Course Name	Duration	Start date	End date	Exam date	Enrollment End date	Click here to Join the course
13	noc25-cs45	Introduction to Large Language Models (LLMs)	12 Weeks	January 20, 2025	April 11, 2025	April 27, 2025	January 27, 2025	https://onlinecourses.nptel.ac.in/noc 25 cs45/preview
14	noc25-cs46	Introduction to Machine Learning	12 Weeks	January 20, 2025	April 11, 2025	April 26, 2025	January 27, 2025	https://onlinecourses.nptel.ac.in/noc 25 cs46/preview
15	noc25-cs49	Machine Learning for Engineering and science applications	12 Weeks	January 20, 2025	April 11, 2025	April 27, 2025	January 27, 2025	https://onlinecourses.nptel.ac.in/noc 25_cs49/preview
16	noc25-cs50	Machine Learning, ML	8 Weeks	January 20, 2025	March 14, 2025	March 22, 2025	January 27, 2025	https://onlinecourses.nptel.ac.in/noc 25 cs50/preview
17	noc25-cs51	Natural Language Processing	12 Weeks	January 20, 2025	April 11, 2025	April 26, 2025	January 27, 2025	https://onlinecourses.nptel.ac.in/noc 25 cs51/preview
18	noc25-cs60	Python for Data Science	4 Weeks	January 20, 2025	February 14, 2025	March 22, 2025	January 27, 2025	https://onlinecourses.nptel.ac.in/noc 25 cs60/preview
19	noc25-cs62	Reinforcement Learning	12 Weeks	January 20, 2025	April 11, 2025	May 4, 2025	January 27, 2025	https://onlinecourses.nptel.ac.in/noc 25 cs62/preview
20	noc25-cs71	Time Series Modelling and Forecasting with Applications in R	12 Weeks	January 20, 2025	April 11, 2025	April 27, 2025	January 27, 2025	https://onlinecourses.nptel.ac.in/noc 25_cs71/preview

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## **Department of Information Technology**

NPTEL Courses Identified for Additional Minor Engineering (Augmented Reality & Virtual Reality) Degree for the period of Jan - Apr, 2025

Following are the rules to obtain Additional Minor Engineering Degree in Augmented Reality & Virtual Reality.

- i) Choose NPTEL courses from the following list which were not studied in your B.E/B.Tech engineering degree.
- (ii) Student shall be permitted to take a maximum of 2 theory courses/courses equivalent to 6 credits during any semester for additional learning towards Honours curriculum.
- (iii) 12 weeks courses carries 3 credits, 8 weeks courses carries 2 credits, 4 weeks courses carries 1 credit.
- (iv) Courses which will be opted from the below list must be registered in the IT department.

The Tentative List of NPTEL Courses for Additional Minor Engineering (Augmented Reality & Virtual Reality) Degree Approved by IT Department are given below.

A.Y: 2024 -25

S.No	Course ID	Course Name	Duration	Start date	End date	Exam date	Enrollment End date	Click here to Join the course
1	noc25-cs03	Advanced Graph Theory	8 Weeks	January. 20, 2025	March 14, 2025	March 22, 2025	January 27, 2025	https://onlinecourses.nptel.ac.in/noc25_cs03/preview
2	noc25-cs04	Affective Computing	12 Weeks	January 20, 2025	April 11, 2025	April 26, 2025	January 27, 2025	https://onlinecourses.nptel.ac.in/noc25_cs04/preview
3	noc25-cs14	Computational Number Theory and Algebra	12 Weeks	January 20, 2025	April 11, 2025	April 27, 2025	January 27, 2025	https://onlinecourses.nptel.ac.in/noc25_cs14/preview
4	noc25-cs21	Deep Learning - IIT Ropar	12 Weeks	January 20, 2025	April 11, 2025	May 3, 2025	January 27, 2025	https://onlinecourses.nptel.ac.in/noc25_cs21/preview
5	noc25-cs22	Deep Learning for Natural Language Processing	12 weeks	January 20, 2025	April 11, 2025	April 27, 2025	January 27, 2025	https://onlinecourses.nptel.ac.in/noc25_cs22/preview
6	noc25-cs23	Design and analysis of algorithms	8 Weeks	January 20, 2025	March 14, 2025	March 22, 2025	January 27, 2025	https://onlinecourses.nptel.ac.in/noc25_cs23/preview
7	noc25-cs35	Games and Information	12 Weeks	January 20, 2025	April 11, 2025	April 27, 2025	January 27, 2025	https://onlinecourses.nptel.ac.in/noc25_cs35/preview
8	noc25-cs37	GPU Architectures and Programming	12 Weeks	January 20, 2025	April 11, 2025	April 27, 2025	January 27, 2025	https://onlinecourses.nptel.ac.in/noc25_cs37/preview
9	noc25-cs38	Human Computer Interaction (In English)	12 Weeks	January 20, 2025	April 11, 2025	April 27, 2025	January 27, 2025	https://onlinecourses.nptel.ac.in/noc25_cs38/preview
10	noc25-cs46	Introduction to Machine Learning	12 Weeks	January 20, 2025	April 11, 2025	April 26, 2025	January 27, 2025	https://onlinecourses.nptel.ac.in/noc25_cs46/preview
11	noc25-cs51	Natural Language Processing	12 Weeks	January 20, 2025	April 11, 2025	April 26, 2025	January 27, 2025	https://onlinecourses.nptel.ac.in/noc25_cs51/preview
12	noc25-cs54	Parallel Computer Architecture	12 Weeks	January 20, 2025	April 11, 2025	April 27, 2025	January 27, 2025	https://onlinecourses.nptel.ac.in/noc25_cs54/preview
13	noc25-cs62	Reinforcement Learning	12 Weeks	January 20, 2025	April 11, 2025	May 4, 2025	January 27, 2025	https://onlinecourses.nptel.ac.in/noc25_cs62/preview



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