



HALDIA INSTITUTE OF TECHNOLOGY

COMPUTER SCIENCE & ENGINEERING

AN AUTONOMOUS INSTITUTION UNDER MAKAUT, WEST BENGAL)
ICARE COMPLEX, HIT, HALDIA, PURBA MEDINIPUR, WEST BENGAL 721657

Recommended MOOCs courses for attaining the Honours in AICTE UG programmes.

For NPTEL/Swayam platform: Credit points as specified in the platform

For other MOOCs platforms like Coursera, edX, Udemy, Simplelearn etc

Courses of 4 weeks to 7 weeks: 1 credit point
Courses of 8 weeks to 11 weeks: 2 credit point
Courses of 12 weeks to 15 weeks: 3 credit point
Courses of 16 weeks or more: 4 credit point

Sl. No.	Course Name	Duration (weeks)	Credit	Name of the MOOC websites	Availability
1	AP Computer Science A: Java Programming Polymorphism and Advanced Data Structures	6	1	EDX	available
2	Build your very first iOS app	8	2	EDX	Available
3	Gameplay Programming for Video Game Designers	5	1	EDX	Available
4	Introduction to Computer Science & Programming Specialization	8	2	COURSERA	Available
5	Introduction to scripting in Python	8	2	COURSERA	Available
6	Foundation of Data Structures	6	1	EDX	Available
7	Synthesis of Digital Systems	12	3	MIT ONLINE COURSE	Available
8	Bayesian Statistics: Techniques and Models	5	1	COURSERA	Available
9	Mathematical Modelling Basics	9	2	EDX	Available
10	Animation and CGI Motion	12	3	EDX	Available
11	Web Application Development	6	1	COURSERA	Available
12	Web Design for Everybody	12	3	COURSERA	Available
13	The Bits and Bytes of Computer Networking	4	1	COURSERA	Available
14	Introduction to Cisco Networking	4	1	COURSERA	Available
15	Introduction to Computing for Data Analysis with Python	6	1	EDX	Available



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Sl. No.	Course Name	Duration (weeks)	Credit	Name of the MOOC websites	Availability
16	Data Analysis and Interpretation	12	3	COURSERA	Available
17	Introduction to Design Thinking	5	1	EDX	Available
18	Introduction to Soft Computing	8	2	SWAYAM	Available
19	Introduction to Data Modelling	4	1	EDX	Available
20	Java Fundamentals for Android Development	6	1	EDX	Available
21	Using Databases with Python	5	1	COURSERA	Available
22	Data Base Management System	8	2	NPTEL	Available
23	Discrete Mathematics	12	3	NPTEL	Available
24	Programming, Data Structures and Algorithms using Python	8	2	NPTEL	Available
25	Design and Analysis of Algorithms	8	2	NPTEL	Available
26	Algorithm Specialization	16	4	COURSERA	Available
27	Divide and Conquer, Sorting, Searching and Randomized Algorithm	4	1	COURSERA	Available
28	Cloud Computing	8	2	NPTEL	Available
29	Cloud Computing	5	1	COURSERA	Available
30	Ethical Hacking	8	2	UDEMY	Available
31	Cyber security and its 10 domains	7	1	COURSERA	Available
32	Introduction to Internet of Things	12	3	NPTEL	Available
33	Introduction to the Internet of Things	6	1	EDX	Available
34	IoT Programming and Big Data	5	1	EDX	Available
35	Data Communications and Network Services	4	1	COURSERA	Available
36	Software testing	12	3	COURSERA	Available
37	Software Engineering	12	3	EDX	Available
38	Software Project Management	12	3	COURSERA	Available
39	Entrepreneurship in Emerging Economies	6	1	EDX	Available
40	Introduction to Computational Thinking and Data Science	10	2	EDX	Available
41	Data Mining: Theories and Algorithms for Big	14	3	EDX	Available



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Sl. No.	Course Name	Duration (weeks)	Credit	Name of the MOOC websites	Availability
	Data				
42	Big Data Fundamentals	10	2	EDX	Available
43	Big Data Analytics	10	2	EDX	Available
44	Foundations of Data Science : Computational Thinking with Python	5	1	EDX	Available
45	How to win a Data Science Competition : Learn from Top Kagglers	5	1	COURSERA	Available
46	Virtual Reality	4	1	COURSERA	Available
47	Principles of Machine Learning	6	1	EDX	Available
48	Machine Learning	12	3	COURSERA	Available
49	AI For Everyone	4	1	COURSERA	Available
50	Robotics: Aerial Robotics	6	1	COURSERA	Available
51	Deep learning in Computer Vision	5	1	COURSERA	Available
52	Deep Learning – Part 1	12	3	COURSERA	Available
53	Artificial Intelligence Search Method for Problem Solving	12	3	COURSERA	Available
54	Machine Learning for Engineering and Science Applications	12	3	COURSERA	Available
55	Computer Vision	12	3	EDX	Available
56	Introduction to Machine Learning	12	3	COURSERA	Available
57	Introduction to Machine Learning	8	2	COURSERA	Available
58	Functional Programming in Scala	6	1	COURSERA	Available
59	Using python to access web data	6	1	COURSERA	Available
60	Object oriented analysis and design	8	2	COURSERA	Available
61	Python 3 Programming Specialization	8	2	COURSERA	Available
62	Natural Language Processing	5	1	COURSERA	Available



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Sl. No.	Course Name	Duration (weeks)	Credit	Name of the MOOC websites	Availability
63	Applied Natural Language Processing	12	3	EDX	Available
64	Natural Language Processing	12	3	EDX	Available
65	Embedded Systems	12	3	NPTEL	Available
66	Introduction to Industry 4.0 and Industrial Internet of Things	12	3	NPTEL	Available
67	A System View of Communications: From Signals to Packets (Part – 2)	6	1	EDX	Available
68	Software Testing fundamentals	8	2	EDX	Available
69	Software Testing and Management	8	2	EDX	Available
70	Neural Network & Deep Learning	4	1	COURSERA	Available
71	Demystifying Networking	4	1	EDX	Available
72	Cyber security and Privacy in the IoT	5	1	EDX	Available
73	IoT System Design: Software and Hardware Integration	4	1	EDX	Available
74	Blockchain and Fin Tech: Basics, Applications, and Limitations	6	1	EDX	Available
75	Block Chain Specialization	8	2	EDX	Available
76	A System View of Communications: From Signals to Packets (Part 3)	5	1	EDX	Available
77	Internet of Things	12	3	NPTEL	Available
78	Computational Thinking for Modeling and Simulation	6	1	EDX	Available
79	Mathematics For Machine Learning: Multivariate Calculas	6	1	COURSERA	Available
80	Becoming an Entrepreneur	6	1	EDX	Available
81	IBM Data Science Professional Certificate	8	2	COURSERA	Available
82	Data Science with Python	10	2	EDX	Available
83	Artificial Intelligence	12	3	NPTEL	Available



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Sl. No.	Course Name	Duration (weeks)	Credit	Name of the MOOC websites	Availability
84	Foundations of Data Science: Prediction and Machine Learning	6	1	EDX	Available
85	Robotics: Vision Intelligence & Machine Learning	12	3	EDX	Available
86	Deep Learning Specialization	12	3	COURSERA	Available
87	Machine learning with Tensor Flow on Google Cloud Platform Specialization	4	1	COURSERA	Available
88	Convolution Neural Network	4	1	COURSERA	Available
89	Deep Learning	6	1	EDX	Available
90	Deep Learning	12	3	NPTEL	Available
91	Reinforcement Learning	12	3	EDX	Available
92	Neural Networks for Machine Learning	16	4	COURSERA	Available
93	Cloud Computing for Enterprises	8	2	EDX	Available
94	Cloud Computing Management	8	2	EDX	Available
95	Cloud Computing Infrastructure	8	2	EDX	Available
96	Data Engineering on Google Cloud Platform Specialization	4	1	COURSERA	Available
97	Security in Google Cloud Platform Specialization	4	1	COURSERA	Available
98	AWS Fundamental: Going Cloud Native	5	1	COURSERA	Available
99	Remote Sensing	12	3	NPTEL	Available
100	Leadership for Engineers	6	1	EDX	Available
101	Computer Forensics	8	2	EDX	Available
102	Human Computer Interactions	8	2	EDX	Available
103	Social Networks	12	3	NPTEL	Available
104	Machine Learning	8	2	NPTEL	Available
105	Introduction to Machine Learning	12	3	NPTEL	Available



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Sl. No.	Course Name	Duration (weeks)	Credit	Name of the MOOC websites	Availability
106	Deep Learning	12	3	NPTEL	Available
107	Data Science for Engineers	8	2	NPTEL	Available
108	Introduction to Internet of Things	12	3	NPTEL	Available

Courses offered by IIT's

Sl. No.	Course Name	Duration (weeks)	Credit	Host Institute	Availability	Link
1	Computer System Security	6 week access with certificate	1	E&ICT Academy, IIT Kanpur	Available	https://ict.iitk.ac.in/online-courses/
2	Python Programming – A Practical Approach	6 week access with certificate	1	E&ICT Academy, IIT Kanpur	Available	https://ict.iitk.ac.in/online-courses/
3	Comprehensive Ethical Hacking Course – Beginner to Advanced (M)	6 week access with certificate	1	E&ICT Academy, IIT Kanpur	Available	https://ict.iitk.ac.in/online-courses/
4	Using Python for Ethical Hacking (M)	6 week access with certificate	1	E&ICT Academy, IIT Kanpur	Available	https://ict.iitk.ac.in/online-courses/
5	Prutor:- A Coding Platform	6 week access with certificate	1	E&ICT Academy, IIT Kanpur	Available	https://ict.iitk.ac.in/online-courses/
6	Programming for Problem Solving	6 week access with certificate	1	E&ICT Academy, IIT Kanpur	Available	https://ict.iitk.ac.in/online-courses/
7	Crash Course in Python (M)	6 week access with certificate	1	E&ICT Academy, IIT Kanpur	Available	https://ict.iitk.ac.in/online-courses/
8	R Programming – A Practical Approach	6 week access with certificate	1	E&ICT Academy, IIT Kanpur	Available	https://ict.iitk.ac.in/online-courses/
9	Python Programming - A Practical Approach (M)	6 week access with	1	E&ICT Academy, IIT	Available	https://ict.iitk.ac.in/online-courses/



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		certificate		Kanpur		courses/
10	Crash Course in Java Programming (M)	6 week access with certificate	1	E&ICT Academy, IIT Kanpur	Available	https://ict.iitk.ac.in/online-courses/
11	Introduction to Blockchain (M)	6 week access with certificate	1	E&ICT Academy, IIT Kanpur	Available	https://ict.iitk.ac.in/online-courses/
12	Comprehensive Linux Course - Beginner to Advanced (M)	6 week access with certificate	1	E&ICT Academy, IIT Kanpur	Available	https://ict.iitk.ac.in/online-courses/
13	Introduction to Artificial Intelligence	6 week access with certificate	1	E&ICT Academy, IIT Kanpur	Available	https://ict.iitk.ac.in/online-courses/
14	Zero to Hero in Android Development with Hands on 19 Projects	6 week access with certificate	1	E&ICT Academy, IIT Kanpur	Available	https://ict.iitk.ac.in/online-courses/
15	Crash Course in Node.js, Express and MongoDB (M)	6 week access with certificate	1	E&ICT Academy, IIT Kanpur	Available	https://ict.iitk.ac.in/online-courses/
16	MySQL - A Practical Approach	6 week access with certificate	1	E&ICT Academy, IIT Kanpur	Available	https://ict.iitk.ac.in/online-courses/
17	C++ Programming - A Practical Approach	6 week access with certificate	1	E&ICT Academy, IIT Kanpur	Available	https://ict.iitk.ac.in/online-courses/
18	Crash Course in C++ (M)	6 week access with certificate	1	E&ICT Academy, IIT Kanpur	Available	https://ict.iitk.ac.in/online-courses/
19	Introduction to Machine Learning	6 week access with certificate	1	E&ICT Academy, IIT Kanpur	Available	https://ict.iitk.ac.in/online-courses/
20	Azure Data Lake	6 week access with certificate	1	E&ICT Academy, IIT Kanpur	Available	https://ict.iitk.ac.in/online-courses/
21	Data Science using Python	6 week access with certificate	1	E&ICT Academy, IIT Kanpur	Available	https://ict.iitk.ac.in/online-courses/
22	Learn HTML5, CSS3 & Bootstrap to Build Responsive Website	6 week access with certificate	1	E&ICT Academy, IIT Kanpur	Available	https://ict.iitk.ac.in/online-courses/
23	Crash Course in Web Development From Scratch Using Wordpress	6 week access with certificate	1	E&ICT Academy, IIT Kanpur	Available	https://ict.iitk.ac.in/online-courses/



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	(M)					
24	Introduction to Programming – A Practical Approach	6 week access with certificate	1	E&ICT Academy, IIT Kanpur	Available	https://ict.iitk.ac.in/online-courses/
25	R Programming - A Practical Approach (M)	6 week access with certificate	1	E&ICT Academy, IIT Kanpur	Available	https://ict.iitk.ac.in/online-courses/
26	Crash Course in Objective C (M)	6 week access with certificate	1	E&ICT Academy, IIT Kanpur	Available	https://ict.iitk.ac.in/online-courses/
27	Crash Course in jQuery (M)	6 week access with certificate	1	E&ICT Academy, IIT Kanpur	Available	https://ict.iitk.ac.in/online-courses/
28	Crash Course in Joomla (M)	6 week access with certificate	1	E&ICT Academy, IIT Kanpur	Available	https://ict.iitk.ac.in/online-courses/
29	Crash Course in AngularJS (M)	6 week access with certificate	1	E&ICT Academy, IIT Kanpur	Available	https://ict.iitk.ac.in/online-courses/
30	Crash Course in Responsive Web Design (M)	6 week access with certificate	1	E&ICT Academy, IIT Kanpur	Available	https://ict.iitk.ac.in/online-courses/
31	Crash Course in Go Programming Language (M)	6 week access with certificate	1	E&ICT Academy, IIT Kanpur	Available	https://ict.iitk.ac.in/online-courses/
32	Machine Learning Zero to Hero	6 week access with certificate	1	E&ICT Academy, IIT Kanpur	Available	https://ict.iitk.ac.in/online-courses/
33	Crash Course in ECMAScript 6 (M)	6 week access with certificate	1	E&ICT Academy, IIT Kanpur	Available	https://ict.iitk.ac.in/online-courses/
34	Crash Course in Prolog Programming (M)	6 week access with certificate	1	E&ICT Academy, IIT Kanpur	Available	https://ict.iitk.ac.in/online-courses/
35	Crash Course in ExpressJS Framework (M)	6 week access with certificate	1	E&ICT Academy, IIT Kanpur	Available	https://ict.iitk.ac.in/online-courses/
36	Crash Course in TypeScript Programming (M)	6 week access with certificate	1	E&ICT Academy, IIT Kanpur	Available	https://ict.iitk.ac.in/online-courses/
37	Python with Prutor	6 week access with certificate	1	E&ICT Academy, IIT Kanpur	Available	https://ict.iitk.ac.in/online-courses/



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38	Crash Course in CSS3 (M)	6 week access with certificate	1	E&ICT Academy, IIT Kanpur	Available	https://ict.iitk.ac.in/online-courses/
39	Core Java with Prutor	6 week access with certificate	1	E&ICT Academy, IIT Kanpur	Available	https://ict.iitk.ac.in/online-courses/
40	Programming Basics	9 weeks	1	IIT Bombay	Available	https://www.edx.org/school/iitbombayx
41	LaTeX for Students, Engineers, and Scientists	7 weeks	1	IIT Bombay	Available	https://www.edx.org/school/iitbombayx
42	Object-Oriented Programming	4 weeks	1	IIT Bombay	Available	https://www.edx.org/school/iitbombayx
43	Algorithms	6 Weeks	1	IIT Bombay	Available	https://www.edx.org/school/iitbombayx
44	Foundations of Data Structures	6 Weeks	1	IIT Bombay	Available	https://www.edx.org/school/iitbombayx
45	Implementation of Data Structures	6 Weeks	1	IIT Bombay	Available	https://www.edx.org/school/iitbombayx
46	Basic 3D Animation using Blender	4 Weeks	1	IIT Bombay	Available	https://www.edx.org/school/iitbombayx
47	Shell Programming - A necessity for all Programmers	5 Weeks	1	IIT Bombay	Available	https://www.edx.org/school/iitbombayx