



**CHAITANYA BHARATHI
INSTITUTE OF TECHNOLOGY (A)**

Kokapet (Village), Gandipet, Hyderabad, Telangana-500075. www.cbti.ac.in



Department of Information Technology

COURSES IDENTIFIED FOR HONOURS DEGREE 2021-2022 (Jan-April)

Date: 17/01/2022

The Tentative list of courses for Honours Degree approved by IT Department is as follows:

I and II Semester-maximum 4 credits,III and IV Semester- maximum 4 to 6 credits including internship, V and VI Semester- maximum 6 credits, VII and VIII Semester- maximum 6 credits

Note: Student has to choose the courses atleast from any two tracks and from each level atmost 2 courses only for Coursera courses.

List of NPTEL Courses:

Course Name	Duration	Start date	End date	Exam date	Enrollment End date	Click here to join the course
Design Thinking - A Primer	4 Weeks	February 21, 2022	March 18, 2022	April 23, 2022	February 21, 2022	https://onlinecourses.nptel.ac.in/noc21_mg04/preview
BioInformatics: Algorithms and Applications	12 Weeks	January 24, 2022	April 15, 2022	April 24, 2022	January 31, 2022	https://onlinecourses.nptel.ac.in/noc22_bt12/preview
Data Analysis for Biologists	8 Weeks	February 21, 2022	April 15, 2022	April 23, 2022	February 21, 2022	https://onlinecourses.nptel.ac.in/noc22_bt20/preview
Ethics in Engineering Practice	8 Weeks	February 21, 2022	April 15, 2022	April 23, 2022	February 21, 2022	https://onlinecourses.nptel.ac.in/noc22_mg54/preview
GPU Architectures and Programming	12 Weeks	January 24, 2022	April 15, 2022	April 24, 2022	January 31, 2022	https://onlinecourses.nptel.ac.in/noc22_cs09/preview
Advanced Computer Architecture	8 Weeks	February 21, 2022	April 15, 2022	April 24, 2022	February 21, 2022	https://onlinecourses.nptel.ac.in/noc22_cs10/preview
Advanced Graph Theory	8 Weeks	February 21, 2022	April 15, 2022	April 23, 2022	February 21, 2022	https://onlinecourses.nptel.ac.in/noc22_cs17/preview
Introduction to parallel programming with OpenMP and MPI	4 Weeks + 4 Weeks(New)	January 24, 2022	March 18, 2022	March 27, 2022	January 31, 2022	https://onlinecourses.nptel.ac.in/noc22_cs21/preview

Ethical Hacking	12 Weeks	January 24, 2022	April 15, 2022	April 23, 2022	January 31, 2022	https://onlinecourses.nptel.ac.in/noc22_cs13/preview
Cloud Computing and Distributed Systems	8 Weeks	January 24, 2022	March 18, 2022	March 27, 2022	January 31, 2022	https://onlinecourses.nptel.ac.in/noc22_cs18/preview
Online Privacy	8 Weeks + 4 Weeks(New)	January 24, 2022	April 15, 2022	April 24, 2022	January 31, 2022	https://onlinecourses.nptel.ac.in/noc22_cs20/preview
Information Security - 5 - Secure Systems Engineering	8 Weeks	January 24, 2022	March 18, 2022	March 27, 2022	January 31, 2022	https://onlinecourses.nptel.ac.in/noc22_cs23/preview
Model Checking	12 Weeks	January 24, 2022	April 15, 2022	April 23, 2022	January 31, 2022	https://onlinecourses.nptel.ac.in/noc22_cs25/preview
Essentials Of Data Science With R Software - 1: Probability And Statistical Inference	12 Weeks	January 24, 2022	April 15, 2022	April 23, 2022	January 31, 2022	https://onlinecourses.nptel.ac.in/noc22_ma34/preview
Essentials Of Data Science With R Software - 2: Sampling Theory And Linear Regression Analysis	12 Weeks	January 24, 2022	April 15, 2022	April 24, 2022	January 31, 2022	https://onlinecourses.nptel.ac.in/noc22_ma35/preview
Data Analysis and Decision Making – I	12 Weeks	January 24, 2022	April 15, 2022	April 23, 2022	January 31, 2022	https://onlinecourses.nptel.ac.in/noc22_mg02/preview
Data Analysis & Decision Making – II	12 Weeks	January 24, 2022	April 15, 2022	April 23, 2022	January 31, 2022	https://onlinecourses.nptel.ac.in/noc22_mg03/preview
Business analytics and data mining Modeling using R	12 Weeks	January 24, 2022	April 15, 2022	April 24, 2022	January 31, 2022	https://onlinecourses.nptel.ac.in/noc22_mg09/preview
An Introduction to Programming Through C++	12 Weeks	January 24, 2022	April 15, 2022	April 24, 2022	January 31, 2022	https://onlinecourses.nptel.ac.in/noc22_cs42/preview
Deep learning	12 Weeks	January 24, 2022	April 15, 2022	April 23, 2022	January 31, 2022	https://onlinecourses.nptel.ac.in/noc22_cs22/preview
Deep Learning - IIT Ropar	12 Weeks	January 24, 2022	April 15, 2022	April 24, 2022	January 31, 2022	https://onlinecourses.nptel.ac.in/noc22_cs35/preview
Computational Geometry	12 Weeks	January 24, 2022	April 15, 2022	April 23, 2022	January 31, 2022	https://onlinecourses.nptel.ac.in/noc22_cs41/preview
Programming in Modern C++	12 Weeks	January 24, 2022	April 15, 2022	April 23, 2022	January 31, 2022	https://onlinecourses.nptel.ac.in/noc22_cs43/preview
Getting Started with Competitive Programming	12 Weeks	January 24, 2022	April 15, 2022	April 23, 2022	January 31, 2022	https://onlinecourses.nptel.ac.in/noc22_cs59/preview
Deep Learning for Visual Computing	12 Weeks	January 24, 2022	April 15, 2022	April 24, 2022	January 31, 2022	https://onlinecourses.nptel.ac.in/noc22_ee54/preview
Reinforcement Learning	12 Weeks	January 24, 2022	April 15, 2022	April 23, 2022	January 31, 2022	https://onlinecourses.nptel.ac.in/noc22_cs34/preview
Computer Vision and Image Processing – Fundamentals and Applications	12 Weeks	January 24, 2022	April 15, 2022	April 23, 2022	January 31, 2022	https://onlinecourses.nptel.ac.in/noc22_ee48/preview
Object Oriented System Development Using UML, Java And Patterns	12 Weeks	January 24, 2022	April 15, 2022	April 23, 2022	January 31, 2022	https://onlinecourses.nptel.ac.in/noc22_cs55/preview

List of Coursera courses:

S. No.	Year	Track 1		Track 2		Track 3		Track 4		Track 5		Track 6		Courses/ Credits
		Advanced AI & DS (Coursera)	Advanced AI & DS (NPTEL)	Programming and Application Development (Coursera)	Programming and Application Development (NPTEL)	AR & VR (Coursera)	AR & VR (NPTEL)	Software Systems Engg.(Coursera)	Software Systems Engg.(NPTEL)	Networking/Cyber Security/IoT/Blockchain (Coursera)	Networking/Cyber Security/IoT/Blockchain (NPTEL)	Industry Oriented(Coursera)	Industry Oriented (NPTEL)	
1	I	Design Thinking and Product Innovation	Design Thinking - A Primer	Design Thinking and Product Innovation	Design Thinking - A Primer	Design Thinking and Product Innovation	Design Thinking - A Primer	Design Thinking and Product Innovation	Design Thinking - A Primer	Design Thinking and Product Innovation	Design Thinking - A Primer		Getting Started with Competitive Programming	2-4
2		Capstone in Python	Programming in C++	Capstone in Python	Programming in C++	Capstone in Python	Programming in C++	Capstone in Python	Programming in C++	Capstone in Python	Programming in C++	-		
3		Startups and Innovation		Startups and Innovation		Startups and Innovation		Startups and Innovation		Startups and Innovation		-		
4		Competitive Programming	Getting Started with Competitive Programming	Competitive Programming	Getting Started with Competitive Programming	Competitive Programming	Getting Started with Competitive Programming	Competitive Programming	Getting Started with Competitive Programming	Competitive Programming	Getting Started with Competitive Programming	-		
5	II	AI Ethics	Ethics in Engineering Practice, Ethical Hacking	Wireframe & Prototype Development	-	Computer Graphics and 3D Design & Printing	Computer Vision and Image Processing – Fundamentals and Applications	Project Management and Testing	-	System Administration	-	Hackerrank */ Hackerearth */ Cloud Associate	2-4	
6		Random Variables and Queuing	Essentials Of Data Science With R	Mobile Application Development using Kotlin		-		-		IoT& AI Cloud	-	-		

		Theory	Software – 1 &2 : Probability And Statistical Inference											
7	III	Deep Learning	Deep learning – IITRopar , Deep Learning	Full Stack Development(Javascript)	-	Geometric Algorithms	-	Agile Methodologies (using Devops)	-	Wireless sensor networks	Secure Computation: Part I	Certification from Online Coding Platforms (Codechef, Leetcode,etc.)		2-6
8		Computer Vision	Deep Learning for Computer Vision, Computer Vision and Image Processing – Fundamentals and Applications	Full Stack Development (Python - Django)	-	AR/VR/MR/XR	-	Quantum Computing				-		
9		AI TensorFlow Development	Reinforcement Learning	-	Computational Geometry			-		Wireless Communication	-	-		
10		Data Warehousing and Data Mining	Scalable Data Science	-				-			Design for internet of things	-		

		Data Science with R												
11	IV	Generative Adversarial Networks						Design Patterns	-	Emerging Technologies	-	Data Engineer/ Cisco Certified/ Java Certification / Associate Android/ Web Apps /Redhat Linux Administration/ MIST/ Microsoft Server Administration/ Microsoft Azure		2-6
12		Autonomous Systems		Advanced Cloud Computing	Cloud Computing and Distributed Systems	GameDevelopment	-	Cloud Computing Solutions at Scale	Cloud Computing and Distributed Systems	Software Defined Networks	-			

HoD, IT