

## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

### MOOC FOR MINORS AND HONOURS - 2022 SCHEME BTECH CSE [ARTIFICIAL INTELLIGENCE]

#### MOOC FOR MINORS:

#### BASKET I SOFTWARE ENGINEERING

Sl. No.	Course	Course Code	Course Type	Duration	Offering Platform	B.Tech Regulation	Institution Offering the Course	Remarks
1	Programming in Java	CSMC00W	MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2022	IIT Kharagpur	Replacing <i>CS0M20A OBJECT ORIENTED PROGRAMMING</i> offered in <i>Semester 3</i>
2	Software Engineering	CSMC00Z	MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2022	IIT Kharagpur	Replacing <i>CS0M30A CONCEPTS IN SOFTWARE ENGINEERING</i> offered in <i>Semester 5</i>
3	Software Testing	CSMC01A	MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2022	IIIT Bangalore	Replacing <i>CS0M30D Introduction to Software Testing</i> offered in <i>Semester 6</i>
4	Object Oriented System Development using UML, Java and Patterns	CSMC00T	MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2022	IIT Kharagpur	
5	Fundamentals of Object Oriented Programming	CSMC01B	MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2022	IIT Roorkee	

**BASKET II MACHINE LEARNING**

Sl. No.	Course	Course Code	Course Type	Duration	Offering Platform	B.Tech Regulation	Institution Offering the Course	Remarks
1	Essential Mathematics for Machine Learning	CSMC01L	MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2022	IIT Ropar	Replacing the course <b>CS0M20E MATHEMATICS FOR MACHINE LEARNING</b> offered in <i>Semester 4</i> .
2	Essential Mathematics for Machine Learning	CSMC00I	MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2022	IIT Roorkee	Replacing the course <b>CS0M20E MATHEMATICS FOR MACHINE LEARNING</b> offered in <i>Semester 4</i> .
3	Linear Algebra in AI and ML	CSMC00P	MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2022	IIT Kharagpur	Replacing the course <b>CS0M20E MATHEMATICS FOR MACHINE LEARNING</b> offered in <i>Semester 4</i> .
4	Machine Learning for Engineering and Science Applications	CSMC00R	MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2022	IIT Madras	Replacing <b>CS0M30B CONCEPTS IN MACHINE LEARNING</b> offered in Semester 5
5	Introduction to Machine Learning	CSMC00O	MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2022	IIT Madras	Replacing <b>CS0M30B CONCEPTS IN MACHINE LEARNING</b> offered in <i>Semester 5</i>

Sl. No.	Course	Course Code	Course Type	Duration	Offering Platform	B.Tech Regulation	Institution Offering the Course	Remarks
6	Introduction to Machine Learning	CSMC00N	MOOC	8 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2022	IIT Kharagpur	Replacing <i>CS0M30B CONCEPTS IN MACHINE LEARNING</i> offered in <i>Semester 5</i>
7	Optimization for machine learning: Theory and Implementation	CSMC00U	MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2022	IIT Kharagpur	
8	Deep Learning	CSMC00H	MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2022	IIT Ropar	Replacing <i>CS0M30E CONCEPTS IN DEEP LEARNING</i> offered in <i>Semester 6</i>
9	Deep Learning	CSMC00G	MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2022	IIT Kharagpur	Replacing <i>CS0M30E CONCEPTS IN DEEP LEARNING</i> offered in <i>Semester 6</i>

### BASKET III NETWORKING

Sl. No.	Course	Course Code	Course Type	Duration	Offering Platform	B.Tech Regulation	Institution Offering the Course	Remarks
1	Introduction to Computer Networks and Internet protocols	CSMC00K	MOOC	15 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2022	Gujarat University Ahmedabad	Replacing <i>CS0M20F INTRODUCTION TO COMPUTER NETWORKS</i> offered in <i>Semester 4</i>

Sl. No.	Course	Course Code	Course Type	Duration	Offering Platform	B.Tech Regulation	Institution Offering the Course	Remarks
2	Advanced Computer Networks	CSMC00B	MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2022	IIT Gandhinagar	Replacing <b>CS0M20F INTRODUCTION TO COMPUTER NETWORKS</b> offered in <i>Semester 4</i>
3	Computer Networks and Internet Protocol	CSMC00D	MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2022	IIT Kharagpur	Replacing <b>CS0M20F INTRODUCTION TO COMPUTER NETWORKS</b> offered in <i>Semester 4</i>
4	Cloud Computing	CSMC00C	MOOC	12 weeks	NPTEL/ SWAYAM	B.Tech Regulation 2022	IIT Kharagpur	
5	Introduction to Internet of Things	CSMC00M	MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2022	IIT Kharagpur	Replacing <b>CS0M30F WIRELESS NETWORKS AND IOT APPLICATIONS</b> offered in <i>Semester 6</i>
6	Introduction To Industry 4.0 And Industrial Internet of Things	CSMC01C	MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2022	IIT Kharagpur	Replacing <b>CS0M30F WIRELESS NETWORKS AND IOT APPLICATIONS</b> offered in <i>Semester 6</i>

**MOOC FOR HONOURS:****BASKET I SECURITY IN COMPUTING**

Sl. No.	Course	Course Code	Course Type	Duration	Offering Platform	B.Tech Regulation	Institution Offering the Course	Remarks
1	A basic course in Number Theory	CSMC00A	MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2022	IIT Bombay	Replacing <b>CS1H20A NUMBER THEORY</b> offered in <i>Semester 4</i>
2	Cryptography and Network Security	CSMC00E	MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2022	IITKGP	Replacing <b>CS1H30A CRYPTOGRAPHIC ALGORITHMS</b> offered in <i>Semester 5</i>
3	Cyber Security and Privacy	CSMC00F	MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2022	IIT Madras	Replacing <b>CS1H30D NETWORK SECURITY</b> offered in <i>Semester 6</i>
4	Introduction to Cyber Security	CSMC00L	MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2022	Uttarakhand Open University, Haldwani	Replacing <b>CS1H30D NETWORK SECURITY</b> offered in <i>Semester 6</i>
5	Privacy and Security in Online Social Media	CSMC00V	MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2022	IIIT Hyderabad	

6	Ethical Hacking	CSMC00J	MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2022	IIT Kharagpur	
7	Secure Computation Part 1	CSMC00Y	MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2022	IIIT Bangalore	
8	Information Security and Cyber Forensics	CSMC01N	MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2022	Devi Ahilya Vishwavidyalaya, Indore	Replacing <b>CS1H40A</b> <b>FORENSICS</b> offered in <i>Semester 6</i> <b>CYBER</b>
9	Digital Forensics	CSMC01J	MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2022	Uttarakhand Open University, Haldwani	Replacing <b>CS1H40A</b> <b>FORENSICS</b> offered in <i>Semester 6</i> <b>CYBER</b>

## BASKET II

## COMPUTATIONAL BIOLOGY

Sl. No.	Course	Course Code	Course Type	Duration	Offering Platform	B.Tech Regulation	Institution Offering the Course	Remarks
1	BioInformatics: Algorithms and Applications	CSMC01F	MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2022	IIT Madras	Replacing <b>CS2H20A</b> <b>COMPUTATIONAL</b> <b>FUNDAMENTALS</b> <b>FOR</b> <b>BIOINFORMATICS</b> offered in <b>Semester 4</b>
2	Computational Systems Biology	CSMC01I	MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2022	IIT Madras	Replacing <b>CS2H30A</b> <b>COMPUTATIONAL</b> <b>BIOLOGY</b> offered in <b>Semester 5</b>
3	Artificial Intelligence in Drug Discovery and Development	CSMC01E	MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2022	IIT (BHU) Varanasi	
4	Next Generation Sequencing Technologies: Data Analysis and Applications	CSMC01O	MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2022	IIT Kharagpur	
5	Statistics for Biomedical Engineers	CSMC01P	MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2022	IIT Madras	
6	Fundamentals of Computational Biology	CSMC01M	MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2022	CSVTU, Bhilai	

**BASKET III          COMPUTER VISION**

Sl. No.	Course	Course Code	Course Type	Duration	Offering Platform	B.Tech Regulation	Institution Offering the Course	Remarks
1	Computer Vision	CSMC01G	MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2022	IIT Kharagpur	Replacing <b>CS2H30B</b> <b>ADVANCED CONCEPTS IN</b> <b>COMPUTER VISION</b> offered in <b>Semester 5</b>
2	Computer Vision and Image Processing - Fundamentals and Applications	CSMC01H	MOOC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2022	IIT Guwahati	
3	Digital Image Processing	CSMC01K	MOCC	12 Weeks	NPTEL/ SWAYAM	B.Tech Regulation 2022	IIT Kharagpur	