

Department of Artificial Intelligence and Machine Learning

[L= Lecture, T = Tutorials, P = Practical's, C = Credits]

Sl. No	Category	Course Code	Course Title	Hours/Week			Credits	Maximum Marks		
				L	T	P		CIA	ES E	Total
SEMESTER I										
THEORY COURSES										
1.	BS	26MA1201	Matrices and Calculus	3	1	0	4	40	60	100
2.	HS	26EN1101	Professional English	3	0	0	3	40	60	100
3.	HS	26HS1102	Universal Human Values	2	0	0	2	40	60	100
4.	ES	26CS1301	Problem Solving using C Programming	3	0	0	3	40	60	100
5.	HS	26HS1101	தமிழர்மரபு / Heritage of Tamils	1	0	0	1	40	60	100
THEORY COURSES WITH LABORATORY COMPONENT										
6.	ES	26AD1301	Essentials of Computing	3	0	2	4	50	50	100
LABORATORY COURSES										
7.	ES	26CS1L01	Problem Solving using C Programming Laboratory	0	0	4	2	60	40	100
MANDATORY COURSES										
8.	MC	26MCXXXX	Mandatory Course I	1	0	0	0	-	-	-
CAREER ENHANCEMENT COURSES										
9.	CEC	26CD1X01	Communication Skills	1	0	0	1			100
TOTAL CONTACT HOURS:							20			

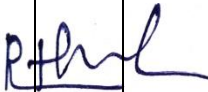


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SEMESTER II										
THEORY COURSES										
1.	BS	26MA2201	Applied Linear Algebra	3	1	0	4	40	60	100
2.	HS	26HS2101	தமிழரும் தொழில்நுட்பமும்/ Tamils and Technology	1	0	0	1	40	60	100
3.	ES	26EC2302	Digital Principles and Computer Organization	3	0	0	3	40	60	100
THEORY COURSES WITH LABORATORY COMPONENT										
4.	BS	26PH1203	Physics for Information Science	3	0	3	4.5	50	50	100
5.	ES	26IT2301	Python Programming	3	0	3	4.5	50	50	100
LABORATORY COURSES										
6.	HS	26EN2L01	English Language Proficiency Laboratory	0	0	4	2	60	40	100
7.	PC	26AM2L01	Design Thinking Laboratory	0	0	4	2	60	40	100
MANDATORY COURSES										
8.	MC	26MCXXXX	Mandatory Course II	1	0	0	0	-	-	-
TOTAL CONTACT HOURS:							21			

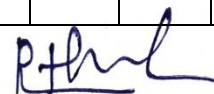


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				L	T	P		CIA	ESE	Total
SEMESTER III										
THEORY COURSES										
1.	HS	26HS3101	Climate Change and Sustainability	2	0	0	2	40	60	100
2.	PC	26AM3401	Operating Systems	3	0	0	3	40	60	100
3.	PC	26AM3402	Data Science	3	0	0	3	40	60	100
THEORY COURSES WITH LABORATORY COMPONENT										
4.	PC	26AM3403	Data Structures	2	0	4	4	50	50	100
5.	PC	26AM3404	Object Oriented Programming using C++	2	0	4	4	50	50	100
6.	PC	26AM3405	Artificial Intelligence	3	0	2	4	50	50	100
LABORATORY COURSES										
7.	PC	26AM3L01	Data Science Laboratory	0	0	4	2	60	40	100
CAREER ENHANCEMENT COURSES										
8.	CEC	26CD3X01	Logical and Analytical Thinking	1	0	0	1			100
TOTAL CONTACT HOURS:							23			

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Sl. No	Category	Course Code	Course Title	Hours/Week			Credits	Maximum Marks		
				L	T	P		CIA	ESE	Total
SEMESTER IV										
THEORY COURSES										
1.	BS	26MA3201	Discrete Mathematical Structures	3	1	0	4	40	60	100
2.	PC	26AM4401	Software Engineering	3	0	0	3	40	60	100
3.	PC	26AM4402	Design and Analysis of Algorithm	3	0	0	3	40	60	100
4.	PC	26AM4403	Database Management Systems	3	0	0	3	40	60	100
5.	PC	26AM4404	Big Data Analytics	3	0	0	3	40	60	100
THEORY COURSES WITH LABORATORY COMPONENT										
6.	PC	26AM4405	Java Programming	3	0	2	4	50	50	100
LABORATORY COURSES										
7.	PC	26AM4L01	Database Management Systems Laboratory	0	0	4	2	60	40	100
CAREER ENHANCEMENT COURSES										
8.	CEC	26CD4X01	Advanced Aptitude & Reasoning	1	0	0	1			100
9.	CEC	26SDXXXX	Skill Development Course -I	1	0	0	1			100
TOTAL CONTACT HOURS:							24			

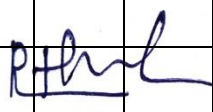


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Sl. No	Category	Course Code	Course Title	Hours/Week			Credits	Maximum Marks		
				L	T	P		CIA	ESE	Total
SEMESTER V										
THEORY COURSES										
1.	PC	26AM5401	Theory of Computation	3	1	0	4	40	60	100
2.	PC	26AM5402	Machine Learning	3	0	0	3	40	60	100
3.	PC	26AM5403	Data and Information Security	3	0	0	3	40	60	100
4.	PE	26AM55XX	Professional Elective-I	3	0	0	3	40	60	100
THEORY COURSES WITH LABORATORY COMPONENT										
5.	PC	26AM5403	Computer Networks	3	0	2	4	50	50	100
6.	PC	26AM5405	Data Exploration and Visualization	2	0	4	4	50	50	100
LABORATORY COURSES										
7.	PC	26AM5L01	Machine Learning Laboratory	0	0	4	2	60	40	100
CAREER ENHANCEMENT COURSES										
8.	CEC	26CD5X01	Professional Coding for Career Development	1	0	0	1			100
TOTAL CONTACT HOURS:							24			



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				L	T	P		CIA	ESE	Total
SEMESTER VI										
THEORY COURSES										
1.	PC	26AM6401	Deep Learning	3	0	0	3	40	60	100
2.	PE	26AM65XX	Professional Elective-II	3	0	0	3	40	60	100
3.	PE	26AM65XX	Professional Elective-III	3	0	0	3	40	60	100
4.	OE	26AM66XX	Open Elective-I	3	0	0	3	40	60	100
THEORY COURSES WITH LABORATORY COMPONENT										
5.	PC	26AM6402	Large Language Models	2	0	2	3	50	50	100
6.	PC	26AM6403	Full stack Development	3	0	2	4	50	50	100
LABORATORY COURSES										
7.	PC	26AM6L01	Deep Learning Laboratory	0	0	4	2	60	40	100
PROJECT										
8.	PW	26AM6701	Multidisciplinary Mini Project	0	0	4	2	50	50	100
CAREER ENHANCEMENT COURSES										
9.	CEC	26CD6X01	Advanced Programming skills	1	0	0	1			100
10.	CEC	26SDXXXX	Skill Development Course -II	1	0	0	1			100
TOTAL CONTACT HOURS:							25			

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				L	T	P		CIA	ESE	Total
SEMESTER VII										
THEORY COURSES										
1.	HS	26HS7101	Research, Innovation and Entrepreneurship	2	0	0	2	40	60	100
2.	PE	26AM75XX	Professional Elective-IV	3	0	0	3	40	60	100
3.	PE	26AM75XX	Professional Elective-V	3	0	0	3	40	60	100
4.	OE	26AM76XX	Open Elective-II	3	0	0	3	40	60	100
PROJECT										
5.	PW	26AM7701	Project Work -Phase I	0	0	4	2	60	40	100
CAREER ENHANCEMENT COURSES										
6.	CEC	26INXXXX	Internship	0	0	4	2			100
7.	CEC	26CD7X01	Career Readiness and Employability Skills	1	0	0	1			100
TOTAL CONTACT HOURS:							16			

Sl. No	Category	Course Code	Course Title	Hours/Week			Credits	Maximum Marks		
				L	T	P		CIA	ESE	Total
SEMESTER VIII										
PROJECT										
1.	PW	26AM8701	Project Work- Phase II	0	0	16	08	60	40	100
TOTAL CONTACT HOURS:							08			



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CHAPTER – 4**List of Programme Electives for Professional Electives and Honours Degree**

AI and Machine Learning		Data Analytics		Fundamentals of IOT		Security And Privacy		Cloud Essentials		Emerging Technologies	
Course Code	Course Title	Course Code	Course Title	Course Code	Course Title	Course Code	Course Title	Course Code	Course Title	Course Code	Course Title
26AMX501	Knowledge Representation and Reasoning	26ADX501	Search Methods for Problem Solving	26CSX501	Fundamentals of IoT	26CYX501	Information Security	26ITX501	Data Warehousing & Mining	26CSX509	Deep Learning and Neural Networks
26AMX502	Recommendation Systems	26ADX502	Image and Video Analytics	26CSX502	Sensors and Actuators for IoT	26CYX502	Modern Cryptography	26ITX502	Cloud Computing	26CSX510	Agentic AI
26AMX503	Soft Computing	26ADX503	Web and Social Media Analytics	26CSX503	IoT Networking & Communication	26CYX503	Security in Communication Networks	26ITX503	Distributed Systems	26CSX511	Blockchain Architecture and Design
26AMX504	Computer Vision	26ADX504	Predictive Analytics	26CSX504	IoT Cloud Platforms	26CYX504	Malware analysis	26ITX504	Cloud Application Development and Deployment	26CSX512	Large Language Models
26AMX505	Human Computer Interaction	26ADX505	Stream Data Analytics	26CSX505	Communication Protocols for IoT	26CYX505	Hardware Security	26ITX505	Devops	26CSX513	Augmented and virtual reality
26AMX506	Business Intelligence Analytics	26ADX506	Social Network Analysis and Security	26CSX506	IoT Analytics	26CYX506	Cyber threat for IoT and Cloud	26ITX506	Edge Computing	26CSX514	Federated Learning
26AMX507	Robotic Process Automation	26ADX507	Statistical Learning for Data Science	26CSX507	Industrial IoT	26CYX507	Secure Coding	26ITX507	Cloud Data Centric Networking	26CSX515	Explainable AI
26AMX508	Information Visualization	26ADX508	Learning Analytical Tools	26CSX508	IoT in 5G Networks	26CYX508	Mobile Application Security	26ITX508	Serverless Computing	26CSX516	Quantum Computing

*** Elective Course Structure: L–T–P–C: 3–0–0–3 | Assessment: CIA – 40%, ESE – 60%**



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LIST OF OPEN ELECTIVES

S. No	Department	Course Code	Course Title	Hours/Week			Credits	Maximum Marks		
				L	T	P		CIA	ESE	Total
1.	AIDS	26ADX601	Exploratory Data Analysis	3	0	0	3	40	60	100
2.	CSE	26CSX601	Introduction to Java Programming	3	0	0	3	40	60	100
3.	CSE (CS)	26CYX601	Introduction to Cyber Security	3	0	0	3	40	60	100
4.	EEE	26EEX601	Electrical Safety and Standards	3	0	0	3	40	60	100
5.	EEE	26EEX602	IoT for Smart Energy	3	0	0	3	40	60	100
6.	ECE	26ECX601	Basics of Biomedical Instrumentation	3	0	0	3	40	60	100
7.	ECE	26ECX602	Fundamentals of Microprocessor and Microcontrollers	3	0	0	3	40	60	100
8.	IT	26ITX601	Industry 5.0	3	0	0	3	40	60	100
9.	MECH	26MEX601	Drone Design and Development	3	0	0	3	40	60	100
10.	Chemistry	26CHX601	Solid and E-Waste Management	3	0	0	3	40	60	100
11.	Chemistry	26CHX602	Energy Conservation and Management	3	0	0	3	40	60	100
12.	Chemistry	26CHX603	Sustainable Development Goals and Engineering Practices	3	0	0	3	40	60	100
13.	Physics	26PHX601	Nano Science and Technology	3	0	0	3	40	60	100
14.	Physics	26PHX602	Nano Electronics and Photonics	3	0	0	3	40	60	100
15.	Mathematics	26MAX601	Essential Statistical Techniques for Data Science	3	0	0	3	40	60	100
16.	Mathematics	26MAX602	Optimization Methods and Applications.	3	0	0	3	40	60	100
17.	English	26ENX601	English for Digital media	3	0	0	3	40	60	100
18.	MBA	26PMX601	Stress Management	3	0	0	3	40	60	100

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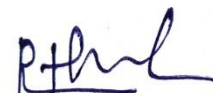
19.	MBA	26PMX602	AI in Human Resource Management	3	0	0	3	40	60	100
20.	MBA	26PMX603	Ethical values of business	3	0	0	3	40	60	100
21.	MBA	26PMX604	Entrepreneurship Development	3	0	0	3	40	60	100

LIST OF OPEN ELECTIVES NPTEL

S. No	Course Title
1.	Fundamentals of Semiconductor Devices
2.	Principles of Communication Systems – I
3.	Introduction to Machine Learning
4.	Introduction to Artificial Intelligence
5.	Smart Materials and Structures
6.	Cryogenic Engineering
7.	EV Essentials
8.	Introduction to Green Energy Technologies
9.	Cryptography and Network Security
10.	Introduction to Database Concepts
11.	Data Analytics with Python
12.	Social Networks
13.	Entrepreneurship Essentials
14.	United Nations Sustainable Development Goals (UN SDGs)
15.	Energy and the Climate Crisis: The Path to Net-Zero Emissions
16.	Elements of Literature and Creative Communication

***Course titles are subject to change as per NPTEL/SWAYAM schedule.**

***Only 12-week courses are considered for 3 credits.**



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LIST OF MANDATORY COURSES

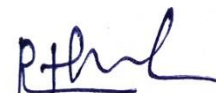
S. No	Course Code	Course Title	Hours / Week			Credits
			L	T	P	
1	26MC1001	Indian Constitution	1	0	0	0
2	26MC1002	Environmental Science	1	0	0	0
3	26MC2001	Indian Knowledge Systems	1	0	0	0

CREDIT SUMMARY

S.No	Category	Credits/Semester								Credits	Credits %
		I	II	III	IV	V	VI	VII	VIII		
1	HS	6	3	2	-	-	-	2	-	13	8
2	BS	4	8.5	-	4	-	-	-	-	16.5	10
3	ES	9	7.5	-	-	-	-	-	-	16.5	10
4	PC	-	2	20	18	20	12	-	-	72	45
5	PE	-	-	-	-	3	6	6	-	15	9
6	OE	-	-	-	-	-	3	3	-	6	4
7	PW	-	-	-	-	-	2	4	8	14	9
8	CEC	1	-	1	2	1	2	1	-	08	5
9	MC	NC	NC	-	-	-	-	-	-	-	-
	Total	20	21	23	24	24	25	16	8	161	100%

Total Number of Credits: 161

HS-Humanities& Science; BS-Basic Science; EC-Engineering Science; PC-Professional Core; PE-Professional Elective; OE-Open Elective



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