MUJ Faculty of Engineering
Bachelor's in Technology in Computer Science and Engineering (Artificial Intelligence & Machine Learning) (2023-2024) onwards

First Semester		
Code	Course Name	Cr
CHY1001	Engineering Chemistry & Lab	3
MAS1101	Calculus & Matrices	3
EEE1001	Basic Electrical Engineering	3
ECE1001	Basic Electronics	3
CHE1001	Biology for Engineers	2
CSE1001	Computer Programming & Lab	4
	IoT Fab Lab	1
LAW1010	Constitution of India	1
First Semester Credits		**20**

Second Semester		
Code	Course Name	Cr
PHY1001	Engineering Physics & Lab	4
	Computational Mathematics	3
CHY1002	Environmental Studies	2
	Engineering Materials & Mechanics	4
MEE1030	MATLAB for Engineers	2
MEE1031	Creativity & Innovation Lab	2
MEE1031	Engineering Graphics	1
LLC1001	Technical Writing Clinic 1	1
DA1001	Universal Human Values	1
Second Semester Credits		**20**

Third Semester		
Code	Course Name	Cr
XXXXXX	Statistics & Probability	3
AIN2101	Department Core 1	4
AIN2102	Department Core 2	4
AIN2103	Department Core 3	4
XX21XX	Economics	3
AIN21XX	University Elective 1	3
AIN2130	Lab 1	1
AIN2131	Lab 2	1
AIN2170	Self-Study – 1 or Project	1
Third Semester Credits		**24**

Fourth Semester		
Code	Course Name	Cr
XX22XX	Management	3
AIN2201	Department Core 4	4
AIN2202	Department Core 5	4
AIN2220/AIN2221	Flexi Core 1	4
AIN22XX	Program Elective 1	3
AIN22XX	University Elective 2	3
AIN2230	Lab 3	1
AIN2231	Lab 4	1
AIN2270	Project Based Learning 1	1
Fourth Semester Credits		**24**

Fifth Semester		
Code	Course Name	Cr
AIN3101	Department Core 6	4
AIN3102	Department Core 7	4
AIN3120/AIN3121	Flexi Core 2	4
XXX31XX	Program Elective 2	3
XXX31XX	Program Elective 3	3
AIN31XX	University Elective 3	3
AIN3131	Lab 5	1
AIN3132	Lab 6	1
AIN3170	Project Based Learning 2	1
Fifth Semester Credits		**24**

Sixth Semester		
Code	Course Name	Cr
AIN3201	Department Core 8	4
AIN3220/ AIN3221	Flexi Core 3	4
XXX32XX	Program Elective 4	3
XXX32XX	Program Elective 5	3
AIN32XX	University Elective 4	3
XXX32XX	Technical Writing Clinic 2	1
AIN3231	Lab 7	1
AIN3270	Self-Study – 2	1
AIN3271	Research, Innovation & Entrepreneurship	3
Sixth Semester Credits		**23**

Seventh Semester		
Code	Course Name	Cr
AIN41XX	University Elective 5	3
XX41XX	Program Elective 6	3
XX41XX	Program Elective 7	3
XX41XX	Program Elec 8 / Univ Elect 6	3
AIN4170	Internship (Industry/ Research)	1
Seventh Semester Credits		**13**

Eighth Semester		
Code	Course Name	Cr
AIN4270	Major Project	12
Eighth Semester Credits		**12**

Proposed List of Courses offered by the Department of CSE(AIML)

Proposed Department Core Courses
1. AIN2101: Data Structures and Algorithms
2. AIN2102: Relational Database Management System
3. AIN2103: Object Oriented Programming using Python.
4. AIN2201: Design and Analysis of Algorithms
5. AIN2202: Operating System
6. AIN3101: Machine Learning
7. AIN3102: Automata Theory & Compiler Design
8. AIN3201: Deep Neural Network

Proposed Flexi- Courses
1. FC1: AIN2220 Principles of Artificial Intelligence
2. FC1: AIN2221 Data Analytics and Visualization
3. FC2: AIN3120 Software Engg. & Project Management
4. FC2: AIN3121 Agile Software Development
5. FC3: AIN3220 Computer Networks and Internets
6. FC3: AIN3221 Data Communication and Networking

Program Electives (PE-1)
1. AIN2241: Internet of Things
2. AIN2242: Computer Graphics and Multimedia
3. AIN2243: Git Essential
4. AIN2244: Computer Organization and Architecture
5. AIN2245: Cloud Computing Techniques.

Program Electives (PE-3)
6. AIN3143: Android App Development
7. AIN3144: Advanced Data Structures
8. AIN3145: Graph Theory and Applications
9. AIN3146: Web Technologies
10. AIN3147: NoSQL Database

Program Electives (PE-7 & 8)
11. AIN4145: Cyber Physical System
12. AIN4146: Social Network Analysis
13. AIN4147: Information Retrieval
14. AIN4148: Virtual & Augmented Reality
15. AIN4149: Computer Vision
16. AIN4150: Reinforcement Learning
17. AIN4151: MLOps
18. AIN4152: Data Security and Privacy
19. AIN4153: Recommender System
20. AIN4154: Biometrics

Focus Areas offered by Department of CSE

Focus Area 1: Health Care Analytics
1. AIN3141: Healthcare Informatics (PE 2)
2. AIN3241: Wearable Technologies (PE 4)
3. AIN3243: Medical Image Processing (PE 5)
4. AIN4141: IoT with Healthcare (PE 6)
5. AIN4143: Big Data Analytics (PE 7)

Focus Area 2: Behavior Analytics
1. AIN3142: Behavior Data Analysis (PE 2)
2. AIN3242: Natural Language Processing (PE 4)
3. AIN3244: Sentimental Analysis and Opining mining (PE 5)
4. AIN4142: Graph Neural Network (PE 6)
5. AIN4144: Cognitive Computing (PE 7)

Proposed Department University Electives (Artificial Intelligence).
(For Non-FoE)
1. AIN2180: Data Structure
2. AIN2280: Python Programming
3. AIN3180: Machine learning
4. AIN3280: Data Visualization Techniques
5. AIN4180: Deep Neural Network