

Maulana Azad



NATIONAL INSTITUTE OF TECHNOLOGY, Bhopal-462003

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

M. Tech. in *Artificial Intelligence*

SCHEME OF STUDY (Revised April 2020)

### First Semester

Course No.	Subject	Schemes of Studies Periods per week			Total Credits
		L	T	P	
AI 101	Statistical Methods	3	1	-	4
AI 102	Knowledge base Systems	3	1	-	4
AI 103	Machine Learning	3	1	-	4
AI 104	Soft Computing	3	1	-	4
	Elective 1 (A)	3	1	-	4
	Elective 2 (B)	3	1	-	4
AI 105	NPTEL/MOOC Communication Skills	2	-	-	2
AI 106	Lab-I	-	-	2	1
AI 107	Seminar-I	-	-	2	1
<b>Total Hours 30</b> <b>Total Credits (Cumulative) 28</b>		<b>Total Credits</b>			<b>28</b>

### Second Semester

Course No.	Subject	Schemes of Studies Periods per week			Total Credits
		L	T	P	
AI 201	Modern Algorithm Design	3	1	-	4
AI 202	Deep Learning	3	1	-	4
AI 203	Computer Vision	3	1	-	4
	Elective 3(A)	3	1	-	4
	Elective 4(A)	3	1	-	4
	Elective 5(C)	3	1	-	4
AI 204	Lab - II	-	-	2	1
AI 205	Research Methodology, Technical Report and Paper Writing	-	2	-	1
AI 206	Seminar-II	-	-	2	2
<b>Total Hours 30</b> <b>Total Credits (Cumulative) 56</b>		<b>Total credits</b>			<b>28</b>

**Third Semester**

<b>Course No.</b>	<b>Subject</b>	<b>Schemes of Studies Periods per week</b>			<b>Total Credits</b>
		<b>L</b>	<b>T</b>	<b>P</b>	
<b>AI 301</b>	Project Phase -I	-	-	24	12
<b>Total Hours 24 Total Credits (Cumulative) 68</b>		<b>Total credits</b>			<b>12</b>

**Fourth Semester**

<b>Course No.</b>	<b>Subject</b>	<b>Schemes of Studies Periods per week</b>			<b>Total Credits</b>
		<b>L</b>	<b>T</b>	<b>P</b>	
<b>AI 401</b>	Project Phase –II / Dissertation	-	-	24	12
<b>Total Hours 24 Total Credits (Cumulative) 80</b>		<b>Total credits</b>			<b>12</b>

## List of Electives

### Group A: Program Electives

<b>Subject Code</b>	<b>Name</b>
AI 501	Artificial and Evolutionary Algorithms
AI 502	Reinforcement Learning
AI 503	Robotics and Planning algorithms
AI 504	Advanced Machine Learning Techniques
AI 505	Natural Language Processing
AI 506	Fuzzy and Rough Theory
AI 507	Data Driven Optimization
AI 508	Brain Computer Interfacing
AI 509	Text Mining
AI 510	Game Theory
AI 511	Scalable Systems for data science

### Group B: Department Electives (for other programs of same department only)

<b>Subject Code</b>	<b>Name</b>
AI 601	Artificial and Evolutionary Algorithms
AI 602	Reinforcement Learning
AI 603	Robotics and Planning algorithms
AI 604	Advanced Machine Learning Techniques

### Group C: Institute Electives (for other departments only)

<b>Subject Code</b>	<b>Name</b>
AI 701	Artificial and Evolutionary Algorithms
AI 702	Robotics and Planning algorithms