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**POSTGRADUATE DEGREE COURSES  
IN  
COMPUTER SCIENCE  
&  
ENGINEERING**

**(Artificial Intelligence and Machine Learning)**

**(Engineering & Technology)**

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**[Proposed Syllabus – 2023 onwards]**

**Department of Computer Science & Engineering  
Dibrugarh University Institute of Engineering and  
Technology, Dibrugarh University  
Dibrugarh, Assam-786004  
India**

**Semester-wise structure of curriculum****[L= Lecture, T = Tutorials, P = Practical's & C = Credits]****Semester I (First year] Curriculum  
Branch/Course: Computer Science Engineering**

Sl. No.	Course Code	Course Title	Hours per week			Credits
			Lecture	Tutorial	Practical	
1	M. Tech-CSE-101	Mathematics for Machine Learning	3	0	0	3
2	M. Tech-CSE-111	Mathematics for Machine Learning Laboratory	0	0	2	1
3	M. Tech-CSE-102	Advanced-Data Structures	3	0	0	3
4	M. Tech-CSE-112	Advanced-Data Structures Laboratory	0	0	2	1
5	M. Tech-CSE-103	Data Warehousing & Pattern Mining	3	0	0	3
6	M. Tech-CSE-113	Data Warehousing & Pattern Mining Laboratory	0	0	2	1
7	M. Tech-CSE-104	Data Visualization & Machine Learning	3	0	0	3
8	M. Tech-CSE-114	Data Visualization & Machine Learning Laboratory	0	0	2	1
9	M. Tech-CSE-105	Research Methodology and IPR	3	0	0	3
<b>Total Credits</b>						<b>19</b>

**Semester II (First year) Curriculum**  
**Branch/Course: Computer Science Engineering**

Sl. No.	Code	Course Title	Hours per week			Credits
			Lecture	Tutorial	Practical	
1	M. Tech-CSE-201	Optimization Technique	3	0	0	3
2	M. Tech-CSE-202	Deep Neural Network	3	0	0	3
3	M. Tech-CSE-212	Deep Neural Network Laboratory	0	0	2	1
4	M. Tech-CSE-203	Artificial Intelligence & Knowledge Representation	3	0	0	3
5	M. Tech-CSE-213	Artificial Intelligence & Knowledge Representation Laboratory	0	0	2	1
6	M. Tech-CSE-204	Natural Language Processing	3	0	0	3
7	M. Tech-CSE-214	Natural Language Processing Laboratory	0	0	2	1
8	M. Tech-CSE-205	Elective-I	3	0	0	3
<b>Total Credits</b>						<b>18</b>

**Elective-I Subjects:**

- (i) Reinforcement Learning
- (ii) Graph Representation Learning
- (iii) Information Retrieval
- (iv) Knowledge Engineering and Expert Systems
- (v) Number Theory & Cryptography

**Semester III (Second year] Curriculum**  
**Branch/Course: Computer Science Engineering**

Sl. No.	Code	Course Title	Hours per week			Credits
			Lecture	Tutorial	Practical	
1	M. Tech-CSE-301	Technical Writing	0	0	2	0
2	M. Tech-CSE-312	Project-I	0	0	30	15
<b>Total Credits</b>						<b>15</b>

**Semester IV (Second year] Curriculum**  
**Branch/Course: Computer Science Engineering**

Sl. No	Code	Course Title	Hours per week			Credits
			Lecture	Tutorial	Practical	
1	M. Tech-CSE-411	Project-II	0	0	32	16
<b>Total Credits</b>						<b>16</b>