



**UTTARAKHAND BOARD OF TECHNICAL EDUCATION**  
**INSTITUTE OF RESEARCH DEVELOPMENT & TRAINING**  
**(STUDY AND EVALUATION SCHEME FOR DIPLOMA PROGRAMME)**



**BRANCH NAME: ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING**

**SEMESTER – V**

**BRANCH CODE: 43**

Course Code	Course Title	TH	T	P	T O T	EVALUATION SCHEME						Total Marks	Total Credit
						Internal Assessment		External					
						Theory	Practical	Theory		Practical			
						Max Marks	Max Marks	Max Marks	Duration in Hrs.	Max Marks	Duration in Hrs.		
Periods Per Week													
435001	Scripting Languages (Python)	6	0	6	12	30	20	50	2.5	50	3.0	150	9
435002	Internet of Things	6	0	6	12	30	20	50	2.5	50	3.0	150	9
435003	<b>Elective-1:</b> Machine Learning or, Fundamentals of Cloud Computing	5	0	0	5	50	0	50	2.5	0	-	100	5
435004													
435005	<b>Elective-2:</b> Data Sciences : Data Ware housing and Data Mining or, Multimedia Technologies	5	0	0	5	50	0	50	2.5	0	-	100	5
435006													
435007	<b>Open Elective:</b> Smart Systems or, Renewable Energy Technologies	4	0	0	4	50	0	50	2.5	0	-	100	4
435008													
435009	Machine Learning in Python Lab	0	0	4	4	0	30	0	-	70	3.0	100	2
AS501	Summer Internship-II (4-6 week duration after IV Sem)	-	-	-	-	0	50	0	-	50	3.0	100	3
AS502	Major Project-I	0	0	2	2	0	50	0	-	100	3.0	150	1
015054	General Proficiency	0	0	4	4	0	25	0	-	0	-	25	0
435052	Industrial Exposure	0	0	0	0	0	25	0	-	0	-	25	0
	<b>Total</b>	<b>26</b>	<b>0</b>	<b>22</b>	<b>48</b>	<b>210</b>	<b>220</b>	<b>250</b>	<b>-</b>	<b>320</b>	<b>-</b>	<b>1000</b>	<b>38</b>

**General Proficiency :** will comprise of various co-curricular activities like games, hobby clubs, seminars, declamation contests, extension lectures, NCC, NSS, cultural activities and discipline etc.

**Industrial Exposure :** compulsory at minimum 2 Industries or Departments.

**Major Project:** It is divided in to two parts (Major Project-I & Major Project-II). Major Project will be initiated in V Semester and will get complete in VI Semester.

**Note :-**

1. Each period will be of 50 minutes.
2. Each session will be of 16 weeks.
3. Effective teaching will be at least 12.5 weeks.