



**School of Engineering and Technology
 Department of Robotics and Automation**

Credit Definition

Type	Duration (in Hour)	Credit
Lecture (L)	1	1
Tutorial (T)	1	1
Practical (P)	2	1

Total Credit

Year	Semester	Hrs/week	Credit
1 st	1	30	24
	2	29	23
2 nd	3	30	24
	4	30	25
3 rd	5	26	22
	6	27	23
4 th	7	22	21
	8	17	16
Total			178

Category Codification with Credit Break up

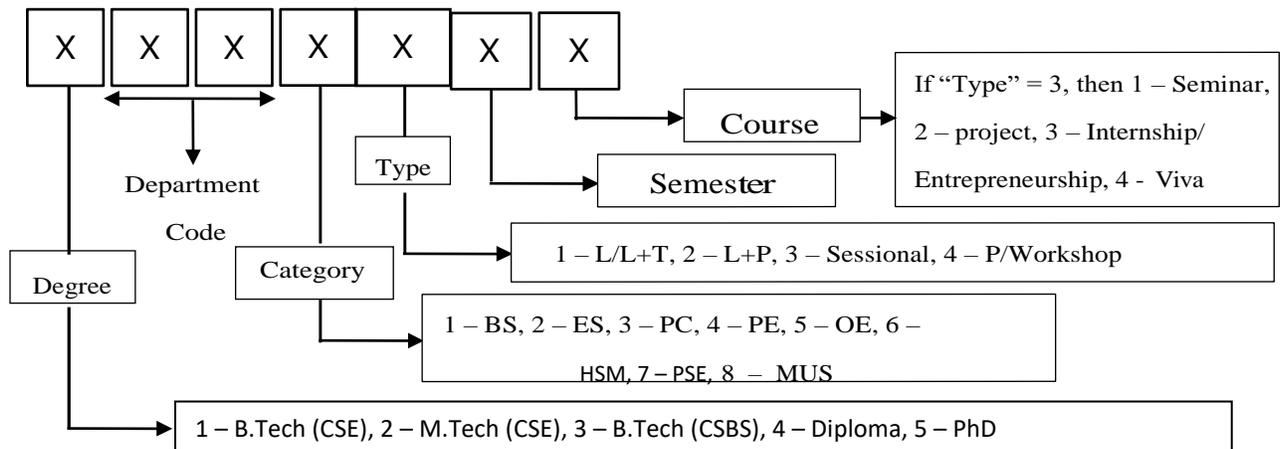
Definition of Category	Code	No	Credit
Basic Science	BS	1	26
Engineering Science	ES	2	23
Professional Core	PC	3	47
Professional Elective (Discipline Specific)	PE	4	21
Open Elective (General Elective)	OE	5	12
Humanities & Social Science including Management	HSM	6	9
Project Work / Seminar / Internship / Entrepreneurship	PSE	7	22
Mandatory / University Specified (Environmental Sc. / Induction Training / Indian Constitution / Foreign Language)	MUS	8	18
			178



**School of Engineering and Technology
 Department of Robotics and Automation**

Category wise Credit Distribution

Subject Codification





**School of Engineering and Technology
 Department of Robotics and Automation**

**SEMESTER: I
 Mandatory Induction Program – Duration 3 weeks**

- | |
|--|
| <ul style="list-style-type: none"> • Physical Activity • Creative Arts • Universal Human Values • Literary • Proficiency Modules • Lectures by Eminent People • Visits to Local Areas • Familiarization to Department/Branch & Innovations |
|--|

SI No.	Course Title	Code	Credit	Type		
				L	T	P
1	Engineering Mathematics – I	1191111	3	3	0	0
2	Engineering Physics	1171112	3	3	0	0
3	Engineering Drawing	1102111	2	2	0	0
4	Fundamentals of Computer Sc. & Problem-Solving using C	1112112	3	3	0	0
5	Principles of Electrical Engineering	1132113	3	3	0	0
6	Communicative English - I	1216111	2	2	0	0
7	Environmental Science	1158111	2	2	0	0
8	Engineering Physics Lab	1171212	1	0	0	2
9	Engineering Drawing Lab	1102211	1	0	0	2
10	Fundamentals of Computer Sc. & Problem-Solving Lab	1112212	2	0	0	4
11	Foreign Language - I	1278111	2	2	0	0
Total Credit (BS: 08, ES: 10, HSM: 04, MUS: 02)			24	28 hrs/ week		



**School of Engineering and Technology
 Department of Robotics and Automation**

SEMESTER: II

SI No.	Course Title	Code	Credit	Type		
				L	T	P
1	Engineering Mathematics – II	1191121	3	3	0	0
2	Engineering Chemistry	1161122	3	3	0	0
3	Principles of Computer Programming	1112122	4	4	0	0
4	Basic Electronics	1122123	3	3	0	0
5	Biology for Engineers	1151123	2	2	0	0
6	Communicative English - II	1216121	2	2	0	0
7	Engineering Chemistry Lab	1161222	1	1	0	0
8	Introduction to Manufacturing Processes Lab	1102221	2	0	0	4
9	Principles of Computer Programming Lab	1112222	2	0	0	4
10	Basic Electronics Lab	1122223	1	0	0	2
11	Foreign Language - II	1278121	2	2	0	0
Total Credit (BS: 08, ES: 14, HSM: 01, MUS: 02)			25	30 hrs/ week		

SEMESTER: III

SI No.	Course Title	Code	Credit	Type		
				L	T	P
1	Numerical Methods	1191131	3	3	0	0
2	Control system	1133231	3	3	0	0
3	Strength of Materials	1403231	2	2	0	0
4	Applied thermal Engg	1103131	2	2	0	0
5	Computer Aided design & Manufacturing	1103132	3	3	0	0
6	System Embedded programming with Java	1393131	2	2	0	0
7	Control System Lab using MATLAB	1133232	1	0	0	2
8	System Embedded programming with Java Lab (IBM)	1393431	1	0	0	2
9	CAD/CAM Lab	1103232	1	0	0	2
10	Applied Thermal Engg Lab	1103231	1	0	0	2
11	Strength of material Lab	1403232	1	0	0	2
12	Foreign Language - III	1278131	2	2	0	0
Total Credit (ES: 03, PC: 17, MUS: 02)			22	27 hrs/ week		



**School of Engineering and Technology
 Department of Robotics and Automation**

SEMESTER: IV

Sl No.	Course Title	Code	Credit	Type		
				L	T	P
1	Kinematics & Dynamics of Robots	1393141	3	3	0	0
2	Process Control & Automation	1133241	3	3	0	0
3	Robot Sensors	1393242	3	3	0	0
4	Microprocessor & Microcontrollers	1123143	3	3	0	0
5	Automation Lab/PLC Lab	1133242	1	0	0	2
6	Sensors	1393243	1	0	0	2
7	Microprocessor & Microcontrollers	1123343	1	0	0	2
8	Introduction to Roboanalyzer	1393441	1	0	0	2
9	REST API+ Node JS (IBM)	1393442	1	0	0	2
10	Mini Project-I (CAD/CAM based)	1107341	1	0	0	0
11	Foreign Language - IV	1278141	2	2	0	0
Total Credit (PC: 17, PSE: 01, MUS: 02)			20	24 hrs/ week		

SEMESTER: V

Sl No.	Course Title	Code	Credit	Type		
				L	T	P
1	AI and its application in Robotics	1393151	3	3	0	0
2	Drives for Robots	1393152	3	3	0	0
3	Robot Vision and Image Processing	1393153	3	3	0	0
4	Simulation, Modelling & Analysis	1393154	3	3	0	0
5	Planning Techniques for Robots	1393155	3	3	0	0
6	AI for Robots (IBM)	1393451	1	0	0	2
7	Drives Lab	1393452	1	0	0	2
8	Robot Vision & Image Processing lab	1393453	1	0	0	2
9	Simulation Lab	1393454	1	0	0	2
10	Mini Project-II(CAD/CAM based)	1107351	1	0	0	0
11	Technical Seminar-I	1397351	1	0	0	0
Total Credit (PC: 19, PSE: 02)			21	23 hrs/ week		



**School of Engineering and Technology
 Department of Robotics and Automation**

SEMESTER: VI

SI No.	Course Title	Code	Credit	Type		
				L	T	P
1	Machine Learning & application in Robotics	1393161	3	3	0	0
2	Wireless Network	1124162	3	3	0	0
3	Industrial /Process Automation & Management	1393162	3	3	0	0
4	Computer Integrated Manufacturing	1103161	3	3	0	0
5	Neural Network & Fuzzy System	1393163	3	3	0	0
6	Machine Learning (IBM)	1393461	2	0	0	4
7	Wireless Network Lab	1124462	1	0	0	2
8	Computer Integrated Manufacturing Lab	1103461	1	0	0	2
9	Robotics Process Automation Lab	1393462	1	0	0	2
10	Technical Seminar-II	1397361	1	0	0	0
Total Credit (PC: 20, PSE: 01)			21	25 hrs/ week		

SEMESTER: VII

SI No.	Course Title	Code	Credit	Type		
				L	T	P
1	Robot Economics	1393171	2	2	0	0
2	Optimization in Engineering Design	1393172	2	2	0	0
3	Mechatronics-I	1103171	2	2	0	0
4	Virtual Instrumentation	1393173	2	2	0	0
5	Manipulator, Estimation & Control	1393174	3	3	0	0
6	Predictive Analytics (IBM)	1393471	1	0	0	2
7	Manipulator, Estimation & Control Lab	1393474	2	0	0	4
8	Virtual Instrumentation Lab	1393473	1	0	0	2
9	Project-I	1397371	3	0	0	0
10	Summer Training	1127371	1	0	0	0
Total Credit (PC: 15, PSE: 04)			19	19 hrs/ week		



School of Engineering and Technology
Department of Robotics and Automation

SEMESTER: VIII

Sl No.	Course Title	Code	Credit	Type		
				L	T	P
1	Modern Material Handling System	1393181	3	3	0	0
2	Mechatronics-II	1103181	3	3	0	0
	Fluid power & Control	1403181	3	3	0	0
3	Values & Ethics	1213181	1	1	0	0
4	Humanoids	1393182	3	3	0	0
5	Microservices (IBM)	1393481	1	0	0	2
6	Project-II	1397381	4	0	0	0
7	Business Intelligence (IBM)	1393482	1	0	0	2
8	Grand Viva	1397382	2	0	0	0
Total Credit (PC: 14, HSM: 01, PSE: 06)			21	17 hrs/ week		