

Faculty of Engineering and Technology

Program Name: Bachelor of Technology in Robotics & Automation

Program Code: ET 113

Semester: I

With Effect From: 2026-27

Subject Code	Subject Name	Course Type	Credit	Hours per week				Theory (Marks)				Practical (Marks)				Total (Marks)
				L	T	P	Total	SEE		CCA		SEE		CCA		
								Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
2ET1000101T	Engineering Mathematics-I with Computing Tools	BSC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
2ET1000101P	Engineering Mathematics-I with Computing Tools Practical	BSC	1	-	-	2	2	-	-	-	-	10	25	10	25	50
2ET1000105T	Communication Skill	HSMC	2	2	-	-	2	24	60	16	40	-	-	-	-	100
2ET1000105P	Communication Skill Practical	HSMC	1	-	-	2	2	-	-	-	-	10	25	10	25	50
2ET1000109T	Elements of Electrical and Electronics Engineering	ESC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
2ET1000109P	Elements of Electrical and Electronics Engineering Practical	ESC	1	-	-	2	2	-	-	-	-	10	25	10	25	50
2ET1000113T	Elements of Civil Engineering	ESC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
2ET1000113P	Elements of Civil Engineering Practical	ESC	1	-	-	2	2	-	-	-	-	10	25	10	25	50
2ET1000114T	Elements of Mechanical Engineering	ESC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
2ET1000114P	Elements of Mechanical Engineering Practical	ESC	1	-	-	2	2	-	-	-	-	10	25	10	25	50
2ET1000115P	Manufacturing Practice Workshop	ESC	1	-	-	2	2	-	-	-	-	10	25	10	25	50
2ET1000116P	Yoga and Spirituality*		-	-	-	2	2	-	-	-	-	-	-	-	-	-
	Total		20	14	-	14	28									800

L=Lecture=Tutorial, P=Practical

BSC= Basic Science Course

ESC= Engineering Science Course

Note(if any):-*Subject Is Non-Credit

PCC= Professional Core Course

HSMC= Humanities & Social Science including Management Course

SEE= Semester End Evaluation

CCA= Continuous & Comprehensive Assessment

Faculty of Engineering and Technology

Program Name: Bachelor of Technology in Robotics & Automation

Program Code: ET 113

Semester: II

With Effect From: 2026-27

Subject Code	Subject Name	Course Type	Credit	Hours per week				Theory (Marks)				Practical (Marks)				Total (Marks)
				L	T	P	Total	SEE		CCA		SEE		CCA		
								Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
2ET1000102T	Engineering Mathematics-II with Computing Tools	BSC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
2ET1000102P	Engineering Mathematics-II with Computing Tools Practical	BSC	1	-	-	2	2	-	-	-	-	10	25	10	25	50
2ET1000104T	Engineering Physics	BSC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
2ET1000104P	Engineering Physics Practical	BSC	1	-	-	2	2	-	-	-	-	10	25	10	25	50
2ET1000107T	Problem Solving with Computational Thinking	ESC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
2ET1000107P	Problem Solving with Computational Thinking Practical	ESC	1	-	-	2	2	-	-	-	-	10	25	10	25	50
2ET1000108T	Engineering Graphic sand Design	ESC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
2ET1000108P	Engineering Graphics and Design Practical	ESC	1	-	-	2	2	-	-	-	-	10	25	10	25	50
2ET1000111T	Universal Human Value-II: Understanding Harmony and Ethical Human Conduct	HSMC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
2ET1000112P	IT Workshop	ESC	1	-	-	2	2	-	-	-	-	10	25	10	25	50
2ET1000117T	Environmental Studies*		-	2	-	-	2	-	-	-	-	-	-	-	-	-
	Total		20	17	-	10	27									750

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Program Name: Bachelor of Technology in Robotics & Automation

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Semester: III

With Effect From: 2026-27

Subject Code	Subject Name	Course Type	Credit	Hours per week				Theory (Marks)				Practical (Marks)				Total (Marks)
				L	T	P	Total	SEE		CCA		SEE		CCA		
								Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
2ET1000305T	Engineering Mathematics-III	BSC	4	3	1	-	4	24	60	16	40	-	-	-	-	100
1ET1130301T	Fundamentals of Robotics and Automation	PCC	3	3	-	-	3	24	60	16	40	-		-	-	100
1ET1130302T	Mechatronics, Robotics & Control	PCC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
1ET1130302P	Mechatronics, Robotics & Control Lab	PCC	1	-	-	2	2	-	-	-	-	10	25	10	25	50
1ET1130303T	Basics of Signal & Systems	ESC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
2ET1010302T	Engineering Materials & Applications	ESC	2	2	-	-	2	24	60	16	40	-	-	-	-	100
1ET1130304T	Machine Drawing and Elements of Machine Design	ESC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
1ET1130304P	Machine Drawing and Elements of Machine Design Lab	ESC	1	-	-	2	2	-	-	-	-	10	25	10	25	50
2ET1000303T	Indian Constitution	MC	0	1	-	-	1	-	-	-	-	-	-	-	-	0
	Total		20	18	1	4	23									700

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Program Name: Bachelor of Technology in Robotics & Automation

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Semester: IV

With Effect From: 2026-27

Subject Code	Subject Name	Course Type	Credit	Hours per week				Theory (Marks)				Practical (Marks)				Total (Marks)
				L	T	P	Total	SEE		CCA		SEE		CCA		
								Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
1ET1130401T	Measurement Systems and Sensors	PCC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
1ET1130401P	Measurement Systems and Sensors Lab	PCC	1	-	-	2	2	-	-	-	-	10	25	10	25	50
1ET1130402T	Machine Element and System Design	PCC	4	3	1	-	4	24	60	16	40	-	-	-	-	100
1ET1130402P	Machine Element and System Design Lab	PCC	1	-	-	2	2	-	-	-	-	10	25	10	25	50
1ET1130403T	Robotic Control Systems	PCC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
1ET1130403P	Robotic Control Systems Lab	PCC	1	-	-	2	2	-	-	-	-	10	25	10	25	50
2ET1010405T	Kinematics and Dynamics of Machines	PCC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
2ET1010405P	Kinematics and Dynamics of Machines Lab	PCC	1	-	-	2	2	-	-	-	-	10	25	10	25	50
1ET1130404T	Thermodynamics	PCC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
2ET1000402T	Integrated Personality Development Course-I	MC	0	2	-	-	2	-	-	-	-	-	-	-	-	0
	Total		20	17	1	8	26									700

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Semester: V

With Effect From: 2026-27

Subject Code	Subject Name	Course Type	Credit	Hours per week				Theory (Marks)				Practical (Marks)				Total (Marks)
				L	T	P	Total	SEE		CCA		SEE		CCA		
								Min.	Max.	Min.	Max.	Min.	Max.	Min	Max.	
1ET1130501T	Robot Dynamics and Manipulator Design	PCC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
1ET1130502T	Automation & Control Systems	PCC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
1ET1130502P	Automation & Control Systems Lab	PCC	1	-	-	2	2	-	-	-	-	10	25	10	25	50
1ET1130503T	PLC/SCDA for Industrial Automation	PCC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
2ET1010503T	Manufacturing Processes	PCC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
2ET1010503P	Manufacturing Processes Lab	PCC	1	-	-	2	2	-	-	-	-	10	25	10	25	50
	Professional Elective-I	PEC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
	Management Elective-I	HSMC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
2ET1000503T	Integrated Personality Development Course - II	MC	0	2	-	-	2	-	-	-	-	-	-	-	-	0
	Total		20	20	-	4	24									700

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Professional Elective-I:	
1ET1130504T	Python Programming
1ET1130505T	Automotive Vehicle Dynamics
1ET1130506T	Advanced Materials for Robotics

Management Elective-I:	
2ET1000501T	Industrial Psychology
2ET1000502T	Project Management

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Semester: VI

With Effect From: 2026-27

Subject Code	Subject Name	Course Type	Credit	Hours per week				Theory (Marks)				Practical (Marks)				Total (Marks)
				L	T	P	Total	SEE		CCA		SEE		CCA		
								Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
1ET1130601T	Artificial Intelligence & Machine Learning	ESC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
1ET1130601P	Artificial Intelligence & Machine Learning Lab	ESC	1	-	-	2	2	-	-	-	-	10	25	10	25	50
1ET1130602T	Robot Operating System, Smart manufacturing	PCC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
1ET1130602P	Robot Operating System, Smart manufacturing Lab	PCC	1	-	-	2	2	-	-	-	-	10	25	10	25	50
1ET1130603T	Hydraulic & Pneumatic Systems	PCC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
1ET1130603P	Hydraulic & Pneumatic Systems Lab	PCC	1	-	-	2	2	-	-	-	-	10	25	10	25	50
	Professional Elective-II	PEC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
	Open Elective-I	OEC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
2ET1000601P	Engineering Project - I	PROJ	2	-	-	4	4	-	-	-	-	10	25	10	25	50
	Total		20	15	-	10	25									700

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SEE=Semester End Evaluation

PEC: Professional Elective Course;

CCA= Continuous & Comprehensive Assessment

PROJ: Project; HSMC: Humanities and Social Sciences;

PCC: Professional Core Course;

OEC: Open Elective Course

Professional Elective-II:	
1ET1130604T	Computer Integrated Manufacturing
1ET1130605T	Industrial Automation
1ET1130606T	Industrial Robotics and Material Handling Systems

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Open Elective-I		Subject Offered By:
2ET1010681T	Fundamentals of Robotics	Mechanical Engineering
2ET1060681T	Disaster Management	Civil Engineering
2ET1090681T	Electrical & Hybrid Vehicles	Electrical Engineering
2ET1030681T	Cryptography and Computer Security	Computer Engineering / Information Technology
2ET1070681T	Wireless Communication	Information Communication Technology

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Semester: VII

With Effect From: 2026-27

Subject Code	Subject Name	Course Type	Credit	Hours per week				Theory (Marks)				Practical (Marks)				Total (Marks)
				L	T	P	Total	SEE		CCA		SEE		CCA		
								Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
1ET1130701T	Machine Vision for Robotics	PCC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
1ET1130701P	Machine Vision for Robotics Lab	PCC	1	-	-	2	2	-	-	-	-	10	25	10	25	50
2ET1010702T	Production and Operation Management	PCC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
1ET1130702T	Road Safety and Maintenance	PCC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
2ET1000701P	Engineering Project -II	PROJ	6	-	-	12	12	-	-	-	-	30	75	30	75	150
	Professional Elective-III	PEC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
	Open Elective–II	OEC	3	3	-	-	3	24	60	16	40	-	-	-	-	100
	Total		22	15	-	14	29									700

L=Lecture, T=Tutorial, P=Practical

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CCA=Continuous & Comprehensive Assessment

PCC: Professional Core Course;

PROJ: Project;

PEC: Professional Elective Course;

OEC: Open Elective Course

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Professional Elective–III:	
2ET1010703T	Finite Element Analysis
2ET1010704T	Computational Fluid Dynamics
2ET1010705T	Additive Manufacturing

Open Elective-II		Subject Offered By:
2ET1010781T	Quality Management	Mechanical Engineering
2ET1060781T	Waste Management	Civil Engineering
2ET1090781T	Wind and Solar Energy Systems	Electrical Engineering
2ET1030781T	Data Handling and Visualization	Computer Engineering/ Information Technology
2ET1080781T	Deep Learning	Artificial Intelligence and Data Science
2ET1070781T	Industrial IoT	Information Communication Technology



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Semester: VIII

With Effect From: 2026-27

Subject Code	Subject Name	Course Type	Credit	Hours per week				Theory (Marks)				Practical (Marks)				Total (Marks)
				L	T	P	Total	SEE		CCA		SEE		CCA		
								Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
1ET1130801P	Internship / Project	PROJ	16	-	-	32	32	-	-	-	-	90	225	90	225	450
1ET1130802P	Seminar	SEM	4	-	-	-	-	-	-	-	-	30	75	30	75	150
	Total		20	-	-	32	32									600

L=Lecture, T=Tutorial, P=Practical

SEE = Semester End Evaluation

CCA=Continuous & Comprehensive Assessment

PROJ: Project;

SEM: Seminar