

MECHATRONICS ENGINEERING DOUBLE MAJOR PROGRAMS 2024/2025

A) Double Major Programs:

Department of Mechanical Engineering

	Course Code	Course Title	T	R	C	ECTS
1	MECE 104	Fundamentals of Mechatronics Engineering	2	0	2	3
2	CENG 161	Introduction to Computer Science + Lab.	3	2	4	5
3	MECE 212	Probability and Random Processes	3	0	3	4
4	MECE 223	Digital Design	3	2	4	6
5	MECE 340	Electromechanical Energy Conversion	3	0	3	3
6	MECE 234	Circuit Theory II	2	2	3	5
7	MECE 218	Principles of Signals and Systems	3	2	4	5
8	MECE 336	Microprocessors I	3	2	4	5
9	MECE 349	Analog Electronics	3	2	4	5
10	MECE 302	Sensors and Measurement	3	2	4	5
11	MECE 401	Introduction to Robotics	3	2	4	5
12	MECE 200	Summer Training I	0	0	0	5
13	MECE 407	Innovative Engineering Analysis and Design	1	2	2	3
14	MECE 408	Innovative Engineering Design and Implementation	1	2	2	3
15	MECE 304	Artificial Intelligence for Mechatronics Engineering	3	0	3	4
16	MECE 306	Computer Programming for Mechatronics Engineering	2	2	3	5
17	MECE 403	Autonomous Systems Design	2	2	3	4
18	IE 446	Project Engineering Management	3	0	3	5
19	MECE 308	Mechatronics System Design I	3	0	3	5
20	MECE 309	Mechatronics System Design II	3	0	3	5
		TOTAL CREDIT			61	

- Mechanical Engineering students must complete the MECE 200 summer internship course at an institution related to Mechatronic Engineering.

Department of Electrics and Electronics Engineering

	Course Code	Course Title	T	R	C	ECTS
1	CHEM 103	Chemistry	3	2	4	5
2	MECE 104	Fundamentals of Mechatronics Engineering	2	0	2	3
3	MECE 113	Computer Aided Engineering Drawing I	2	2	3	5
4	MECE 114	Computer Aided Engineering Drawing II	3	0	3	4
5	MECE 203	Statics	3	0	3	5
6	MECE 206	Dynamics	3	0	3	4
7	MECE 202	Strength of Materials	3	0	3	5
8	MECE 307	Machine Elements I	3	0	3	5
9	MECE 210	Manufacturing Processes	3	2	4	5
10	MECE 301	Theory of Machines I	3	0	3	4
11	MECE 302	Sensors and Measurement	3	2	4	5
12	MECE 401	Introduction to Robotics	3	2	4	5
13	IE 446	Project Engineering Management	3	0	3	5
14	IE 345	Engineering Economy	3	0	3	4
15	MECE 200	Summer Training I	0	0	0	5
16	MECE 407	Innovative Engineering Analysis and Design	1	2	2	3
17	MECE 408	Innovative Engineering Design and Implementation	1	2	2	3
18	MECE 304	Artificial Intelligence for Mechatronics Engineering	3	0	3	4
19	MECE 306	Computer Programming for Mechatronics Engineering	2	2	3	5
20	MECE 403	Autonomous Systems Design	2	2	3	4
21	MECE 308	Mechatronics System Design I	3	0	3	5
22	MECE 309	Mechatronics System Design II	3	0	3	5
		TOTAL CREDIT			64	

- Electrical and Electronics Engineering students must complete the MECE 200 summer internship course in a unit or company related to Mechatronics Engineering.

Department of Computer Engineering

	Course Code	Course Title	T	R	C	ECTS
1	MECE 113	Computer Aided Engineering Drawing I	2	2	3	5
2	MECE 114	Computer Aided Engineering Drawing II	3	0	3	4
3	CHEM 103	Chemistry	3	2	4	5
4	MECE 104	Fundamentals of Mechatronics Engineering	2	0	2	3
5	MECE 210	Manufacturing Processes	3	2	4	5
6	MECE 203	Statics	3	0	3	5
7	MECE 206	Dynamics	3	0	3	4
8	MECE 202	Strength of Materials	3	0	3	5
9	MECE 340	Electromechanical Energy Conversion	3	0	3	3
10	MECE 234	Circuit Theory II	2	2	3	5
11	MECE 218	Principles of Signals and Systems	3	2	4	5
12	MECE 349	Analog Electronics	3	2	4	5
13	MECE 200	Summer Training I	0	0	0	5
14	MECE 302	Sensors and Measurement	3	2	4	5
15	MECE 401	Introduction to Robotics	3	2	4	5
16	MECE 307	Machine Elements I	3	0	3	5
17	MECE 301	Theory of Machines I	3	0	3	4
18	MECE 386	Control Theory	3	2	4	5
19	IE 345	Engineering Economy	3	0	3	4
20	MECE 407	Innovative Engineering Analysis and Design	1	2	2	3
21	MECE 408	Innovative Engineering Design and Implementation	1	2	2	3
22	IE 446	Project Engineering Management	3	0	3	5
23	MECE 403	Autonomous Systems Design	2	2	3	4
24	MECE 308	Mechatronics System Design I	3	0	3	5
25	MECE 309	Mechatronics System Design II	3	0	3	5
		TOTAL CREDIT			76	

- Computer engineering students must complete the MECE 200 summer internship course in a unit or business related to Mechatronic Engineering.

Department of Industrial Engineering

	Course Code	Course Title	T	R	C	ECTS
1	MECE 114	Computer Aided Engineering Drawing II	3	0	3	4
2	MECE 203	Statics	3	0	3	5
3	MECE 206	Dynamics	3	0	3	4
4	MECE 202	Strength of Materials	3	0	3	5
5	MECE 235	Circuit Theory I	2	2	3	5
6	MECE 223	Digital Design	3	2	4	6
7	MECE 340	Electromechanical Energy Conversion	3	0	3	3
8	MECE 234	Circuit Theory II	2	2	3	5
9	MECE 218	Principles of Signals and Systems	3	2	4	5
10	MECE 349	Analog Electronics	3	2	4	5
11	MECE 336	Microprocessors I	3	2	4	5
12	MECE 200	Summer Training I	0	0	0	5
13	MECE 302	Sensors and Measurement	3	2	4	5
14	MECE 401	Introduction to Robotics	3	2	4	5
15	MECE 307	Machine Elements I	3	0	3	5
16	MECE 301	Theory of Machines I	3	0	3	4
17	MECE 386	Control Theory	3	2	4	5
18	MECE 407	Innovative Engineering Analysis and Design	1	2	2	3
19	MECE 408	Innovative Engineering Design and Implementation	1	2	2	3
20	MECE 304	Artificial Intelligence for Mechatronics Engineering	3	0	3	4
21	MECE 306	Computer Programming for Mechatronics Engineering	2	2	3	5
22	MECE 403	Autonomous Systems Design	2	2	3	4
23	MECE 308	Mechatronics System Design I	3	0	3	5
24	MECE 309	Mechatronics System Design II	3	0	3	5
		TOTAL CREDIT			74	

- Industrial engineering students must complete the MECE 200 summer internship course in a unit or business related to Mechatronics engineering.

Department of Civil Engineering

	Course Code	Course Title	T	R	C	ECTS
1	MECE 114	Computer Aided Engineering Drawing II	3	0	3	4
2	MECE 104	Fundamentals of Mechatronics Engineering	2	0	2	3
3	MECE 210	Manufacturing Processes	3	2	4	5
4	MECE 235	Circuit Theory I	2	2	3	5
5	MECE 223	Digital Design	3	2	4	6
6	MECE 340	Electromechanical Energy Conversion	3	0	3	3
7	MECE 234	Circuit Theory II	2	2	3	5
8	MECE 218	Principles of Signals and Systems	3	2	4	5
9	MECE 349	Analog Electronics	3	2	4	5
10	MECE 336	Microprocessors I	3	2	4	5
11	MECE 200	Summer Training I	0	0	0	5
12	MECE 302	Sensors and Measurement	3	2	4	5
13	MECE 401	Introduction to Robotics	3	2	4	5
14	MECE 307	Machine Elements I	3	0	3	5
15	MECE 301	Theory of Machines I	3	0	3	4
16	MECE 386	Control Theory	3	2	4	5
17	MECE 407	Innovative Engineering Analysis and Design	1	2	2	3
18	MECE 408	Innovative Engineering Design and Implementation	1	2	2	3
19	IE 446	Project Engineering Management	3	0	3	5
20	MECE 212	Probability and Random Processes	3	0	3	4
21	MECE 304	Artificial Intelligence for Mechatronics	3	0	3	4
22	MECE 306	Computer Programming for Mechatronics Engineering	2	2	3	5
23	MECE 403	Autonomous Systems Design	2	2	3	4
24	MECE 308	Mechatronics System Design I	3	0	3	5
25	MECE 309	Mechatronics System Design II	3	0	3	5
		TOTAL CREDIT			77	

- Civil Engineering students must complete the MECE 200 summer internship course in a unit or company related to Mechatronics engineering.

Department of Mathematics

	Course Code	Course Title	T	R	C	ECTS
1	MECE 104	Fundamentals of Mechatronics Engineering	2	0	2	3
2	CHEM 103	Chemistry	3	2	4	5
3	MECE 113	Computer Aided Engineering Drawing I	2	2	3	5
4	MECE 114	Computer Aided Engineering Drawing II	3	0	3	4
5	MECE 203	Statics	3	0	3	5
6	MECE 206	Dynamics	3	0	3	4
7	MECE 202	Strength of Materials	3	0	3	5
8	MECE 235	Circuit Theory I	2	2	3	5
9	MECE 223	Digital Design	3	2	4	6
10	MECE 336	Microprocessors I	3	2	4	5
11	MECE 218	Principles of Signals and Systems	3	2	4	5
12	MECE 386	Control Theory	3	2	4	5
13	MECE 200	Summer Training I	0	0	0	5
14	MECE 302	Sensors and Measurement	3	2	4	5
15	MECE 401	Introduction to Robotics	3	2	4	5
16	MECE 407	Innovative Engineering Analysis and Design	1	2	2	3
17	MECE 408	Innovative Engineering Design and Implementation	1	2	2	3
18	MECE 340	Electromechanical Energy Conversion	3	0	3	3
19	MECE 234	Circuit Theory II	2	2	3	5
20	MECE 349	Analog Electronics	3	2	4	5
21	MECE 210	Manufacturing Processes	3	2	4	5
22	MECE 307	Machine Elements I	3	0	3	5
23	MECE 301	Theory of Machines I	3	0	3	4
24	IE 446	Project Engineering Management	3	0	3	5
25	MECE 300	Summer Training II	0	0	0	5
26	MECE 304	Artificial Intelligence for Mechatronics Engineering	3	0	3	4
27	MECE 306	Computer Programming for Mechatronics Engineering	2	2	3	5
28	MECE 403	Autonomous Systems Design	2	2	3	4
29	MECE 308	Mechatronics System Design I	3	0	3	5
30	MECE 309	Mechatronics System Design II	3	0	3	5
		TOTAL CREDIT			90	

- Mathematics students must complete the MECE 200 Summer Internship course in a unit or business related to Mechatronics engineering.

Department of Software Engineering

	Course Code	Course Title	T	R	C	ECTS
1	MECE 104	Fundamentals of Mechatronics Engineering	2	0	2	3
2	CHEM 103	Chemistry	3	2	4	5
3	MECE 113	Computer Aided Engineering Drawing I	2	2	3	5
4	MECE 114	Computer Aided Engineering Drawing II	3	0	3	4
5	MECE 210	Manufacturing Processes	3	2	4	5
6	MECE 203	Statics	3	0	3	5
7	MECE 206	Dynamics	3	0	3	4
8	MECE 202	Strength of Materials	3	0	3	5
9	MECE 340	Electromechanical Energy Conversions	3	0	3	3
10	MECE 235	Circuit Theory I	2	2	3	5
11	MECE 234	Circuit Theory II	2	2	3	5
12	MECE 218	Principles of Signals of Systems	3	2	4	5
13	MECE 349	Analog Electronics	3	2	4	5
14	MECE 200	Summer Training I	0	0	0	5
15	MECE 302	Sensors and Measurement	3	2	4	5
16	MECE 401	Introduction to Robotics	3	2	4	5
17	MECE 307	Machine Elements I	3	0	3	5
18	MECE 301	Theory of Machines I	3	0	3	4
19	MECE 386	Control Theory	3	2	4	5
20	IE 345	Engineering Economy	3	0	3	4
21	MECE 407	Innovative Engineering Analysis and Design	1	2	2	3
22	MECE 408	Innovative Engineering Design and Implementation	1	2	2	3
23	IE 446	Project Engineering Management	3	0	3	5
24	MECE 223	Digital Design	3	2	4	6
25	MECE 336	Microprocessors I	3	2	4	5
26	MECE 403	Autonomous Systems Design	2	2	3	4
27	MECE 308	Mechatronics System Design I	3	0	3	5
28	MECE 309	Mechatronics System Design II	3	0	3	5
		TOTAL CREDIT			87	

- Software Engineering students must complete the MECE 200 Summer Internship course in a unit or business related to mechatronic engineering.