Mechanical Engineering Undergraduate Program – Course List

For students entering in the 2025-2026 academic year and later

Code	Old Code	Name	Hour per week	Credit	ECTS	Level	Year	Semester	Type	Prerequisites
ME 100	-	**Engineering Innovation & Programming**	4 (2+2)	3	4	Undergraduate	1st Year	Spring	Compulsory	-
ME 101	-	**Engineering Drawing**	4 (2 + 2)	3	5	Undergraduate	1st Year	Spring	Compulsory	-
ME 203	ME 204	**Strength of Materials**	3 (3 + 0)	3	4	Undergraduate	2nd Year	Spring	Compulsory	ME 216
ME 214	-	**Mechatronics**	2+2 (Theory + Practice)	3	4	Undergraduate	2nd Year	Spring	Compulsory	PHYS 102
ME 215	ME 218	**Engineering Materials**	3 (3 + 0)	3	4	Undergraduate	2nd Year	Spring	Compulsory	CHEM 101
ME 216	-	**Statics**	3 (2 + 1)	3	5	Undergraduate	2nd Year	Fall	Compulsory	PHYS 101 and (MATH 152 or MATH 102)
ME 217	-	**Dynamics**	4 (2+2)	3	5	Undergraduate	2nd Year	Spring	Compulsory	ME 216
ME 237	-	**Thermodynamics I**	3 (3+0)	3	5	Undergraduate	2nd Year	Fall	Compulsory	CHEM 101 and (MATH 152 or MATH 102)
ME 239	-	**Thermodynamics II**	4 (3 + 1)	3	4	Undergraduate	2nd Year	Spring	Compulsory	ME 237
ME 271	-	**Undergraduate Research I**	1 (0 + 1)	1	2	Undergraduate	2nd Year	Fall	Elective	-
ME 272	-	**Undergraduate Research II**	1 (0 + 1)	1	2	Undergraduate	2nd Year	Spring	Elective	-
ME 300	ME 301	**Machine Elements**	4 (3 + 1)	4	4	Undergraduate	3rd Year	Fall	Compulsory	ME 204 or ME 203
ME 302	ME 303	**Manufacturing Technologies**	3 (3 + 0)	3	4	Undergraduate	3rd Year	Fall	Compulsory	ME 218 or ME 215
ME 304	ME 305	**Modeling and Control of Dynamic Systems**	3 (3+ 0)	3	4	Undergraduate	3rd Year	Fall	Compulsory	MATH 205 and ME 217
ME 306	-	**Machine Theory**	4 (2 + 2)	3	5	Undergraduate	3rd Year	Spring	Compulsory	ME 217
ME 312	-	**Internship I**	2 (0 + 2)	1	5	Undergraduate	3rd Year	Fall	Compulsory	Completion of the second semester in the department
ME 315	ME 317	**Fluid Mechanics**	4 (2+2)	3	4	Undergraduate	3rd Year	Fall	Compulsory	MATH 203 and MATH 205
ME 316	-	**Experimental Engineering**	3 (1+2)	2	5	Undergraduate	3rd Year	Spring	Compulsory	ME 237 and (ME 305 or ME 304) and (ME 317 or ME 315)
ME 318	-	**Fluid Dynamics and Design**	3 (3+0)	3	5	Undergraduate	3rd Year	Spring	Compulsory	ME 317 or ME 315
ME 352	-	**Heat Transfer**	3 (2 + 1)	3	5	Undergraduate	3rd Year	Spring	Compulsory	MATH 205, ME 237
ME 354	-	**Numerical Analysis with Engineering Applications**	4 (2+ 2)	3	5	Undergraduate	3rd Year	Spring	Compulsory	MATH 205 and MATH 203
ME 371	-	**Undergraduate Research III**	1 (0 + 1)	1	2	Undergraduate	3rd Year	Fall	Elective	-
ME 372	-	**Undergraduate Research IV**	1 (0 + 1)	1	2	Undergraduate	3rd Year	Spring	Elective	-
ME 400	ME 401	**Capstone 1**	2 (0+2)	4	6	Undergraduate	4th Year	Fall	Compulsory	Consent +160 ECTS
ME 403	-	**Prototyping**	3 (3 + 0)	3	5	Undergraduate	4th Year	Spring	Elective	-
ME 405	-	**Applied Fields**	4 (0 Theory + 4 Practice)	4	22	Undergraduate	4th Year	Spring	Compulsory	ME 401 or ME 400
ME 406	-	**Capstone 2**	4 (0+4)	4	9	Undergraduate	4th Year	Spring	Compulsory	ME 401 or ME 400
ME 412	-	**Internship II**	2 (0 + 2)	1	5	Undergraduate	4th Year	Spring	Compulsory	ME 312
ME 416	-	**Wind Energy and Conversion Technologies**	3 (2 + 1)	3	5	Undergraduate	4th Year	Spring	Elective	-
ME 421	-	**Introduction to Robotics**	3 (Theory)	3	5	Undergraduate	4th Year	Spring	Elective	-
ME 423	-	**Microstructure Engineering**	3 (3+ 0)	3	5	Undergraduate	4th Year	Fall	Elective	ME 218 or ME 215
ME 424	-	**Fuel Cell Science and Engineering**	3 (3 + 0)	3	5	Undergraduate	4th Year	Spring	Elective	ME 237
ME 425	-	**Vibration Engineering**	4 (2 + 2)	3	5	Undergraduate	4th Year	Spring	Elective	-
ME 428	-	**Finite Element Method**	4 (2 + 2)	3	5	Undergraduate	4th Year	Fall	Elective	MATH 203, MATH 205 and ME 354
ME 437	-	**Dislocations and Strengthening Mechanisms in Solids**	3 (3 + 0)	3	5	Undergraduate	4th Year	Fall & Spring	Elective	ME 218 or ME 215
ME 438	-	**Composite Materials**	3 (3 + 0)	3	5	Undergraduate	4th Year	Spring	Elective	-
ME 441	-	**Metal Cutting Theory and Practice**	3 (2 + 1)	3	5	Undergraduate	4th Year	Spring	Elective	ME 303 or ME 302
ME 450	-	**Mobile Robot Control**	3 (3 + 0)	3	5	Undergraduate	4th Year	Spring	Elective	ME 305 or ME 304
ME 459	-	**Corrosion Engineering**	3 (2 + 1)	3	5	Undergraduate	4th Year	Fall	Elective	-

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ME 465	-	**Introduction to Data Mining**	3 + 0 (3 + 0)	3	5	Undergraduate	4th Year	Spring	Elective	-
ME 466	-	**Solar Energy Fundamental**	3 (3+0)	3	5	Undergraduate	4th Year	Spring	Elective	ME 352
ME 467	-	**Joining Methods for Aerospace Materials**	3 (3 + 0)	3	5	Undergraduate	4th Year	Fall	Elective	-
ME 468	-	**Sustainable Manufacturing**	3 (3 + 0)	3	5	Undergraduate	4th Year	Fall	Elective	-
ME 469	-	**3D Biofabrication**	3 (3 + 0)	3	5	Undergraduate	4th Year	Fall	Elective	-
ME 481	-	**Renewable Energy Technologies**	3 (3 + 0)	3	5	Undergraduate	4th Year	Spring	Elective	ME 237
ME 482	-	**Thermal Insulation in Buildings with Heating and Cooling System Design**	3 (2 + 1)	3	5	Undergraduate	4th Year	Fall & Spring	Elective	-
ME 483	-	**Machine Learning for Additive Manufacturing**	3 (3+0)	3	5	Undergraduate	4th Year	Fall & Spring	Elective	-
ME 484	-	**Applied Artificial Intelligence (AI) in Engineering Systems**	3 (2+1)	3	5	Undergraduate	4th Year	Fall	Elective	-
ME 485	-	**Internal Combustion Engines**	3 (3+0)	3	5	Undergraduate	4th Year	Fall	Elective	-
ME 490	-	**Applied Probability and Statistics with Computational Approach**	3 (2 + 1)	3	5	Undergraduate	4th Year	Fall & Spring	Elective	(MATH 152 or MATH 102) and MATH 203
MEX 131	-	**Digital Learning Platform Transfer Elective 1**	1 (1+0)	1	3	Undergraduate	2nd–3rd Year	Fall & Spring	Elective	-
MEX 132	-	**Digital Learning Platform Transfer Elective 2**	1 (1+0)	1	3	Undergraduate	2nd–3rd Year	Fall & Spring	Elective	-
MEX 141	-	**Digital Learning Platform Basic Level Transfer Elective 1**	1 (1+0)	1	4	Undergraduate	2nd–3rd Year	Fall & Spring	Elective	-
MEX 142	-	**Digital Learning Platform Basic Level Transfer Elective 2**	1 (1+0)	1	4	Undergraduate	2nd–3rd Year	Fall & Spring	Elective	-
MEX 151	-	**Digital Learning Platform Advanced Transfer Elective 1**	1 (1+0)	1	5	Undergraduate	3rd–4th Year	Fall & Spring	Elective	-
MEX 152	-	**Digital Learning Platform Advanced Transfer Elective 2**	1 (1+0)	1	5	Undergraduate	3rd–4th Year	Fall & Spring	Elective	-