

MECHANICAL ENGINEERING - Catalog Year 2026

Total Credits = 120-126

Freshman Year, Fall Semester

Course Code	Description	Cr	Grade
EGR 101	Intro. to Eng. Design & Innov. (A4)	2	
MTH 141 +	Calculus I (A1, B3)	4	
CHM 101	General Chemistry Lec I (A1)	3	
CHM 102	General Chemistry I Lab	1	
PHY 203	Elementary Physics I (A1)	3	
PHY 273	Elementary Physics Lab I (A1)	1	
	General Education Outcome(s) ¹	3	

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Freshman Year, Spring Semester

Course Code	Description	Cr	Grade
EGR 106	Matlab for Engineering Applications (A4)	2	
MTH 142 +	Calculus II (A1, B3)	4	
PHY 204	Elementary Physics II Lab (A1)	3	
PHY 274	Elementary Physics II (A1)	1	
	General Education Outcome(s) ¹	3	
	General Education Outcome(s) ¹	3	

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Sophomore Year, Fall Semester

Course Code	Description	Cr	Grade
[ISE 240 & 241] or MCE 201	[Mfg Processes and Systems (3) & Lab (1)] or Engineering Graphics (3)	3-4	
MCE 262	Statics	3	
MTH 243 +	Calculus for Functions of Several Vars (A1, B3)	3	
	Science Elective ²	4	
	General Education Outcome(s) ¹	3	

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Sophomore Year, Spring Semester

Course Code	Description	Cr	Grade
[ISE 240 & 241] or MCE 201	[Mfg Processes and Systems (3) & Lab (1)] or Engineering Graphics (3)	3-4	
CVE 220	Mechanics of Materials	3	
MCE 263	Dynamics	3	
MTH 362	Advanced Engineering Mathematics	3	
EGR 241	Python for Engineering Applications	4	

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Junior Year, Fall Semester

Course Code	Description	Cr	Grade
MCE 301 +	Application of Mechanics in Design	3	
MCE 341	Fundamentals of Thermodynamics	3	
MCE 354	Fluid Mechanics	3	
MCE 372	Engineering Analysis I	3	
EGR 316G	Engineering Ethics (A3,C1,G)	3	

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Junior Year, Spring Semester

Course Code	Description	Cr	Grade
ELE 220	Passive and Active Circuits	3	
MCE 302	Design of Machinery	3	
MCE 313	Intro to MCE Experimentation	3	
MCE 348	Heat and Mass Transfer	3	
MCE 366	System Dynamics	3	

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Senior Year, Fall Semester

Course Code	Description	Cr	Grade
MCE 401	Mechanical Eng. Capstone Design I	3	
MCE 414	Mechanical Eng. Experimentation	3	
CHE 333	Engineering Materials	3	
	Professional Elective ³	3	
	Professional Elective ³	3	

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Senior Year, Spring Semester

Course Code	Description	Cr	Grade
MCE 402	Mechanical Eng Capstone Design II (D1)	3	
	Professional Elective ³	3	
	Professional Elective ³	3	
	General Education Outcome(s) ¹	3	
	General Education Outcome(s) ¹	3	

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Notes:

+ Course pre-requisites include grade requirements in previous coursework, see catalog or eCampus course description for details.

1) General Education Outcomes (A1-D1): if all outcomes are satisfied in fewer spaces than provided, you must take a course(s) of your choice (Free Elective) to ensure you have earned at least 120 credits as required to earn a BS degree. A complete detailing of these requirements are listed in the college's curriculum requirements section of this catalog.

2) Science Elective: choose one (1) from BIO 201, BIO 360; CHM 112 & 114, CHM 124 & CHM 126; CMB 201; or PHY 205 & PHY 275.

3) Professional Elective Requirements: Must be satisfied by twelve (12) credits of professional electives, with a minimum of three (3) three (3)-credit MCE courses (no more than two (2) courses from the MCE 47*/CHE 47*/NUE 47* series), two (2) of which must be taken at URI. The fourth course may be a 300-, 400-, or 500-level course offered by the College of Engineering, CHM, CSC, or PHY, or a 400- or 500-level MTH or STA course (with the exceptions of CSC 320, ELE 313, MTH 420, and PHY 322; STA 409 will not count for students with credit in MCE 411/ISE 311). Professional elective courses taken outside URI are subject to URI transfer credit rules and require prior written approval.

EGR101 is intended for and required of all first-year engineering students. Course substitution is considered only on an exception basis for transfer students with 24 or more earned credits, or for students with unique circumstances, and requires prior approval of the Assistant Dean for Undergraduate Affairs.