

Course Offering Plan - Fall 2023 to Summer 2027

Required courses

Course	F23	S24	F24	S25	F25	S26	F26	S27	Title	Cr.	Prerequisites	Coord.
EGN 160	x		x		x		x		Intro to Programming: The C Language	4+	None	Lück
ITP 210	x	xs	x	xs	x	xs	x	xs	Technical Writing	3	ENG 100	tech
EGN 248	xc	x	xc	x	xc	x	xc	x	Intro to Diff-Eq and Linear Algebra	4	MAT 153	Davis
EGN 304		xs		xs		xs		xs	Engineering Economics	3	MAT 152	Ghorashi
EGN 401	x	x	x	x	x	x	x	x	Sr. Design Proj I, the Egn Profession	3	ITP 210, THE 170, EGN 304, EGN 182	Eaton
EGN 402	x	xs	x	xs	x	xs	x	xs	Senior Design Project II	3	EGN 401, instr. perm.	all
ELE 216	x	c	x	c	x	c	x	c	Circuits I: Steady-State Analysis	3	MAT 153, PHY 123	Lück
ELE 217		xs		xs		xs		xs	Circuits II: System Dynamics	3	ELE 216, (EGN 248, ITP 210: co-reqs)	Lück
ELE 219		xs		xs		xs		xs	Circuits Laboratory	1	ELE 217 (co-req)	Lück
ELE 323	x		x		x		x		Electromechanical Energy Conversion	3	ELE 217, ITP 210	Lück
ELE 172	x	c	x	c	x	c	x	c	Digital Logic	3	MAT 145	Jankowski
ELE 179	x	c	x	c	x	c	x	c	Digital Logic Laboratory	1	ELE 172 (co-req)	Jankowski
ELE 262		x		x		x		x	Physical Electronics	3	CHY 113, ELE 217 (co-req)	Guvench
ELE 271		x		x		x		x	Microprocessor Systems	4+	ELE 172, EGN 160	Lück
ELE 314	x		x		x		x		Linear Signals and Systems*	3	ELE 217, EGN 248	Jankowski
EGN 325		x		x		x		x	Control Systems*	3	ELE 217, EGN 248	Lück
EGN 329		x		x		x		x	Electromech. & Control Systems Lab	1	ELE 323, ELE 219, EGN 325 (co-req)	Lück
ELE 342	x		x		x		x		Electronics I: Devices and Circuits*	4+	EGN 187, ELE 217, ELE 219, ELE 262	Guvench
ELE 343		x		x		x		x	Electronics II: Electronic Design	4+	ELE 342	Guvench
ELE 351	x		x		x		x		Electromagnetic Fields*	3+	ELE 217, MAT 252, EGN 248	Smith
ELE 483		x		x		x		x	Communications Engineering	3+	ELE 314	Maxworth
ELE 486		x		x		x		x	Digital Signal Processing	3	EGN 160, ELE 314	Jankowski
ELE 489		x		x		x		x	Analog and Digital Signals Laboratory	1	ELE 219, ELE 486 (co-req)	Jankowski
MEE 150	xc	x	xc	x	xc	x	xc	x	Applied Mechanics: Statics	3	MAT 152, PHY 121	Ghorashi
MEE 230	c	x	c	x	c	x	c	x	Thermodynamics I: Laws and Properties	3	MAT 153, PHY 121	Eaton
MEE 251	x	c	x	c	x	c	x	c	Strength of Materials	3	MEE 150, MAT 153	Davis
MEE 259	x		x		x		x		Statics and Strength of Materials Lab	1	MEE 251 (co-req)	Davis
MEE 260	x		x		x		x		Materials Science for Engineers	3+	CHY 113, MAT 153, PHY 123	Lanba
MEE 270		x		x		x		x	Applied Mechanics: Dynamics	3	MEE 150, MAT 252 (co-req)	Davis
MEE 331	x		x		x		x		Thermodynamics II: Flows and Cycles	3	MEE 230	Eaton
MEE 339	x		x		x		x		Thermodynamics Laboratory	1	MEE 259, MEE 331 (co-reqs)	Davis
MEE 360	x		x		x		x		Fluid Mechanics	3	MEE 270, EGN 248, MAT 252	Davis
MEE 372		x		x		x		x	Computer-Aided Design of Mach Elem	4+	EGN 182, MEE 251, MEE 259	Ghorashi
MEE 373	x			x		x		x	Design of Machines and Mechanisms	4+	See Catalog	Ghorashi
MEE 374		x		x		x		x	Theory and Applications of Vibrations*	3	EGN 248, EGN 260 or ELE 262	Ghorashi
MEE 379		x		x		x		x	Dynamics and Vibrations Laboratory	3	MEE 270, MEE 259, MEE 374 (co-req)	Ghorashi
MEE 432		x		x		x		x	Heat Transfer	3	MEE 230, MEE 360	Eaton
MEE 439		x		x		x		x	Fluid Mech. and Heat Transfer Lab	1	MEE 259, MEE 432 (co-req)	Davis
IDE 361									Work Design	3	EGN 189, MEE 150	Kordijazi
IDE 362									Human Factors	3	SOC 100, IDE 361	Kordijazi
IDE 369									Work Design and Human Factors Lab	1	IDE 361, IDE 362 (co-req)	Kordijazi
IDE 461									Facility Design	3	IDE 361, MAT 383	Kordijazi
IDE 462									Lean Six Sigma	3	EGN 481	Kordijazi
IDE 469									Lean Facility Inventory Lab	1	IDE 461, IDE 462 (co-req)	Kordijazi
IDE 481				x				x	Statistics for Manufacturing	3+	MAT 380	Kordijazi

Technical elective courses

Course	F23	S24	F24	S25	F25	S26	F26	S27	Title	Cr.	Prerequisites	Coord.
EGN 417		x				x			Introduction to Robotics	3+	EGN 160, EGN 248	Lück
EGN 421			x				x		Plasma Engineering	3+	PHY 123, EGN 248	Maxworth
EGN 446					x				Micro Electromechanical Systems	3+	ELE 217, ELE 262 or EGN 260	Guvench
ELE 427				x				x	Energy and Power Systems	3+	ELE 323	Lück
MEE 422	x				x				Spacecraft Systems Engineering	3+	ELE 217	Eaton
ELE 467			x				x		Optoelectronics	3+	ELE 217, ELE 262	Guvench
ELE 452		x				x			Antennas	3+	ELE 351	Maxworth
ELE 487								x	Digital Image Processing	3+	EGN 160, ELE 314	Jankowski
MEE 332			x				x		Fund. Combustion Science	3+	MEE 230	Eaton
MEE 454								x	Adv. Material Behavior, Testing & Proc.	3+	EGN 260, MEE 251	Lanba
MEE 356	x				x				Intro to the Finite Element Method	3+	EGN 160, EGN 248, MEE 251	Lanba
MEE 463		x				x			Aerodynamics	3+	MEE 360	Davis
EGN 403	x	xs	x	xs	x	xs	x	xs	Advanced Design Project	3	≥ B in EGN 402, instr. perm.	
EGN 394	x	xs	x	xs	x	xs	x	xs	Engineering Internship	≤3	All soph. courses, instr. perm.	
EGN 497	x	xs	x	xs	x	xs	x	xs	Independent Study	3	Instructor permission	

Engineering tool series

Course	F23	S24	F24	S25	F25	S26	F26	S27	Title	Cr.	Prerequisites	Coord.
EGN 181	x		x		x		x		Engineering Tools: <i>Mathematica</i>	1		Jankowski
EGN 182	x	x	x	x	x	x	x	x	Engineering Tools: <i>SolidWorks</i>	1		Davis
EGN 186		x		x		x		x	Engineering Tools: <i>MATLAB</i>	1		Davis
EGN 187	x		x		x		x		Engineering Tools: Circuit Simulation	1		Maxworth
EGN 188		x		x		x		x	Engineering Tools: Materials Processing	1	EGN 182	tba
EGN 189									Engineering Tools: Spreadsheet Program	1		Kordijazi

Co-requisites are automatic prerequisites for subsequent courses.

* Major-specific course available to other majors as a technical elective.

x: regular offering; may be offered in other semesters, contingent upon enrollment.

s: offered also in the summer

c: an equivalent may be offered at SMCC.

+: Includes an additional contact hour for an integrated laboratory component.

p: permanent course number after being offered initially as EGN 498.

i: EGN 402 instructor

Revised: 4/11/2024