

ENGR Course offerings

(Subject to change. Updated November 4, 2016)

	F-15	W-16	S-16		F-16	S-17	F-17	S18	F-18	S19	
160	X	X									
161	X	2	X	1618	X	X	X	X	X	X	Intro to Engr I
162		X	2	1628	2700	X, 2700	X	X	X	X	Intro to Engr II
207	X	X	X	2070	X	X	X	X	X	X	Circuits
240	X	X		2110	X	X	X	X	X	X	Statics
241		X	X	2120	X	X	X	X	X	X	Dynamics
243		X	X	2130	X	X	X	X	X	X	Mechanics of Materials
244		X	X	2140	X	X	X	X	X	X	Materials Sci & Engr
270	X			2350	X	X	X	X	X	X	Engineering Graphics
271		X		2360		X	X	X	X	X	Intermediate CAD
				2700							Special Topics
307				3070		X				X	Analog Electronics
477				4700							Special Topics
300	X			3300	X		X		X		Modeling & Analysis
301		X		3310		X		X		X	Numerical Methods
310	X			3110	X		X		X		Thermodynamics
320		X		3120		X		X		X	Fluid Mechanics
330	X		X	4110	X		X		X		Heat Transfer
401		X			4700						Senior Laboratory
405	X			4120	X		X		X		Machine Design
				4800							Research Participation
490	X	X	X	4900	X	X	X	X	X	X	Senior Project A
				4910		X	X	X	X	X	Senior Project B
340				3400	X				X		Soil & Water Mgmnt
341		X		3410				X			Ag Machines & Instr
342	X										Bioprocess Engineering
440											Biol Systems Apps
441			X	4410		X				X	Environ Engineering
442			X	4420			X				Unit Operations
477				4700							Special Topics
420				4200	X				X		Ops Research
422				4220		X				X	Project Mngmnt
424		X		4240				X			Quality Mngmnt
426		X	X	4260	X		X				Engineering Econ
351	X		X	GEOL	X		X		X		Fundamentals of PE
				4060							
452				4520		X				X	Production Engineering
453				4530		X				X	Reservoir Engineering
454			X	4540				X			Drilling Engineering
				4610		X				X	Conventional Energy
				4620				X			Renewable Energy

ENGR 2700 will be offered for students needing ENGR 162. ENGR 4700 will be offered in Fall 2016 for students taking ENGR 330 in Spring 2016.

Blue text indicates core (required) courses
Teal background indicates electives not in any emphasis
Orange Background indicates Biosystems and Agricultural Engineering Emphasis courses
Green Background indicates Engineering Management Emphasis electives
ENGR 4260 is required for both Petroleum & Management emphases
Blue background indicates Petroleum Engineering Emphasis electives
Light blue indicates Energy and Power track electives

ENGR	Description	Co-requisites	Pre-requisites
160	Engineering Orientation (1)		
161	Introduction to Engineering Design (2)		
162	Introduction to Engineering Computing (2)	MATH 201 or 231	MATH 201 or 231
207	Electric Circuits (5)		PHYS 222, MATH 202 or 232, MATH 222 or CMPS 221 or ENGR 162
240	Statics (5)	MATH 202 or 232	PHYS 221
241	Dynamics (5)		ENGR 240
243	Mechanics of Materials (5)		ENGR 240
244	Properties of Materials (5)		PHYS 221, CHEM 211
270	CAD-2D (3)		
271	CAD-3D (3)		ENGR 270
300	Modeling and Analysis (5)		PHYS 222, CMPS 221 or ENGR 162
301	Numerical Methods (5)		ENGR 300
307	Electronics (5)		ENGR 207
310	Thermodynamics (4)		PHYS 222
320	Fluid Mechanics (5)		ENGR 300, 310
330	Heat Transfer (4)		ENGR 320
340	Soil and Water Management (4)	ENGR 300	ENGR 240
341	Ag Machines (3)	ENGR 240	ENGR 240
342	Bioprocesses (4)		ENGR 240, CHEM 211, 211L
351	Fundamentals & Transport – Petroleum Engineering (5)		CHEM 211, PHYS 221, MATH 202 or 232
401	Senior Lab (1)		ENGR 330
405	Machine Design (5)		ENGR 241, 243, 300
420	Operations Research (4)		ENGR 300
422	Project Management (4)		Senior standing
424	Quality management (4)		MATH 201 or 231
426	Engineering Economics (4)		MATH 201 or 231
440	Biological Systems Applications (4)	ENGR 320	ENGR 320, CHEM 211, BIOL 100, 103, 201, 202, or 203 (*)
441	Environmental Engineering (4)	ENGR 320	ENGR 320, CHEM 211, 211L
442	Food and Bioprocess Engineering Unit Operations (4)	ENGR 330	ENGR 330, CHEM 211, 211L
452	Petroleum Production (4)		ENGR 351 (*)
453	Reservoir Engineering (5)		ENGR 351, MATH 203 or 233 (*)
454	Drilling and Completion Technology (5)		ENGR 244, 351 (*)
477	Special Topics (1-4)		(*)
490A	Senior Design Project A (2)	ENGR 330	ENGR 240, 330
490B	Senior Design Project B (2)		490A
490C	Senior Design Project C (2)		490B

ENGR	Description	Co-requisites	Pre-requisites
1618	Introduction to Engineering I (2)		
1628	Introduction to Engineering II (2)		ENGR/ECE 1618
2070	Electric Circuits (4)		PHYS 2220 with C- or better
2110	Analytics Mechanics – Statics (3)	MATH 2320 or 2520	PHYS 2210 with C- or better; MATH 2320 or 2520
2120	Analytic Mechanics – Dynamics (3)		ENGR 2110 with C- or better
2130	Mechanics of Materials (3)		ENGR 2110 with C- or better
2140	Materials Science and Engineering (4)		PHYS 2210; CHEM 1000, 1001 all with C- or better
2350	Engineering Graphics (2)		
2360	Intermediate CAD in Engineering (2)		ENGR 2350 with C- or better
2700	Special Topics in Engineering (1-3)		
3070	Principles of Electronics (3)		PHYS/ENGR/ECE 2070 with C- or better
3300	Engineering Modeling and Analysis (3)		PHYS 2220, MATH 2320 or 2520 both with C- or better
3310	Numerical Methods and Applications in Engineering (3)		ENGR 3300 with C- or better
3110	Thermodynamics (4)		PHYS 2220, CHEM 1000; both with C- or better
3120	Fluid Mechanics (4)		ENGR 2120, 3300; both with C- or better
4110	Heat Transfer (4)		ENGR 3110, 3120
4120	Machine Design (4)		ENGR 2120, 2130; both with C- or better
4700	Special Topics in Engineering Sciences (1-3)		Permission of Instructor
4800	Research Participation (1-3)		Permission of Instructor
4900	Senior Design Project A (2)		ENGR 3300 with C- or better, ES Seniors only
4910	Senior Design Project B (2)		ENGR 4900, ES Seniors only
3400	Soil and Water Resource Management (3)	ENGR 3300	ENGR 2110 with C- or better; ENGR 3300
3410	Agricultural Machines and Instrumentation (4)		ENGR 2110 with C- or better
4410	Environmental Engineering (3)	ENGR 3120	CHEM 1000, 1001; both with C- or better; ENGR 3120
4420	Food and Bioprocess Engineering Unit Operations (3)	ENGR 3110	CHEM 1000, 1001; both with C- or better; ENGR 3110
4200	Operations Research (3)		MATH 2310 or 2510 with C- or better
4220	Project Management (3)		MATH 2310 or 2510 with C- or better
4240	Quality Management (3)		MATH 2310 or 2510 with C- or better
4260	Economics of Engineering Design (3)		MATH 2310 or 2510 with C- or better
4520	Petroleum Production Engineering (3)	ENGR 3110	ENGR 3110; GEOL 4060 with C- or better
4530	Reservoir Engineering (4)		MATH 2320 or 2520; GEOL 4060; both with C- or better
4540	Drilling Engineering and Completion Technology (4)		ENGR 2140; GEOL 4060 both with C- or better
4610	Conventional Energy Production (3)		ENGR 3110
4620	Renewable Energy Production (3)		ENGR 3110