

**ENGR Course offerings**  
(Subject to change. Updated October 2018)

	F-19	S20	F-20	S21	
1618	X	X	X	X	Intro to Engr I
1628	X	X	X	X	Intro to Engr II
2070	X	X	X	X	Circuits
2110	X	X	X	X	Statics
2120	X	X	X	X	Dynamics
2130	X	X	X	X	Mechanics of Materials
2140	X	X	X	X	Materials Sci & Engr
2350	X	X	X	X	Engineering Graphics
2360		X		X	Intermediate CAD
2700					Special Topics
3070				X	Analog Electronics
4700					Special Topics
3300	X		X		Modeling & Analysis
3310		X		X	Numerical Methods
3110	X		X		Thermodynamics
3120		X		X	Fluid Mechanics
4110	X		X		Heat Transfer
4120	X		X		Machine Design
4800					Research Participation
4900	X	X	X	X	Senior Project A
4910	X	X	X	X	Senior Project B
3400				X	Soil & Water Mgmt
3410	X				Ag Machines & Instr
4410			X		Environ Engineering
4420		X			Unit Operations
4200			X		Ops Research
4220				X	Project Mngmnt
4240		X			Quality Mngmnt
4260	X				Engineering Econ
GEOL 4060	X		X		Petroleum Geology
4520				X	Production Engineering
4530				X	Reservoir Engineering
4540		X			Drilling Engineering
4610				X	Conventional Energy
4620		X			Renewable Energy
ECE 3370		X		X	Power Systems Fundamentals
ECE 4380	X		X		Power Systems Operations with Renewable Energy

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

Blue background indicates Petroleum Engineering Emphasis electives

Light blue indicates Energy and Power track electives

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

ECE 3370	Power Systems Fundamentals (4)		ECE/ENGR/PHYS 2070 or ENGR/PHYS 207 with a grade of C- or better
ECE 4380	Power Systems Operations with Renewable Energy Resources (4)		ECE 3370.

### ENGR Units and WTUs

ENGR Course	WTU Lecture	WTU Each lab	Units
1618	1	1.3	2
1628	1	1.3	2
2070	3	2	4
2110	3		3
2120	3		3
2130	3		3
2140	3	2	4
2350	1	2	2
2360	1	2	2
2700			1-3
3300	3		3
3310	2	2	3
3070	2	2	3
3110	3	2	4
3120	3	2	4
3400	3		3
3410	3	2	4
4110	3	2	4
4120	3	2	4
4200	3		3
4220	3		3
4240	3		3
4260	3		3
4410	2	2	3
4420	3		3
4520	3		3
4530	3	2	4
4540	3	2	4
4700			1-3
4800			1-3
4900			2
4910			2