



Below is the natural sequence of Energy Engineering program courses designed for students to register per semester. Other degree requirements and comprehensive details are to be found in the AUIS Academic Catalog.

Course Code and Description	Cred	Prerequisite(s)	✓
<b>1st Semester</b>			
ENGR 230 - Engineering Drawing (Major)	3	None	
R 100 - Reading (Core)	3	None	
W 100 - Writing (Core)	3	None	
MTH 232 - Calculus I (Core)	3	None	
CHEM 232 + CHEML 232 - Chemistry I + Chemistry Lab I (Core)	4	None	
<b>Total Credits</b>	<b>16</b>		
<b>2nd Semester</b>			
CIV 101 - The Ancient World History (Core)	3	W 100, R 100	
ENGR 231 - Fabrication Shop (Team-based Problem Solving) (Major)	3	ENGR 230	
ENGR 354 - Materials Science (Major)	3	CHEM 232 + CHEML 232	
PHYS 232 + PHYSYL 232 - Calculus Based Physics I + Calculus Based	4	MTH 232	
MTH 233 - Calculus II (Core)	3	MTH 232	
<b>Total Credits</b>	<b>16</b>		
<b>3rd Semester</b>			
ENG 101 - Argument (Core)	3	W 100, R 100	
MTH 332 - Differential Equations (Core)	3	MTH 233	
Core Elective: Humanities, Social Science (Core)	3	See Course Description	
ENGR 344 - Mechanics I (Major)	3	PHYS 232 + PHYSYL 232	
PHYS 233 + PHYSYL 233 - Calculus Based Physics II + Calculus Based	4	PHYS 232 + PHYSYL 232	
<b>Total Credits</b>	<b>16</b>		
<b>4th Semester</b>			
MTH 331 - Calculus III (Core)	3	MTH 233	
ENG 102 - Critical Reading (Core)	3	ENG 101	
ENGR 352 - Thermodynamics (Major)	3	PHYS 232 + PHYSYL 232	
ENGR 356 + ENGR 356L - Fluid Mechanics (Major) + Fluids Laboratory	4	ENGR 344	
ENGR 390 - Circuits (Major)	3	PHYS 233 + PHYSYL 233	
<b>Total Credits</b>	<b>16</b>		
<b>5th Semester</b>			
ENGR 313 - Measurements Laboratory (Major)	3	PHYS 233 + PHYSYL 233	
ENGR 358 - Mechanics of Materials (Major)	3	ENGR 344	
MTH 340 - Linear Algebra (Core)	3	MTH 232	
ENGR 244 - Engineering Computing and Numerical Analysis (Major)	3	MTH 340 (Corequisite)	
ENGR 425 - Energy Storage Systems (Major)	3	ENGR 390	
<b>Total Credits</b>	<b>15</b>		
<b>6th Semester</b>			
ENGR 453 - Applications of Thermodynamics (Major)	3	ENGR 352	
ENGR 455 - Introduction to Petroleum Engineering (Major)	3	ENGR 356	
ENGR 348 - Mechanics II, Dynamics (Major)	3	ENGR 344	
ENGR 452 - Transport Phenomena (Major)	3	MTH 332	
STT 342 - Engineering Statistics (Major)	3	ENGR 244	
<b>Total Credits</b>	<b>15</b>		
<b>7th Semester</b>			
Engineering Elective	3	See Course Description	
ENGR 366 - Applied Electronics (Major)	3	ENGR 390	
ENGR 444 - Engineering Project Management (Major)	3	ENGR 231	
ENGR 461 - System Dynamics and Control (Major)	3	ENGR 390 + MTH 332	
ENG 203 - Research & Project - Writing (Core)	3	ENG 102	
<b>Total Credits</b>	<b>15</b>		
<b>8th Semester</b>			
ENGR 454 - Process Engineering (Major)	3	ENGR 455	
ENGR 457 - Renewable Energy (Major)	3	ENGR 390	
ENGR 491 - Design I (Major)	3	ENG 203 + 75 Credit Hours	
Engineering Elective	3	See Course Description	
ENGR 484 - Engineering Laboratory (Major)	3	ENGR 313	
<b>Total Credits</b>	<b>15</b>		
<b>9th Semester</b>			
Engineering Elective	3	See Course Description	
ENGR 492 - Design II (Major)	3	ENGR 491	
CIV 203 - Civilization III: The Ancient World (Humanities) (Core)	3	CIV 101	
<b>Total Credits</b>	<b>9</b>		
<b>Summer/Winter</b>			
ENGR 490 - Engineering Internship (Major)	1	Senior Standing (to be taken alone)	
<b>Program Total Credits</b>	<b>134</b>		
<b>Program Credits</b>			
Core	51 Credits (16 Courses)		
Major	74 Credits (25 Courses)		
Engineering Elective	9 Credits (3 Courses)		
<b>Total</b>	<b>134 Credits (44 Courses)</b>		

**General Tips and Recommendations**

Engineering electives are 200+ engineering courses.

**Varied Degree Paths:**

Student degree paths may vary slightly from this form. If academic record differs from the courses listed in this form, please contact the Registration and Records Office