American University of Iraq, Sulaimani

BSc. In Energy Engineering Program

Degree Progress Guide (Fall 2022 - Onwards)

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	Credits	Prerequisite(s)	✓
1st Semester			
ENGR 230 - Engineering Drawing (Major)	3	None	
CIV 101 - The Ancient World History (Core)	3	None	
ENG 101 - Argument (Core)	3	None	
MTH 133 - Precalculus (Core)	3	None	
CHEM 232 + CHEML 232 - Chemistry I + Chemistry Lab I (Core)	4	None	
Total Credits	**16**		
2nd Semester			
ENGR 231 - Fabrication Shop (Team-based Problem Solving) (Major)	2	ENGR 230	
ENG 102 - Critical Reading (Core)	3	ENG 101	
MTH 232 - Calculus I (Core)	3	MTH 133	
ENGR 354 - Materials Science (Major)	3	CHEM 232 + CHEML 232	
Core Elective: Humanities, Social Science (Core)	3	See Course Description	
Total Credits	**14**		
3rd Semester			
MTH 233 - Calculus II (Core)	3	MTH 232	
CIV 203 - Civilization III: The Ancient World (Humanities) (Core)	3	30 Credits and above	
PHYS 232 + PHYSL 232 - Calculus Based Physics I + Calculus Based Physics Lab I (Core)	4	MTH 232	
MTH 340 - Linear Algebra (Core)	3	Second Semester Standing	
ENG 203 - Research & Project - Writing (Core)	3	ENG 102	
Total Credits	**16**		
4th Semester			
MTH 332 - Differential Equations (Core)	3	MTH 233	
MTH 331 - Calculus III (Core)	3	MTH 233	
ENGR 344 - Mechanics I (Major)	3	PHYS 232 + PHYSL 232	
ENGR 352 - Thermodynamics (Major)	3	PHYS 232 + PHYSL 232	
PHYS 233 + PHYSL 233 - Calculus Based Physics II + Calculus Based Physics Lab II (Core)	4	PHYS 232 + PHYSL 232	
Total Credits	**16**		
5th Semester			
ENGR 356 - Fluids (Major)	4	ENGR 344, MTH 233	
ENGR 358 - Mechanics of Materials (Major)	3	ENGR 344	
ENGR 390 - Circuits (Major)	4	PHYS 233 + PHYSL 233	
ENGR 244 - Engineering Computing and Numerical Analysis (Major)	3	MTH 332, MTH 331	
ENGR 425 - Energy Storage System (Major)	3	ENGR 354	
Total Credits	**17**		
6th Semester			
ENGR 420 - Turbomachinery (Major)	3	ENGR 356, ENGR 352	
ENGR 313 - Measurements Laboratory (Major)	2	ENGR 356, ENGR 390	
ENGR 348 - Mechanics II (Major)	3	ENGR 344, MTH 340	
ENGR 452 - Transport Phenomena (Major)	3	ENGR 356, MTH 332	
STT 342 - Engineering Statistics (Major)	3	ENGR 244	

Total Credits	**14**		
Summer/Winter			
ENGR 490 - Engineering Internship (Major)	3	Senior Standing (to be taken alone)	
7th Semester			
ENGR 455 - Introduction to Petroleum Engineering (Major)	3	ENGR 356	
ENGR 366 - Applied Electronics (Major)	3	ENGR 390	
ENGR 444 - Engineering Project Management (Major)	3	STT 342	
ENGR 461 - System Dynamics and Control (Major)	3	ENGR 348	
ENGR 491 - Design I (Major)	3	ENG 213, ENGR 358, ENGR 231, Senior Standing	
Total Credits	**15**		
8th Semester			
ENGR 454 - Process Engineering (Major)	3	ENGR 455	
ENGR 457 - Renewable Energy (Major)	3	ENGR 461	
ENGR 492 - Design II (Major)	2	ENGR 491, ENGR 366, ENGR 444	
Engineering Elective	3	Senior Standing	
ENGR 484 - Engineering Laboratory (Major)	3	ENGR 313, STT 342	
Total Credits	**14**		
9th Semester			
Engineering Elective	3	Senior Standing	
Engineering Elective	3	Senior Standing	
Total Credits	**6**		

Program Credits	
Core	48 Credits (15 Courses)
Major	74 Credits (25 Courses)
Engineering Electives	9 Credits (3 Courses)
Total	131 Credits (43 Courses)

General Tips and Recommendations

Engineering electives are 300+ 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 during the advising week for clarification. Independent study, transfer credits or other unique circumstances are typically accounted for in the elective category.