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	Cred	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 232 - Calculus I (Core)	3	None	
CHEM 232 + CHEML 232 - Chemistry I + Chemistry Lab I (Core)	4	None	
Total Credits	**16**		
2nd Semester			
CIV 203 - Civilization III: The Ancient World (Humanities) (Core)	3	CIV 101	
ENGR 231 - Fabrication Shop (Team-based Problem Solving) (Major)	3	ENGR 230	
ENGR 354 - Materials Science (Major)	3	CHEM 232 + CHEML 232	
PHYS 232 + PHYSL 232 - Calculus Based Physics I + Calculus Based Physics Lab I (Core)	4	MTH 232	
MTH 233 - Calculus II (Core)	3	MTH 232	
Total Credits	**16**		
3rd Semester			
ENG 102 - Critical Reading (Core)	3	ENG 101	
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 + PHYSL 232	
PHYS 233 + PHYSL 233 - Calculus Based Physics II + Calculus Based Physics Lab II (Core)	4	PHYS 232 + PHYSL 232	
Total Credits	**16**		
4th Semester			
MTH 331 - Calculus III (Core)	3	MTH 233	
ENG 203 - Research & Project - Writing (Core)	3	ENG 102	
ENGR 352 - Thermodynamics (Major)	3	PHYS 232 + PHYSL 232	
ENGR 356 + ENGR 356L - Fluid Mechanics (Major) + Fluids Laboratory	4	ENGR 344	
ENGR 390 - Circuits (Major)	3	PHYS 233 + PHYSL 233	
Total Credits	**16**		
5th Semester			
ENGR 313 - Measurements Laboratory (Major)	3	PHYS 233 + PHYSL 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	
Total Credits	**15**		
6th Semester			
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	
Total Credits	**15**		
7th Semester			
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	
ENGR 491 - Design I (Major)	3	ENG 203 + 75 Credit Hours	
Total Credits	**15**		
8th Semester			
ENGR 454 - Process Engineering (Major)	3	ENGR 455	
ENGR 457 - Renewable Energy (Major)	3	ENGR 390	
ENGR 492 - Design II (Major)	3	ENGR 491	
Engineering Elective	3	See Course Description	
ENGR 484 - Engineering Laboratory (Major)	3	ENGR 313	
Total Credits	**15**		
9th Semester			
Engineering Elective	3	See Course Description	
Summer/Winter			
ENGR 490 - Engineering Internship (Major)	1	Senior Standing (to be taken alone)	
Program Total Credits	**128**		

Program Credits	
Core	45 Credits (14 Courses)
Major	74 Credits (25 Courses)
Engineering El	9 Credits (3 Courses)
Total	128 Credits (42 Courses)

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 during the advising week for