American University of Iraq, Sulaimani

Below is the natural sequence of Artificial Intelligence and Robotics 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			
MTH 133 - Precalculus	3	None	
CHEM 232 + CHEML 232 - Chemistry I + Chemistry Lab I	4	None	
ENGR 230 - Engineering Drawing	3	None	
CIV 101 - The Ancient World History	3	None	
ENG 101 - Argument	3	None	
Total Credits	**16**		
2nd Semester			
MTH 232 - Calculus I	3	MTH 133	
ENGR 231 - Fabrication Shop (Team-based Problem Solving)	2	ENGR 230	
ENGR 244 - Engineering Computing	3	MTH 133	
ENG 102 - Critical Reading	3	ENG 101	
MTH 235 - Discreet Math	3	MTH 133	
Total Credits	**#REF!**		
3rd Semester			
ENGR 444 - Engineering Project Management	3	ENGR 231	
MTH 233 - Calculus II	3	MTH 232	
PHYS 232 + PHYSL 232 - Calculus Based Physics I + Calculus Based Physics Lab I	4	MTH 232	
Core Elective: Humanities, Social Science	3	See course description	
ENGR 210 - Introduction to Programming	3	None	
Total Credits	**16**		
4th Semester			
PHYS 233 + PHYSL 233 - Calculus-based Physics II + Calculus-based Physics Lab II	4	PHYS 232 + PHYSL 232	
MTH 332 - Differential Equations	3	MTH 233	
ENGR 344 - Mechanics I: Statics	3	PHYS 232 + PHYSL 232	
ENG 203 - Research & Project - Writing	3	ENG 102	
MTH 340 - Linear Algebra	3	Second Semester Standing	
Total Credits	**16**		
5th Semester			
ENGR 390 - Circuits	4	PHYS 233 + PHYSL 233	
Engineering Elective	3	See course description	
ENGR 320 Introduction to Artificial Intelligence	3	ENGR 244	
CIV 203 - Civilization III: The Ancient World (Humanities)	3	30 Credits and above	
STT 342 - Engineering Statistics	3	ENGR 244	
Total Credits	**16**		
6th Semester			
ENGR 348 - Mechanics II: Dynamics	3	ENGR 344	
ENGR 321 - AI Applications	3	ENGR 320	
ENGR 322 - Algorithms and Data Structures	3	ENGR 210	
ENGR 323 - Data Science and Analytics	3	ENGR 244	
ENGR 324 - Mechatronics	3	ENGR 244	
Total Credits	**15**		
Summer/Winter			
ENGR 490 - Engineering Internship	3	Senior Standing (to be taken alone)	
7th Semester			
ENGR 491 - Design I	3	ENG 203, 75 Credits and above	
ENGR 461 - System Dynamics and Control	3	ENGR 348	
ENGR 483 - Robotics	3	Co-requisite: ENGR 461	
ENGR 422 - Computer Vision	3	ENGR 322	
ENGR 366 - Applied Electronics	3	ENGR 390	
Total Credits	**15**		
8th Semester			
ENGR 492 - Design II	2	ENGR 491	
ENGR 423 - Large Language Models	3	ENGR 322	
ENGR 424 - Machine Learning	3	ENGR 322	
ENGR 486 - Robotic Manipulation and Mobility	3	ENGR 324	

ENGR 313 - Measurements Laboratory	2	PHYS 233 + PHYSL 233	
Total Credits	**13**		
9th Semester			
Engineering Elective	3	See course description	
Engineering Elective	3	See course description	
Total Credits	**6**		

Program Credits	
Core	24 Credits (8 Courses)
Major	97 Credits (32)
Engineering Electives	9 Credits (3 Courses)
Total	130 Credits

General Tips and Recommendations

Not Applicable

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.