



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)	
<b>1st Semester</b>			
MTH 232 - Calculus I	3	None	
MTH 235 - Discreet Math	3	None	
ENGR 230 - Engineering Drawing	3	None	
CIV 101 - The Ancient World History	3	None	
ENG 101 - Argument	3	None	
<b>Total Credits</b>	<b>15</b>		
<b>2nd Semester</b>			
ITE 202 - IT Systems	3	CSC 101 or ENGR 231	
ENGR 231 - Fabrication Shop (Team-based Problem Solving)	3	ENGR 230	
ENGR 244 - Engineering Computing	3	Co-requisite: MTH 340, Pre-requisite: MTH 232	
PHYS 232 + PHYSYL 232 - Calculus Based Physics I + Calculus Based Physics L	4	MTH 232	
MTH 340 - Linear Algebra	3	MTH 232	
<b>Total Credits</b>	<b>16</b>		
<b>3rd Semester</b>			
ENGR 320 Introduction to Artificial Intelligence	3	ENGR 244	
MTH 233 - Calculus II	3	MTH 232	
ENG 102 - Critical Reading	3	ENG 101	
PHYS 233 + PHYSYL 233 - Calculus-based Physics II + Calculus-based Physics L	4	PHYS 232 + PHYSYL 232	
ITE 303 - Introduction to Programming	3	ITE 202	
<b>Total Credits</b>	<b>16</b>		
<b>4th Semester</b>			
ITS 350 - Introduction to Data Structures and Algorithms	3	ITE 303	
ITS 310 - Computing and Robotics	3	ITE 303	
ENGR 344 - Mechanics I: Statics	3	PHYS 232 + PHYSYL 232	
ENG 203 - Research & Project - Writing	3	ENG 102	
ENGR 390 - Circuits	3	PHYS 233 + PHYSYL 233	
<b>Total Credits</b>	<b>15</b>		
<b>5th Semester</b>			
ENGR 444 - Engineering Project Management	3	ENGR 231	
MTH 332 - Differential Equations	3	MTH 233	
ENGR 321 - AI Applications	3	ENGR 320	
CIV 203 - Civilization III: The Ancient World (Humanities)	3	CIV 101	
STT 342 - Engineering Statistics	3	ENGR 244	
<b>Total Credits</b>	<b>15</b>		
<b>6th Semester</b>			
ENGR 348 - Mechanics II: Dynamics	3	ENGR 344	
Engineering / IT / SE Elective	3	See course description	
Engineering / IT / SE Elective	3	See course description	
ENGR 323 - Data Science and Analytics	3	ENGR 244	
ENGR 324 - Mechatronics	3	ENGR 390	
<b>Total Credits</b>	<b>15</b>		
<b>Summer/Winter</b>			
ENGR 490 - Engineering Internship	1	Senior Standing (to be taken alone)	
<b>7th Semester</b>			
ENGR 491 - Design I	3	ENG 203, ENGR 231	
ENGR 313 - Measurements Laboratory	3	PHYS 233 + PHYSYL 233	
ENGR 483 - Robotics	3	Co-requisite: ENGR 461, Pre-requisite: ENGR 348	
ENGR 422 - Computer Vision	3	ITS 350	
ENGR 366 - Applied Electronics	3	ENGR 390	
<b>Total Credits</b>	<b>15</b>		
<b>8th Semester</b>			
ENGR 492 - Design II	3	ENGR 491	
ENGR 423 - Large Language Models	3	ITS 350	
ENGR 424 - Machine Learning	3	ITS 350	
ENGR 461 - System Dynamics and Control	3	ENGR 390	
Engineering / IT / SE Elective	3	See course description	
<b>Total Credits</b>	<b>15</b>		
<b>9th Semester</b>			
Core Elective	3	See course description	
<b>Total Credits</b>	<b>3</b>		
<b>Program Credits</b>			
Core			
Major			
Engineering Elective			
Total			
<b>General Tips and Recommendations</b>			
Not Applicable			
<b>Varied Degree Paths:</b>			
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.			