# 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** | | | |
| ENGR 230 - Engineering Drawing | 3 | None | |
| R 100 - Reading | 3 | None | |
| W 100 - Writing | 3 | None | |
| MTH 232 - Calculus I | 3 | None | |
| MTH 235 - Discrete Math | 3 | None | |
| **Total Credits** | **15** | | |
| **2nd Semester** | | | |
| ENGR 231 - Fabrication Shop (Team-based Problem Solving) | 3 | ENGR 230 | |
| ITE 202 - IT Systems | 3 | CSC 101 or ENGR 230 | |
| PHYS 232 + PHYSL 232 - Calculus Based Physics I + Calculus Based Physics Lab | 4 | MTH 232 | |
| ENG 101 - Argument | 3 | R 100, W 100 | |
| MTH 340 - Linear Algebra | 3 | MTH 232 | |
| **Total Credits** | **16** | | |
| **3rd Semester** | | | |
| ENGR 244 - Engineering Computing | 3 | Co-requisite: MTH 340 | |
| MTH 233 - Calculus II | 3 | MTH 232 | |
| ENG 102 - Critical Reading | 3 | ENG 101 | |
| PHYS 233 + PHYSL 233 - Calculus-based Physics II + Calculus-based Physics Lab | 4 | PHYS 232 + PHYSL 232 | |
| ITE 303 - Introduction to Programming | 3 | ITE 202 | |
| **Total Credits** | **16** | | |
| **4th Semester** | | | |
| 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 + PHYSL 232 | |
| ENG 203 - Research & Project - Writing | 3 | ENG 102 | |
| ENGR 390 - Circuits | 3 | PHYS 233 + PHYSL 233 | |
| **Total Credits** | **15** | | |
| **5th Semester** | | | |
| ENGR 444 - Engineering Project Management | 3 | ENGR 231 | |
| MTH 332 - Differential Equations | 3 | MTH 233 | |
| STT 342 - Engineering Statistics | 3 | ENGR 244 | |
| CIV 101 - The Ancient World History | 3 | R 100, W 100 | |
| ENGR 323 - Data Science and Analytics | 3 | Co-requisite: STT 342 | |
| **Total Credits** | **15** | | |
| **6th Semester** | | | |
| ENGR 348 - Mechanics II: Dynamics | 3 | ENGR 344 | |
| ENGR 313 - Measurements Laboratory | 3 | PHYS 233 + PHYSL 233 | |
| ENGR 366 - Applied Electronics | 3 | ENGR 390 | |
| ENGR 320 Introduction to Artificial Intelligence | 3 | STT 342 | |
| ENGR 320L Introduction to Artificial Intelligence Laboratory | 1 | ITE 202 + CoReq: ENGR 320 | |
| ENGR 324 - Mechatronics | 3 | ENGR 390 | |
| **Total Credits** | **16** | | |
| **7th Semester** | | | |
| ENGR 491 - Design I | 3 | ENG 203, ENGR 231 | |
| ENGR 461 - System Dynamics and Control | 3 | ENGR 390 + MTH 332 | |
| ENGR 422 - Computer Vision | 3 | ITS 350 | |
| ENGR 483 - Robotics | 3 | ENGR 348 + Co-req: ENGR 461 | |
| ENGR 426 - Digital Signal Processing | 3 | MTH 332 + ITE 303 | |
| **Total Credits** | **15** | | |
| **8th Semester** | | | |
| ENGR 492 - Design II | 3 | ENGR 491 | |
| ENGR 423 - Large Language Models | 3 | ITS 350 | |
| ENGR 424 - Machine Learning | 3 | ITS 350 | |
| Engineering / IT / SE Elective | 3 | See course description | |
| Engineering / IT / SE Elective | 3 | See course description | |
| **Total Credits** | **15** | | |
| **9th Semester** | | | |
| Core Elective | 3 | See course description | |
| Engineering / IT / SE Elective | 3 | See course description | |
| CIV 203 - Civilization III: The Ancient World (Humanities) | 3 | CIV 101 | |
| **Summer/Winter** | | | |
| ENGR 490 - Engineering Internship | 1 | Senior Standing (to be taken alone) | |
| **Program Total Credits** | **133** | | |

## Program Credits

| | |
|---|---|
| Core | 50 Credits (16 Courses) |
| Major | 73 Credits (25 Courses) |
| Engineering Electives | 9 Credits (3 Courses) |
| Total | 132 Credits (44 Courses) |

## General Tips and Recommendations

AI and Robotics Engineering electives are 200+ courses in either the Engineering or Computing and Informatics Department.

## 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.