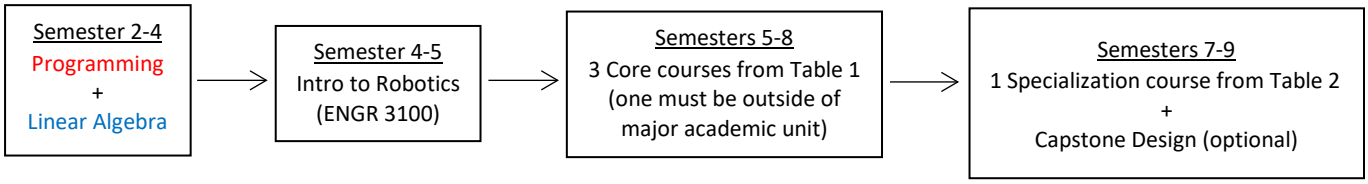
Robotics Engineering Minor

The flowchart for the minor is shown below.



Programming: ME 2543 or IE 2060 or CSC 1253 or CSC 1350 or CHE 2176. One of these courses is required for each Engineering major, except for BE.

Linear algebra: MATH 2070 or MATH 2085 or MATH 2090. One of these courses is required for each Engineering major, except for BE.

Introduction to Robotics: Offered only in the fall semester.

Capstone Design: Engineering students from academic units with Capstone Design are strongly encouraged to select a robotics-related project.

Table 1: List of Core Courses

ME 3133 Dynamics or CE 2460 Dynamics and Vibrations
ME 4183 Theory/Design Mechanical Control Systems, EE 3530 Intro Control Engineering, or CHE 4198 Process Dynamics & Control
ME 4673 Intro Modern Control Theory
ME 4683 Sensors & Actuators
ME 4193 Vehicle Dynamics
EE 3752 Microprocessor Systems
EE 4003 Intro Programmable Logic Control
EE 4750 Microprocessor Interfacing Techniques
EE 4780 Intro Computer Vision
EE 4730 3D Graphical and Geometric Modeling
EE 4160 Algorithms and Implementations for Digital Signal Processing
EE 4003 Digital Control
EE 4490 Adjustable Speed Drives
CSC 4444 Artificial Intelligence
CSC 4356/ME 4573 Intro Interactive Computer Graphics
CSC 4243 Interface Design and Technology
CSC 4512 Optimization
CSC 4402 Intro Database Management Systems
IE 4465/BE 4323 Biomechanics for Engineers, or KIN 3514 Biomechanical Basis of Kinesiology
IE 4485 Systems Integration in Manufacturing
IE 4466 Human Computer Interaction
KIN 3513 Intro Motor Learning
KIN 4571 Neuromotor Control of Human Movement

Table 2: List of Specialization Courses

ENGR 4100 Industrial Robots*
ENGR 4200 Autonomous Robotic Vehicles
ENGR 4103 Assistive Robotics

* Pre-requisite: ME 3133 or CE 2460

Specialization courses are offered every three semesters according to the following schedule.

- ENGR 4100: Fall 2024, Spring 2026, etc
- ENGR 4200: Spring 2024, Fall 2025, etc
- ENGR 4103: Fall 2023, Spring 2025, etc