

**Robotics Engineering**  
Catalog Year 2024-2025

*Note: This is a recommended sequence and shifts are likely to occur due to prerequisite completion and course availability.*

Semester One	Semester Two
CHEM 1127Q: General Chemistry I (4 credits)	PHYS 1501Q: Physics for Engineers I (4 credits)
MATH 1131Q: Calculus I (4 credits)	MATH 1132Q: Calculus II (4 credits)
CSE 1010: Intro to Computing for Engineers (3 credits)	ENGR 1166: Foundations of Engineering (3 credits)
ENGL 1007: Writing and Composition (4 credits)	ECE 1401: Programming for Elec. Engineers (3 credits)
	Gen Ed (3 credits)
<b>15 credits</b>	<b>17 credits</b>

Semester Three	Semester Four
ECE 2001: Electrical Circuits (4 credits)	ECE 3101: Signals & Systems (3 credits)
MATH 2110Q: Multivariable Calculus (4 credits)	MATH 2210Q: Applied Linear Algebra (3 credits)
MATH 2410: Elem. Differential Equations (3 credits)	ECE 3411: Microprocessor Applications (3 credits)
PHYS 1502Q: Physics for Engineers I (4 credits)	ECE/ME 3161: Intro to Robotics (3 credits)
CSE 2050: Data Structures and O. O. Design (3 credits)	CSE 2500: Intro to Dis. Systems <b>or</b> MATH 2710: Trans. To Adv. Maths (3 credits)
<b>18 credits</b>	<b>15 credits</b>

Semester Five	Semester Six
ECE 3111 Systems Analysis (4 credits) <b>or</b> ME 3253/3254: Linear Systems Theory (3 credits)	ECE/ME 3163: Robot Control & Dynamics (3 credits)
ECE/ME 3162: Robot Motion Planning (3 credits)	CSE 4820: Intro to Machine Learning (3 credits)
CSE 3500: Algorithms (3 credits)	Track Elective (3 credits) ECE 3201 recommended
STAT 3345Q: Prob. Models for Engineers (3 credits) <b>or</b> MATH 3160: Probability (3 credits)	PHIL 1104: Philosophy & Social Ethics (CA 1) (3 credits)
Gen Ed (3 credits)	Gen Ed (3 credits)
<b>15 or 16 credits</b>	<b>15 credits</b>

Semester Seven	Semester Eight
ECE 4901: ECE Design I (2 credits)	ECE 4902: ECE Design II (3 credits)
ECE 4900W: Communic. Engineer. Solutions (1 credit)	Track Elective (3 credits)
ECE 4161: Robotics Systems Laboratory (3 credits)	Robotics Elective (3 credits)
Track Elective (3 credits)	Robotics Elective (3 credits)
Gen Ed (3 credits)	Free Elective* (3 credits)
Gen Ed/Free Elective (3 credits)	
<b>15 credits</b>	<b>15+ credits</b>

\*as needed to reach total degree credits

*See reverse for important general education and major specific information.*

**Total Credits: 126**