

Bachelor of Science in Engineering with a major in Mechatronics and Robotics Engineering

Major Requirements

Oakland University Courses	Northwestern Michigan College Courses
MTH 1554	MTH 141
MTH 1555	MTH 142
MTH 2554	MTH 241
APM 2555	MTH 251
PHY 1510 and 1520	PHY 221/221L/221R and PHY 222/222L/222R
CHM 1440	CHEM 150, 150R, and 150L
EGR 1200	DD 170
ME 3200^	EGR 203^
ME 3250^	EGR 202^
Economics Requirement	ECO 201 or 202
Choose one* Approved Math or Science Elective (students encouraged to select with an OU adviser)	BIO 115/115L; (CHEM 151, 151R, and 151L)

^Students who take this equivalent at NMC are required to take a 1 credit lab at Oakland University

*Students must complete at least 30 credits of required math/science courses, additional options available at OU

Students may transfer an unlimited amount of credit from NMC, and must complete a minimum of 45 credit hours from OU to meet degree requirements. As programs may limit how much transfer credit can be used toward requirements, **it is highly recommended that students work with both an OU academic adviser and their NMC academic adviser to maximize the applicability of coursework to specific requirements.**

TRANSFERRING WITH THE MICHIGAN TRANSFER AGREEMENT (MTA):

When choosing to complete MTA to satisfy General Education, please confirm the best courses to take to fulfill the agreement with your academic adviser at NMC or at the [NMC MTA Approved Courses](#) website. Completing MTA when following this major guide will satisfy OU's transferable General Education requirements.

Additional course requirements for MTA when following this major guide (minimum 30 credit hours required for MTA):

ENG 111

ENG 112 (Review your MTA plans with an OU academic adviser)

One MTA Approved Social Sciences course

Two MTA Approved Humanities courses

TRANSFERRING WITHOUT MTA:

If you intend to transfer without MTA, you can choose to complete additional coursework to fulfill OU's individual General Education categories instead. When following this major guide, please reference the [NMC General Education Transfer Guide](#) for the NMC courses that satisfy these specific OU General Education categories:

- Writing Foundations (ENG 112)
- Arts
- Language and Culture
- Global Perspective
- Literature
- U.S. Diversity

All prospective students should call the School of Engineering and Computer Science (SECS) Academic Advising Office at (248) 370-2201 to schedule an appointment. Their office can also be contacted by email at secsadvising@oakland.edu, or visit their [website](#) for more information.

NOTES:

The Electrical and Computer Engineering Department offers optional concentrations in Automotive Mechatronic Systems, Autonomous Vehicles, Electric Drives and Powertrains, Human-Robot Interaction, Industrial Robotics and Automation, and Intelligent Robotics and Controls to students interested in broadening their knowledge in a specific area of mechatronics and robotics engineering and wishing an area of concentration in their degree.

Transfer students are admitted directly to the major if they have a cumulative GPA of 2.8 or higher, if students have a GPA between 2.5 and 2.79, they are admitted as a “Candidate” to the SECS, and will need to meet established criteria to change their major.

Students apply for major standing once they have completed math, science, and core engineering courses.

Oakland University will always honor the **MACRAO transfer agreement** and apply it to the General Education requirement the same as MTA.

SCHOOL OF ENGINEERING AND COMPUTER SCIENCE (SECS) TALKING POINTS:

Learn more about OU's [ABET accredited programs](#): (Bioengineering, Mechanical Engineering, Computer Engineering, Electrical Engineering, Industrial & Systems Engineering, Information Technology and Computer Science).

Learn about ways to [get involved](#) in over 20 student organizations affiliated with SECS, as well as different professional organizations related to careers in engineering and computer science!

OU students also participate in competitions such as Intelligent Ground Vehicle, [Formula SAE](#), North American International Auto Show in Detroit, GrizzHacks, and Maker Faire Detroit.

OU offers a number of [scholarship opportunities](#) to students in the School of Engineering and Computer Science to help pay for your education.

The School of Engineering and Computer Science offers a wide variety of [opportunities for undergraduate research](#).

SECS students can work with a career consultant about your resume, job search or to practice your interviewing skills. There are also a number of networking events each month and [resources available through the Career and Life Design Center](#). Employers from hundreds of companies participate in our annual Engineering and IT Career Fair in search of Oakland students to fill internship and full-time opportunities.