

Bachelor of Science with a major in Bioengineering (2018/19 Catalog)

Major Requirements

Oakland University Courses	Macomb Community College Courses
ECN 2010 or 2020	ECON 1170 or (ECON 1160 accepted) or ECON 2110
MTH 1554	MATH 1760
MTH 1555	MATH 1770
MTH 2554	MATH 2760
APM 2555	MATH 2000 and 2770
PHY 1610	PHYS 2220 accepted (see adviser to discuss pre-req differences)
PHY 1620	PHYS 2230 accepted
CHM 1440 & 1470	CHEM 1170 (see adviser to discuss pre-req differences)
CHM 1450 & 1480	CHEM 1180
CHM 2340	CHEM 2260
BIO 1200	BIOL 1000
EGR 1200	ATAP 2010 or 2350 or 2360 or 2380 or DRCG 1140 or PRDE 1400 or 1410 or 1450 or 1475 or 1520 or 1620 or 2620

There are four professional track options to choose from. The courses below apply to the specific track listed. It is recommended to meet with an academic adviser at OU to discuss the different track options.

BIO 3500 (Major Course option or Molecular Engineering Track)	BIOL 2400
CSI 3450 (Bioinformatics Track)	ITCS 1170

MICHIGAN TRANSFER AGREEMENTS:

In many cases, it is to a student's advantage to complete the MTA or MACRAO agreement when fulfilling General Education requirements. This may allow for more flexibility when creating a schedule while at your community college. When choosing to complete MTA or MACRAO, please confirm the best courses to take to fulfill the agreement with your academic adviser at Macomb or [MTA Approved Courses](#).

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

ENGL 1180/1210 & 1190/1220 (ENGL 1190/1220 is a pre-requisite for coursework at OU)

MTA Approved Social Science

MTA Approved Social Science

MTA Approved Humanities

MTA Approved Humanities

SPECIAL NOTE REGARDING MTA OR MACRAO: In some cases, completing the MTA or MACRAO agreement is not as practical. When using MTA or MACRAO, your ability to make the most efficient course selections at OU may be impacted depending on your accumulated credits and chosen OU major. For more details on whether or not it is recommended for you to complete MTA or MACRAO, please consult with an OU academic adviser.

If you plan to transfer without completing a transfer agreement, please reference the table below for courses that satisfy individual categories.

GENERAL EDUCATION REQUIREMENTS

40 credits are required from categories 1-10. Each of these categories must be fulfilled by completing one course of at least 3 or more credits. A course may not be used in more than one of these categories. Please see OU Catalog for further information.

Oakland University Categories	Macomb Community College Courses
1. Writing Foundations	ENGL 1190, 1220 (minimum grade of C required for this category)
2. Formal Reasoning	Satisfied by MATH 1760
3. Arts	ARTT 1620, 2650, 2660; HIST 2340; HUMN 1210, 1270, 1300, 1460; MUSC 1030, 1040, 2710, 2720
4. Foreign Language and Culture	CHIN 1260, 1270; ARAB, GRMN 1260, 1270, 2360; FREN, ITAL, SPAN 1260, 1270, 2360, 2370;
5. Global Perspective	ANTH 1000, 1100; ECON 2110; GEOG 2000; HIST 2520, 2650; HUMN 1700, 2000; INTL 2000, 2010, 2300, 2700, 2800; MUSC 1040; POLS 1600
6. Literature	ENGL 1730, 2510, 2520, 2600, 2610, 2710, 2720, 2730, 2740, 2800, 2810, 2850; HUMN 1750
7. Natural Science and Technology	Satisfied by BIOL 1000, CHEM 1170, PHYS 2220
8. Social Science	Satisfied By ECON 1160, 1170, 2110
9. Western Civilization	Satisfied by PHL 1310 at OU
10. Knowledge Applications	Satisfied by MATH 1770, PHYS 2230
U.S. Diversity – May double count with categories 1-10	ENGL 2740; HIST 2100, 2200; HUMN 1270, 1460; POLS 1000; SOCY 1010, 2550
Capstone & Writing Intensive in the Major	These general education requirements must be met by courses taken at Oakland University.

Students who complete MTA or MACRAO according to this guide satisfy general education categories 1-9 and U.S. Diversity.

NOTES:

Please contact the School of Engineering and Computer Science [Academic Advising](#) Office at (248)370-2201.

TALKING POINTS:

ABET accredited programs (Mechanical Engineering, Computer Engineering, Electrical Engineering, Industrial & Systems Engineering, Information Technology and Computer Science).

Career Consultants to assist with resume building, internship/job searching, network events and more. Employers from 120 companies participated in the 2017 Engineering and IT career fair, in search of Oakland students to fill internship and full-time opportunities.

[Student and Professional Organization](#) involvement opportunities.

Different [Scholarship](#) opportunities await to help pay for your education.

Information Technology and Computer Science majors have an internship/research requirement that helps students gain meaningful experiences. Check out all of the [Undergraduate Research](#) opportunities available.

Lunch & Learns, Meet & Greets, and Lunch Lecture Series allow students to meet representatives from companies like GM, Argus Cyber Security, United States Army Tank Automotive Research, Development and Engineering Center (TARDEC) and many more that hire OU students.

Participate in competitions such as Intelligent Ground Vehicle, Formula SAE, North American International Auto Show in Detroit, and Maker's Faire.

Check out some of the videos highlighting OU students' work [Formula SAE Racing](#), [Maker Faire 2017- Blue Ribbon Winner](#), [Maker Faire 2016](#). OU students know how to have fun- [Harlem Shake 2013](#) & [Harlem Shake 2015](#).

Student-built Loon Copter won **\$1 million prize** in International Drones for Good Competition.

77% of SECS students completed an internship during the 2015-2016 academic year.

The overall placement rate of SECS students during the 2015-2016 academic year was 97%.

OU is the top-producing school for self-driving vehicle workers.

Oakland University's School of Engineering and Computer Science (SECS), in collaboration with Professional and Continuing Education (PACE) has partnered with DCT Aviation of Waterford, Mich. to develop a new, two-course sUAS Remote Pilot Certificate Program. The two-course program is specifically designed to provide both basic airman knowledge, hands-on flying skills, and preparation to apply for and pass the Federal Aviation Administration's sUAS Remote Pilot Certification Test.

Oakland University has been designated as a National Center of Academic Excellence in Cyber Defense Education (CAE-CDE) through academic year 2023.