

Macomb Community College:
Suggested:
Associate of General Studies (AGS)

Oakland University:
Bachelor of Science Engineering (BSE)
Electrical Engineering

Macomb Community College -- Before Transfer

Pre-Major Requirements:	47-49 Hrs
Complete -- 10 courses:	
CHEM 1170: General Chemistry 1	4
ECON 1170: Principles of Economics 2 or ECON 2110: International Economics (<i>or ECON 1160: Principles of Economics 1 may serve as a substitute for this course</i>)	3
MATH 1760: Analytic Geometry & Calculus 1	4
MATH 1770: Analytic Geometry & Calculus 2	4
MATH 2000: Introduction to Linear Algebra and MATH 2770: Differential Equations	8
MATH 2760: Analytic Geometry & Calculus 3	4
PHYS 2220: Analytical Physics 1	5
PHYS 2230: Analytical Physics 2	5
Complete 1 course: ATAP 2010, 2350, 2360, 2380; DRCG 1140; PRDE 1400, 1410, 1450, 1475, 1520, 1620, 2620	2-4
Complete 1 course with OU advisor approval: BIOL 1000; CHEM 1180; or MATH 2200	4
General Education Requirements: Note: Students who complete a Michigan transfer agreement (MTA or MACRAO) will satisfy Oakland University's general education requirement. Meet with a Macomb academic advisor or counselor for specific MTA courses and requirements or visit: macomb.edu/transfer	19-23 Hrs
1. Writing Foundations – 2 courses or MTA Endorsement: ENGL 1180 or ENGL 1210 and ENGL 1190 or ENGL 1220	6-8
2. Formal Reasoning – 1 course or MTA Endorsement: Satisfied by Major (MATH 1760)	-
3. Arts – 1 course or MTA Endorsement: ARTT 2650, 2660; HIST 2340; HUMN 1210, 1270 , 1300, 1460 ; MUSC 1030, 2710, 2720	3-4
4. Foreign Language and Culture – 1 course or MTA Endorsement: ARAB; CHIN; FREN; GRMN; ITAL; SPAN (except SPAN 1265)	4
5. Global Perspectives – 1 course or MTA Endorsement: ANTH 1000; ECON 2110; GEOG 2000; HIST 2520, 2650; HUMN 1700; INTL 2000, 2010, 2500, 2700, 2800; POLS 1600	3-4
6. Literature – 1 course or MTA Endorsement: ENGL 1730, 2510, 2520, 2610, 2710, 2720, 2730, 2800, 2810, 2850; HUMN 1750	3
7. Natural Science and Technology – 1 course or MTA Endorsement: Satisfied by Major (CHEM 1170 or PHYS 2220)	-
8. Social Science – 1 course or MTA Endorsement: Satisfied by Major (ECON 1170 or ECON 2110)	-
9. Western Civilization – 1 course or MTA Endorsement: Satisfied by Major (Oakland University Course)	-
10. Knowledge Applications: Satisfied by Major (MATH 1770)	-
U.S. Diversity – 1 course or MTA Endorsement: One course (bolded) may be satisfied when completed from the above 1-10 categories: HIST 2100, 2200; HUMN 1270, 1460; POLS 1000; SOCY 1010, 2550	-
Capstone & Writing Intensive in the Major: These general education requirements must be completed at Oakland University	-

Oakland University -- After Transfer	
Pre-Major Requirements:	7-12 Hrs
Complete -- 2 courses:	
APM 2555: Introduction to Differential Equations with Matrix Algebra	4
PHL 1310: Introduction to Ethics in Science and Engineering	3
Complete --1 course: APM 2663, 3332, 3557, 4333, 4334, 4555, 4663, 4777; BIO 1200 (if BIOL 1000 is not completed at Macomb), BIO 3400, 3220, 4112; CHM 1450 and CHM 1480; MTH 3552; PHY 3250, 3260, 3310, 3610, 3660, 3710, 4310; or others by approval by petition to the SECS Committee on Academic	0-5
Engineering Core:	21 Hrs
Complete – 6 courses:	
EGR 1200: Engineering Graphics and CAD	1
EGR 1400: Computer Problem Solving in Engineering and Computer Science	4
EGR 2400: Introduction to Electrical and Computer Engineering	4
EGR 2500: Introduction to Thermal Engineering	4
EGR 2600: Introduction to Industrial and Systems Engineering	4
EGR 2800: Design and Analysis of Electromechanical Systems	4
Required Professional Subjects:	32 Hrs
Complete -- 9 courses:	
ECE 2005: Electrical Circuits	4
ECE 2700: Digital Logic Design	4
ECE 3100: Electronic Circuits and Devices	4
ECE 3204: Signals and Systems	4
ECE 3300: Electromagnetics I	4
ECE 3600: Electrical Machines	4
ECE 3105: Electronic Circuits and Devices II	4
ECE 4999: Senior Design	4
Professional Electives:	16 Hrs
Students must complete 2 professional depth areas from below. In one depth area, students are Required to take the key course and one of the two listed professional electives. In the other depth area, students are only required to take the key course. Students must also complete one free elective from any 4000-level ECE course. Prior approval of the chairperson of the Department of Electrical and Computer Engineering is required for courses: ECE 4998, ECE 4996, and any 5000-level course.	
Professional Depth Areas:	
1. Communications: <u>Key course:</u> ECE 4210; <u>Electives:</u> ECE 4220, 4230	
2. Computer Engineering: <u>Key course:</u> ECE 4720; <u>Electives:</u> CSI 3640, ECE 3710	
3. Control Systems: <u>Key course:</u> ECE 4400; <u>Electives:</u> ECE 4410, 4415	
4. Electromagnetics: <u>Key course:</u> ECE 4305; <u>Electives:</u> ECE 4310, 4320	
5. Electronics: <u>Key course:</u> ECE 4132; <u>Electives:</u> ECE 4130, 4135	
6. Industrial Robotics: <u>Key course:</u> ECE 4500; <u>Electives:</u> ECE 4510, 4520	
7. Power Systems: <u>Key course:</u> ECE 4610; <u>Electives:</u> ECE 4620, 4630	
Free Elective: One 4000-level ECE course	TBD
Maximum credits at Macomb = 64	Minimum credits at Oakland University = 65
<i>Minimum credits for the Bachelor of Science in Engineering – Computer Engineering = 129</i>	

Important Information:

- All content is for informational purposes and is designed to be used as a tool to assist students with transfer information but should not be used for self-advising.
- Associate degree requirements are not included on this transfer plan. When pursuing a Macomb degree, work closely with a Macomb academic and Oakland University advisor or counselor to ensure BOTH the Macomb and Oakland University degree requirements are being met.
- Transfer credit limits vary by each transfer college and major. This transfer plan may contain more than the maximum number of allowable transfer credits Oakland University will accept.
- Macomb and Oakland University reserve the right to make any necessary changes to courses, provisions, or transfer requirements without notice.
- It is the responsibility of the student to be aware of changes that affect their transfer plan. Students are strongly encouraged to contact Oakland University on an annual basis to review program requirements.
- For further information, please contact Oakland University located at the Macomb University Center at 586.263.6242 to schedule an appointment with an Oakland University academic advisor, or visit: [Macomb University Center - Oakland University](#)
- This program is also offered at Oakland University's main campus. For additional information, please view the recommended program guide: [Bachelor of Science in Engineering with a major in Electrical Engineering](#) or contact the [School of Engineering and Computer Science](#).

Effective Date: 2017/2018 catalog and updated on the Macomb transfer plan June 2017