

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

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

Macomb Community College -- Before Transfer

Major Requirements:	43-45 Hrs
CHEM 1170: General Chemistry 1	4
ECON 1160: Principles of Economics 1 or ECON 1170: Principles of Economics 2 or ECON 2110: International Economics	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
Math/Science Elective -- 1 course with advisor approval: BIOL 1000; CHEM 1180; MATH 2200 (<i>Recommended for EE/CE double majors</i>)	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 at Macomb (MATH 1760)	-
3. Arts – 1 course or MTA Endorsement: ARTT 1620, 2650, 2660; HIST 2340; HUMN 1210, 1270 , 1300, 1460 ; MUSC 1030, 1040, 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, 1100; ECON 2110; GEOG 2000; HIST 2520, 2650; HUMN 1700, 2000; INTL 2000, 2010, 2300, 2500, 2700, 2800; MUSC 1040; POLS 1600	3-4
6. Literature – 1 course or MTA Endorsement: ENGL 1730, 2510, 2520, 2610, 2710, 2720, 2730, 2740 , 2800, 2810, 2850; HUMN 1750	3
7. Natural Science and Technology – 1 course or MTA Endorsement: Satisfied by Major at Macomb (CHEM 1170; PHYS 2220)	-
8. Social Science – 1 course or MTA Endorsement: Satisfied by Major at Macomb (ECON 1160, 1170, 2110)	-
9. Western Civilization – 1 course or MTA Endorsement: Will be satisfied by Major at Oakland University (PHL 1310)	-
10. Knowledge Applications: Satisfied by Major at Macomb (MATH 1770; PHYS 2230)	-
U.S. Diversity – 1 course or MTA Endorsement: One course listed above (bolded) may also satisfy this requirement if completed in the above 1-10 categories: 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 completed at Oakland University	-

Oakland University -- After Transfer	
Major Requirements:	7-12 Hrs
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 (<i>if BIOL 1000 is not completed at Macomb</i>), 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 Standing.	0-5
Engineering Core:	21 Hrs
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:	34-35 Hrs
ME 3300: Computer-Aided Design	3
ME 3200: Engineering Mechanics	4
ME 3500: Introduction to Fluid and Thermal Energy Transport	4
ME 3250: Mechanics of Materials	4
ME 3700: Properties of Materials	4
ME 4200: Vibrations and Controls	4
ME 4300: Mechanical Systems Design	4
ME 4500: Energy Systems Analysis and Design or ME 4550: Fluid and Thermal Systems Design	4
ME 4999: Senior Mechanical Engineering Design Project or ME 4998: Senior Project	3-4
Professional Electives:	TBD
<p>Students must complete at least 12 additional credits of 4000/5000-level engineering courses (must have permission of instructor to take 5000-level). At least 8 credits must have an ME designation. If interested in broadening knowledge in a specific area of mechanical engineering, students should elect sequences of courses as described in the specialized professional depth areas from below.</p> <ul style="list-style-type: none"> Meet with your SECS advisor at Oakland University to discuss the best course options for the degree. 	
<p>Professional Depth Areas:</p> <ol style="list-style-type: none"> Energy, Fluid and Thermal Systems: <u>Recommended:</u> ME 4510, ME 4520; <u>Other Relevant Courses:</u> ME 4530, 4500, 4540, 4550 Computer-aided Design: <u>Recommended:</u> ME 4350, 4360 Automotive Engineering: <u>Recommended Automotive Structures Specialty:</u> ME 4210, 4220 <u>Recommended Internal Combustion Engines Specialty:</u> ME 4500, 4540 <u>Other Relevant Courses:</u> ME 4260, 4510, 4520, 4750, 4350, 4730, ECE 4400, 4110, 4520 Manufacturing Engineering: <u>Recommended:</u> ME 4600, 4700; <u>Other Relevant Courses:</u> ME 4360, 4710, 4740, 4750, ECE 4400, ISE 4485 Materials Engineering: <u>Recommended:</u> ME 4600, 4610, 5530 Nuclear Engineering: <u>Required:</u> ME 4520, 4500, 4580, 4585, PHY 3180 	
Maximum credits at Macomb = 64	Minimum credits at Oakland University = 65
<i>Minimum credits for the Bachelor of Science in Engineering – Mechanical 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 with a major in Mechanical Engineering](#) or contact the [School of Engineering and Computer Science](#).

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