Transfer Credit Guide

This guide is subject to change and should be used in consultation with an academic advisor.

CMU
CENTRAL MICHIGAN UNIVERSITY

MAJOR: MECHANICAL ENGINEERING
DEGREE: BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING

The engineering majors prepare students to help solve many exciting and demanding problems including important global issues related to energy and the environment, as well as the development of new devices, products and materials. Students work with advanced computer simulations and modern, well-equipped laboratories that provide exciting and valuable hands-on experience.

Schoolcraft College	Credits	Central Michigan University Equivalent
General Education Requirements – Competencies (Require a grade of "C" or higher)		
ENG 111 College Composition 1	3	ENG 101 Freshman Composition
ENG 112 College Composition 2	3	ENG 201 Intermediate Composition
Oral English		Satisfied by COMA 103 or THEA 241 (see below)
Mathematics		Satisfied by MATH 150 (see below)
Quantitative Reasoning		Satisfied by PHYS 211 (see below) or at CMU
Writing Intensive		Six credits waived if MTA or MACRAO is satisfied. The remaining 6 must be completed at CMU
General Education – University Program Requirements All MTA applicable courses require a grade of "C" or higher		
Group I Humanities (6 – 8) from at least 2 subjects *MACRAO: Requires 8 hours – MTA: Requires 2 courses*		
Select **one** of the following:		
COMA 103 Fundamentals of Speech	3	COM 101 Introduction to Communication
THEA 241 Oral Interpretation of Literature	3	TAI 170 Oral Interpretation of Literature
Select additional courses from: ARB – FR – GER – SPAN: 101, 102, 201, 202; ART 105, 106, 109, 110, 113, 115, 116, 118, 119, 125, 126, 201, 205, 211, 212, 216, 218, 219, 236, 239, 243, 244; CHIN – ITAL: 101, 102; ENG 170, 200, 203, 243, 244, 245, 246, 248, 251, 252, 275, 280; HIST 134, 137, 138, 141, 151, 152, 153, 230; HUM 106, 150, 190, 201, 202, 203, 204, 210, 212, 215, 231, 232; MUS 104, 105, 107, 149, 153, 154, 155, 164, 165, 250, 252; PHIL 243	3 - 6	Various Humanities Course Credit
Group II Natural Sciences (4 – 8) from at least 2 subjects *MACRAO: Requires 8 hours (Math + Natural Science)-MTA: Requires 2 courses* At least one course must be a lab science		
CHEM 111 General Chemistry	4	CHM 131 General Chemistry I
PHYS 211 Physics for Scientists & Engineers 1	5	PHY 145QR University Physics I & 175 University Physics Lab
Group III Social Sciences (6 – 8) from at least 2 subjects *MACRAO: Requires 8 hours – MTA: Requires 2 courses*		
Select courses from: ANTH 112, 117, 201, 211, 214; ECON 103, 201, 202; GEOG 133, 241; HIST 134, 137, 138, 141, 151, 152, 153, 230; POLS 105, 109, 205, 207, 209; PSYCH 153, 201, 205, 206, 207, 209, 219, 229, 239, 249; SOC 201, 205, 209, 210, 220, 290	6 – 8	Various Social Science Credit
Group IV Studies in Culture and Diversity		**Waived if MTA/MACRAO is satisfied**
Mathematics (3 – 4): *MACRAO: Requires 8 hours (Math + Natural Science) - MTA: Requires 1 course*		
MATH 150 Calculus w/ Analytic Geometry 1	5	MTH 132 Calculus I
Major or Degree Related Transferable Courses		
BUS 207 Business Law 1	3	BLR 202 Legal Environment of Business
MATH 151 Calculus w/ Analytic Geometry 2	5	MTH 133 Calculus II
MATH 230 Linear Algebra	4	MTH 223 Linea Algebra and Matrix Theory
MATH 240 Calculus w/ Analytic Geometry 3	5	MTH 233 Calculus III
MATH 252 Differential Equations	5	MTH 334 Differential Equations
PHYS 212 Physics for Scientists & Engineers 2	5	PHY 146 University Physics II & 176 University Physics Lab

IMPORTANT NOTES

- **It is strongly recommended that transfer students contact CMU early in their college career to ensure proper course sequencing for their major, optimizing course scheduling, and timely degree completion at CMU. CMU Engineering and Technology (E&T) 989.774.3033 or etdept@cmich.edu**
- Students interested in signing an Engineering Major are required to meet with a CMU Engineering and Technology (E&T) advisor during their first semester of attendance at CMU.
- Engineering majors are required to meet with their engineering advisor each semester for appropriate class selection.
- Pre-requisites are strictly enforced.

CENTRAL MICHIGAN UNIVERSITY
Admissions: Warriner Hall 102 | Mount Pleasant, MI 48859 | 1-888.292.5366 Toll Free
cmuadmit@cmich.edu | http://admissions.cmich.edu
CMU is an AA/EO institution, providing equal opportunity to all persons, including minorities, females, veterans and individuals with disabilities. (see cmich.edu/aaeo) UComm 9063

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Major or Degree Related Courses to be Completed at CMU

DEGREE REQUIRED COURSES (33 - 36)
Business Component – Required (3 hours)
BLR 202 satisfied at Schoolcraft with BUS 207

Mathematics & Science Requirements I (24 hours)
MTH 132 satisfied at Schoolcraft with MATH 150
MTH 133 satisfied at Schoolcraft with MATH 151
MTH 233 satisfied at Schoolcraft with MATH 252
PHY 145QR satisfied at Schoolcraft with PHYS 211
PHY 146 satisfied at Schoolcraft with PHYS 212
PHY 175 satisfied at Schoolcraft with PHYS 211
STA 392 Probability and Statistics for Engineers (3)

Mathematics & Science Requirements II (3 – 6 hours)
Select **one** of the following options:
Option A (3 hours)
MTH 232 Linear Algebra and Differential Equations (3)
Option B (6 hours)
MTH 223 satisfied at Schoolcraft with MATH 240
MTH 334 satisfied at Schoolcraft with MATH 252
Mathematics & Science Requirements III (4 – 5 hours)
Select **one** of the following:
CHM 131 satisfied at Schoolcraft with CHEM 111
CHM 161 Principles of Chemistry (5)

SPECIALIZED STUDIES - MAJOR REQUIRED COURSES
Required Courses I (63 hours)
EGR 120 Introduction to Engineering (3)
EGR 190QR Digital Circuits (3)
EGR 200 Computer Aided Problem Solving for Engineers (3)
EGR 251 Engineering Statics (3)
EGR 253 Engineering Dynamics (3)
EGR 255 Strength of Materials (3)
EGR 290 Circuit Analysis I (3)
EGR 300 Engineering Economic Analysis (3)
EGR 355 Engineering Materials (3)
EGR 356 Thermodynamics I (3)
EGR 358 Fluid Mechanics (3)
EGR 359 Machine Design I (3)
EGR 360 Solid Mechanics Laboratory (3)
EGR 456 Thermodynamics II & Heat Transfer (3)
EGR 458 Measurement and Instrumentation Laboratory (3)
EGR 459 Machine Design II (3)
EGR 460 Thermal Fluids Laboratory (3)
EGR 477 Finite Element Analysis (3)
EGR 489WI Senior Design I (3)
EGR 499WI Senior Design II (3)
IET 154 Engineering Design Graphics (3)

Electives (9 hours)
Select at least 9 hours from the following:
EGR 292, EGR 298, EGR 371, EGR 397, EGR 437, EGR 479, EGR 553, EGR 554, EGR 576, EGR 578

Notes:
- Not more than three credits of EGR 437 will count
- You may only select one of EGR 292 or 298

General Notes

- A grade of C- or better is required for a course to transfer.
- A bachelor's degree requires a minimum of 124 semester hours of credit. CMU will accept community college transfer credits beyond the recommended 64 semester hours; however students will need to complete a minimum of 60 semester hours from an accredited 4-year-degree granting institution. A minimum of 40 hours must be completed at the 300 level or above. A minimum of 30 semester hours of credit must be earned from CMU.
- The University Program Requirements and competencies may be fulfilled by students who satisfy the MACRAO Agreement or the MTA
- **Students are required to meet CMU Competency Requirements prior to reaching 56 credit hours. Competency requirements consist of: two Written English (composition) courses, one Oral English (communication) course, and one Mathematics course be completed with a grade of "C" or above.**

Any remaining required and elective courses for a bachelor's degree will be selected in consultation with an academic advisor to ensure that CMU degree requirements are being met.

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Contact Undergraduate Admissions at cmuadmit@cmich.edu for major related course information and or explore http://cmich.edu/transfer, CMU's Transfer Equivalency Tool and the CMU's Transfer Simulation Tool.

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