MAJOR: ACTUARIAL SCIENCE MAJOR

DEGREE: BACHELOR OF SCIENCE OR BACHELOR OF ARTS

Why Study Actuarial Science? Actuaries study risk. The work is quite quantitative. About 70% of actuaries work for insurance companies; about 25% for consulting firms, and about 5% for government agencies. The publication Jobs Rated Almanac has always rated actuary as one of the top five jobs in the United States. The Actuarial Science major is an interdisciplinary major with an advisor from the Department of Mathematics. It offers courses to prepare students for the first (Exam P) and second (Exam FM) actuarial exams jointly administered by the Society of Actuaries and the Casualty Actuarial Society.

Henry Ford College

<table>
<thead>
<tr>
<th>General Education Requirements – Competencies (Require a grade of &quot;C&quot; or higher)</th>
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<tbody>
<tr>
<td>ENG 131 Introduction to College Writing</td>
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<tr>
<td>ENG 132 College Writing and Research</td>
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<tr>
<td>SPC 131 Fundamentals of Speaking</td>
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<tr>
<td>Mathematics</td>
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<tr>
<td>Quantitative Reasoning</td>
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<td>Writing Intensive</td>
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<th>Credits</th>
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<th>Central Michigan University Equivalent</th>
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<tr>
<td>ENG 101 Freshman English</td>
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<tr>
<td>ENG 201 Intermediate English</td>
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<td>COM 101 Introduction to Communication</td>
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Transfer Credit Guide

Group I Humanities (6 – 8) from at least 2 subjects

- MACRAO: Requires 8 hours – MTA: Requires 2 courses


6 – 8 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

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Various Natural Sciences Course Credit

Group III Social Sciences (6 – 8) from at least 2 subjects

- MACRAO: Requires 8 hours – MTA: Requires 2 courses

Select courses from: ANTH 131, 151, 152, 153, 154; BIS 151, 152, CRJ 131, 134, 135, 136, 141, 231, 232; GEG 101, 130, 201, 202, 203, 232; GEOG 131; PHYS 120, 121, 131, 132, 133, 134, 135, 137, 139, 231, 232; PSCI 131, 132, 133, 135; SCI 131, 160, 210, 213

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Various Social Sciences Course Credit

Group IV Studies in Culture and Diversity

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<th>Mathematics (3 – 4):</th>
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<tr>
<td>MACRAO: Requires 8 hours (Math + Natural Science) - MTA: Requires 1 course</td>
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<tr>
<td>MATH 180 Calculus I</td>
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MTH 132 Calculus I

Major or Degree Related Transferable Courses

- 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 College of Science and Engineering – Department of Mathematics 989.774.3596 or math@cmich.edu
- Admission Requirements: Retention & Termination Standards
  - As early as possible, a student interested in actuarial science should contact the actuarial science advisor. It is important to get through the calculus sequence as soon as possible in order to give the student maximum opportunity to pass actuarial exams.
  - NOTE to students with an Actuarial Science major and Mathematics minor: for this combination students must take 6 hours of mathematics courses numbered 300 or above which are not counted toward the Actuarial Science major.
Transfer Credit Guide

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

Major or Degree Related Courses to be Completed at CMU

**Required courses I (51 hours)**
- ACC 201 satisfied at HFC with BAC 131
- ACC 202 satisfied at HFC with BAC 132
- BLR 202 Legal Environment of Business (3)
- ECO 201 satisfied at HFC with BEC 151
- ECO 202 satisfied at HFC with BEC 152
- FIN 317 Insurance Planning (3)
- FIN 332 Managerial Finance (3)
- MTH 132 satisfied at HFC with MATH 180
- MTH 133 satisfied at HFC with MATH 183
- MTH 223 Linear Algebra and Matrix Theory (3)
- MTH 233 satisfied at HFC with MATH 280
- MTH 540 Mathematical Theory of Interest (4)
- STA 539 Probability Foundations of Actuarial Science (3)
- STA 576 Statistical Program/Data Mgmt and Analysis (3)
- STA 584 Mathematical Statistics I (3)
- STA 585 Mathematical Statistics II (3)

**Required courses II (2-3 hours)**
Choose CPS 150 or any programming language course (2 or 3 credits).

**Required courses III (3 hours)**
Select one of the following:
- ECO 385 Introduction to Econometrics (3)

**STA 580 Applied Statistical Methods I (3)**

**Required courses IV (3 hours)**
Select one of the following:
- ECO 532 Economic Forecasting (3)
- STA 589 Time Series Forecasting (3)

**Electives (3 hours)**
Select one of the following in consultation with the advisor:
- BIS 360 Applied Business Communication (3)
- ECO 365 Intermediate Microeconomic Theory (3)
- ECO 370 Intermediate Macroeconomic Theory (3)
- FIN 442 Intermediate Financial Management (3)
- MTH 332 Introduction to Mathematical Proof (3)
- STA 591 Data Mining Techniques I (3)

**Area requirements**
- Humanities (6 - 12)
- Social Sciences (6 - 12)

**BACHELOR OF ARTS:** Completion of the 202 course in any foreign language. This requirement may also be satisfied by passing the 202 examination or equivalent. Two foreign language courses from the University Program may be counted toward satisfying this requirement.

**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.

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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