

# UNIVERSITY OF CENTRAL MISSOURI

## MCC A.A. to UCM B.S. in Actuarial Science and Statistics

### YEARS 1 AND 2 AT MCC

(UCM Equivalencies in parenthesis)

#### COMMUNICATIONS – 9 Credit Hours

|   |   |
|---|---|
| ENGL 101 Composition and Reading I (ENGL 1020)        | 3 |
| ENGL 102 Composition and Reading II (ENGL 1030)       | 3 |
| COMM 100 Fundamentals of Speech (COMM 1000) <b>or</b> | 3 |
| COMM 102 (Communication general education)            |   |

#### MATHEMATICS – 3 Credit Hours

If planning to take MATH 180 (MATH 1151), MATH 190 (MATH 1152), and MATH 210 (MATH 2153) as transfer credit, one of the following classes must be taken to fulfill an MCC prerequisite requirement.

MATH 130 Trigonometry (MATH 1112) **or**  
MATH 150 PreCalculus (MATH 1150)

#### AMERICAN INSTITUTIONS – 3 Credit Hours

|   |   |
|---|---|
| HIST 120 (HIST 1350), 121 (HIST 1351), POLS 136 (POLS 1510) <b>or</b> 137 (POLS 2511) | 3 |
|---|---|

#### SCIENCES – 7 Credit Hours

Take two courses; one course should be taken with a lab.  
See a full list of offerings at:

<http://www.mcckc.edu/programs/aa/>

#### WESTERN CIVILIZATIONS – 3 Credit Hours

|   |   |
|---|---|
| HIST 133 (HIST 1400) <b>or</b> HIST 134 (HIST 1402) | 3 |
|---|---|

#### SOCIAL SCIENCES – 3 Credit Hours

|  |   |
|--|---|
| Option 1: ECON 210 Macroeconomics (ECON 1010)  | 3 |
| Option 2: ANTH 100 (ANTH 1810), ANTH 110 (ANTH 1820), PSYC 140 (PSY 1100), SOCI 160 (SOC 1800), ECON 210 (ECON 1010) | 3 |

#### HUMANITIES – 3 Credit Hours

|   |   |
|---|---|
| ENGL 218 (GNED 1909), 220 (ENGL 2210), 221 (ENGL 2215), 222 (ENGL 2200), 223 (ENGL 2205), 268 (ENGL 2270), PHIL 100 (PHIL 1000), 200 (PHIL 1400), <b>or</b> 203 (PHIL 2300) | 3 |
|---|---|

#### HUMANITIES APPRECIATION – 3 Credit Hours

|   |   |
|---|---|
| ART 108 (ART 1800), ART 150 (ART 1815), ART 151 (ART 1825) 3<br>MUSI 108 (MUS 1210), <b>or</b> THEA 106 (THEA 2400), ARAB, FREN, GERM, CHIN, SIGN, SPAN 101 (SPAN 1601), SPAN 102 (SPAN 1602), SPAN 203 (SPAN 2601), <b>or</b> SPAN 204 (SPAN 2602) | 3 |
|---|---|

#### COMMON CORE ELECTIVES – 8 Credit Hours

|  |   |
|--|---|
| **MATH 115 Statistics (ACST 1300)                  | 3 |
| **MATH 180 Analytic Geometry and Cal I (MATH 1151) | 5 |

*It is recommended that MATH 180 be completed at MCC to prevent a delay in program completion by year 4 at UCM.*

#### GENERAL DEGREE REQUIREMENTS – 7 Credit Hours

|   |   |
|---|---|
| COLL 100 First Year Seminar   | 1 |
| Global Diversity  | 3 |
| Course options available at <a href="http://www.mcckc.edu/programs/aa/">http://www.mcckc.edu/programs/aa/</a> |   |
| CSIS 115 (CIS 1600) or higher   | 3 |

#### ELECTIVES – 11 Credit Hours

|  |   |
|--|---|
| **MATH 190 Analytic Geometry and Cal II (MATH 1152)  | 5 |
| **MATH 210 Analytic Geometry and Cal III (MATH 2153) | 5 |

#### For Option 2 Only:

|   |   |
|---|---|
| CSIS 222 Object-Oriented Prog with Java (CS 1110) | 3 |
|---|---|

Free electives required to get to 60 total hours for A.A.

### YEARS 3 AND 4 AT UCM

#### CORE REQUIREMENTS - 21 Credit Hours

|  |   |
|--|---|
| ACST 3311 Introduction to Mathematical Statistics        | 3 |
| ACST 4312 Probability Models                             | 3 |
| ACST 4321 Applied Statistics I                           | 3 |
| ACST 4322 Applied Statistics II                          | 3 |
| ACST 4530 Statistical Modeling                           | 3 |
| ACST 4645 Senior Projects in Actuarial Sci. & Statistics | 3 |
| CS 2400 Discrete Structures <b>or</b>                    | 3 |
| MATH 2410 Discrete Mathematics                           | 3 |

#### Option: 1 Actuarial Science - 32 Credit Hours

|  |   |
|--|---|
| ACST 4501 Actuarial Exam Review Problem Set I  | 1 |
| ACST 4510 Mathematics of Finance               | 3 |
| ACST 4511 Actuarial Exam Review Problem Set II | 1 |
| ACST 4520 Life Contingencies I                 | 3 |
| CS 3800 Applications Development with VB.NET   | 3 |
| ECON 3010 Intermediate Macroeconomics          | 3 |
| FIN 3861 Financial Management I                | 3 |
| FIN 4803 Principles of Insurance               | 3 |
| FIN 4817 Managing Financial Derivatives        | 3 |

#### Electives from the following

|  |   |
|--|---|
| ACST 4323 Statistical Aspects of Experimental Design | 3 |
| ACST 4331 SAS Programing for Statistical Analysis    | 3 |
| ECON 3030 Intermediate Microeconomics                | 3 |
| FIN 3850 Principles of Finance                       | 3 |
| MATH 3710 Linear Algebra                             | 3 |
| MATH 3151 Differential Equations                     | 3 |

#### Option 2: Statistics - 26-27 Credit Hours

|  |   |
|--|---|
| ACST 4323 Statistical Aspects of Experimental Design | 3 |
| ACST 4331 SAS Programing for Statistical Analysis    | 3 |
| MATH 3151 Differential Equations                     | 3 |
| MATH 3710 Linear Algebra                             | 3 |

#### Electives from the following

|  |   |
|--|---|
| ACST 4501 Actuarial Exam Review-Problem Set I  | 1 |
| ACST 4510 Mathematics of Finance               | 3 |
| ACST 4511 Actuarial Exam Review-Problem Set II | 1 |
| ACST 4520 Life Contingencies I                 | 3 |
| CS 2300 Data Structures                        | 3 |
| CS 3800 Applications Development with VB.NET   | 3 |
| CS 4600 Database Theory & Applications         | 3 |
| MATH 4150 Advanced Calculus I                  | 3 |

#### Free Electives - 12-15 Credit Hours

\*\*Course fulfills a major requirement at UCM and if not taken as part of AA must be taken at UCM

**Minimum Hours Required for A.A.: 60**  
**Minimum Hours Required for B.S.: 120**

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### VALIDITY OF THIS TRANSFER GUIDE

This guide is based on the UCM 2017 Undergraduate Catalog and is subject to change. This guide is a recommendation only and your actual program may vary. Time to degree completion and course sequencing will depend on any credits transferred to UCM and on planned placement in math, reading, and writing. See the current UCM Undergraduate Catalog and MCKC Course Catalog for a complete listing of academic policies, curriculum, prerequisites, and course descriptions.

### GENERAL EDUCATION REQUIREMENTS

Students who hold an Associate in Arts Degree from MCKC or have met the Missouri 42-hour General Education Core requirements are considered to have fulfilled all UCM General Education requirements, except specific general education classes required by this major. Lists of General Education Requirements can be found in the UCM Catalog.

**For those students with an associate degree other than the Associate of Arts or who have not completed the A.A. degree, transfer courses are evaluated on a course-by-course basis.**

### REQUIREMENTS FOR THIS MAJOR

- Minimum of 120 hours
- Minimum of 30 hours of upper-level credit (3000/4000 level). Courses taken at a two-year college MAY be articulated for an upper-level course but WILL NOT count towards upper-level hour requirements.
- Minimum of 12 hours of upper-level credit (3000/4000 level) in major
- No minor is required for this degree.
- No modern language is required for this degree.

### RESIDENCY REQUIREMENTS FOR A DEGREE AT UCM

A candidate for any bachelor's degree must have earned the following minimum hours at UCM:

- 30 hours overall
- 20 upper-level hours (3000/4000 level courses)
- 15 hours in the major
- 9 upper-level hours in the major
- 9 hours in minor (if applicable)
- 1 upper-level hour in minor (if applicable)
- The last 12 semester hours required for the degree

### GPA REQUIRED FOR GRADUATION

Students must achieve a minimum GPA of 2.00 in all GPAs to qualify for graduation. This includes cumulative GPA, UCM GPA, major GPA, and minor GPA (if applicable). Some degrees have additional GPA requirements.

### DUAL ADMISSION

Students are encouraged to apply for dual admission during their first semester at MCKC to coordinate associate degree completion with degree requirements at UCM. To learn more visit [www.ucmo.edu/undergrad/dualadmissions.cfm](http://www.ucmo.edu/undergrad/dualadmissions.cfm).

### GENERAL EDUCATION ASSESSMENT

All UCM students are required to pass a General Education Assessment (GEA). Students transferring in more than 45 hours are required to take the test during their first semester at UCM. Testing Services can be contacted by phone at (660) 543-4919 or by e-mail at [testingservices@ucmo.edu](mailto:testingservices@ucmo.edu). To learn more visit [www.ucmo.edu/assessment/documents/gened\\_policy.pdf](http://www.ucmo.edu/assessment/documents/gened_policy.pdf)

### CATALOGS

Metropolitan Community College catalog:

[http://www.mcckc.edu/PDF/MCC Online Catalog 2016-2017.pdf](http://www.mcckc.edu/PDF/MCC%20Online%20Catalog%202016-2017.pdf)

UCM catalog: [www.catalog.ucmo.edu](http://www.catalog.ucmo.edu)

### TRANSFER WORK

Arrange for all transfer work to be posted at UCM at the time of application. An official transcript must be received at UCM directly from each school attended. Individual transfer equivalencies can be found online at [www.ucmo.edu/corequiv](http://www.ucmo.edu/corequiv). Transcripts can be sent to: University of Central Missouri, Office of Admissions, Ward Edwards 1400, Warrensburg, MO 64093

### UCM TRANSFER ADVISORS

UCM advisors for programs in the College of Health, Science, and Technology (CHST) are located in the CHST Advising Center located in Administration 105. Contact your advisor by calling (660)543-4554 or by email [chstadvising@ucmo.edu](mailto:chstadvising@ucmo.edu).

### UCM DEPARTMENT CONTACT

The School of Computer Science and Mathematics is located in W.C. Morris room 222. You can contact them by telephone at (660) 543-4930. To learn more visit [www.ucmo.edu/cs-math](http://www.ucmo.edu/cs-math).

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