

UNIVERSITY OF CENTRAL MISSOURI

MCC A.A. to UCM B.S. in Bioinformatics: Computing and Statistics

YEARS 1 AND 2 AT MCC

(UCM equivalencies in parentheses)

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)	3

MATHEMATICS – 3 Credit Hours

If planning to take MATH 180 and MATH 190 as transfer credit one of the following classes must be taken to fulfill an MCC prerequisite requirement.

MATH 130 Trigonometry (MATH 1112) (3) *or*

MATH 150 PreCalculus (MATH 1150) (5)

AMERICAN INSTITUTIONS – 3 Credit Hours

HIST 120 (HIST 1350), 121 (HIST 1351), <i>or</i>	3
POLS 136 (POLS 1510)	

SCIENCES – 7 Credit Hours

**CHEM 111 General College Chemistry I (CHEM 1131) 5

Take one additional course; See a full list of offerings at:

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

WESTERN CIVILIZATIONS – 3 Credit Hours

HIST 133 (HIST 1400) *or* HIST 134 (HIST 1402) 3

SOCIAL SCIENCES – 6 Credit Hours

ANTH 100 (ANTH 1810), ANTH 110 (ANTH 1820), PSYC 140 (PSY 1100), SOCI 160 (SOC 1800), ECON 210 (ECON 1010) *or* ECON 211 (ECON 1011) 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), 148 (PHIL 1410), *or* 203 (PHIL 2300) 3

HUMANITIES APPRECIATION – 3 Credit Hours

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

COMMON CORE ELECTIVES – 5 Credit Hours

Take additional common core electives to reach 42 hours of general education. Offerings available at <http://www.mcckc.edu/programs/aa/>

GENERAL DEGREE REQUIREMENTS – 7 Credit Hours

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

ELECTIVES – 11 Credit Hours

**CHEM 112 General College Chemistry II (1132) 5
**CHEM 221 Organic Chemistry I (CHEM 3341) 5
**CSIS 123 Programming Fundamentals (CS 1100) 3
**CSIS 222 Object Oriented Programming with Java (CS1110) 3
**CSIS 271 Data Structures and Algorithm Analysis (CS 2300) 3
**MATH 141 Discrete Structures for CS I (CS 2400) 3
**MATH 180 Analytic Geometry and Calculus I (MATH 1151) 5
#MATH 190 Analytic Geometry and Calculus II 5
\$MATH 210 Analytic Geometry and Calculus III (MATH 2153) 5

YEARS 3 AND 4 AT UCM

MAJOR REQUIREMENTS - 59 Credit Hours

ACST 2310 Statistics and Data Analysis	3
BIOL 1510 Investigative Biology	4
BIOL 2512 Cell Biology	3
BIOL 3511 Genetics	4
BIOL 4514 Molecular Biology	3
BIOL 4515 Molecular Technology	3
CHEM 3421 Biochemistry	3
CS 3650 Fundamentals of Bioinformatics I	3
CS 4300 Algorithm Design and Analysis	3
CS 4600 Database Theory and Applications	3
CS 4630 Data Mining	3
CS 4650 Fundamentals of Bioinformatics II	3

Computing and Statistics Option – 15 Credit Hours

ACST 3311 Introduction to Probability and Statistics	3
ACST 4645 Senior Projects in Actuarial Science & Statistics	3
MATH 1040 Intro to the Mathematical Sciences	1
Electives from the following	3

ACST 4321 Regression Analysis	3
ACST 4323 Statistical Aspects of Experimental Design	3
CS 3600 Introduction to Data Visualization	3
CS 4000 Special Problems in Computer Science	3
CS 4620 Big Data Analytics	3
CS 4710 Introduction to Machine Learning	3
MATH 3710 Linear Algebra	3
CS 4020 Internship <i>or</i>	3
ACST 4390 Internship in Actuarial Science or Statistics	

GENERAL EDUCATION REQUIREMENTS – 6 Credit Hours

CS 1000 Computers and Modern Society	3
CS 1020 Introduction to Biomedical Informatics	3

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

Fulfills a part of the required UCM Computing & Statistics Core

\$ Fulfills a part of the required UCM Computing & Statistics Electives

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 2018 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 MCC 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 MCC 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.

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.

To learn more visit

www.ucmo.edu/assessment/documents/gened_policy.pdf

CATALOGS

Metropolitan Community College catalog:

<http://www.mcckc.edu/PDF/academiccatalog.pdf>

UCM catalog: 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. 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 Success Advising Center located in Union 128. Contact your advisor by calling (660)543-4721 or by email success@ucmo.edu.

PROGRAM CONTACT

The School of Computer Science and Mathematics. W.C. Morris room 222. (660) 543-4930. www.ucmo.edu/cs-math.
