

# UNIVERSITY OF CENTRAL MISSOURI

## MCC A.A. to UCM B.S. in Computer Science: Software Development

### 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)	3

#### MATHEMATICS – 3 Credit Hours

**MATH 115 Statistics (ACST 1300)	3
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#### AMERICAN INSTITUTIONS – 3 Credit Hours

HIST 120 (HIST 1350), 121 (HIST 1351), POLS 136 (POLS 1510) <i>or</i> 137 (POLS 2511)	3
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#### 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) <i>or</i> HIST 134 (HIST 1402)	3
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#### SOCIAL SCIENCES – 3 Credit Hours

ANTH 100 (ANTH 1810), ANTH 110 (ANTH 1820), PSYC 140 (PSY 1100), SOCI 160 (SOC 1800), ECON 210 (ECON 1010) <i>or</i> ECON 211 (ECON 1011)	3
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#### 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), <i>or</i> 203 (PHIL 2300)	3
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#### HUMANITIES APPRECIATION – 3 Credit Hours

ART 108 (ART 1800), ART 150 (ART 1815), ART 151 (ART 1825) 3 MUSI 108 (MUS 1210), <i>or</i> THEA 106 (THEA 2400), ARAB, FREN, GERM, CHIN, SIGN, SPAN 101 (SPAN 1601), SPAN 102 (SPAN 1602), SPAN 203 (SPAN 2601), <i>or</i> SPAN 204 (SPAN 2602)	3
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#### COMMON CORE ELECTIVES – 8 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 <a href="http://www.mcckc.edu/programs/aa/">http://www.mcckc.edu/programs/aa/</a>	
CSIS 115 (CIS 1600) <i>or</i> higher	3

#### ELECTIVES – 11 Credit Hours

**CSIS 123 Programming Fundamentals (CS 1100)	3
**CSIS 143 Database Design and Management (CS 4600)	3
**CSIS 152 Linux Operating System <b>AND</b>	6
**CSIS 223 Object-Oriented Programming (CS 3500)	
#CSIS 178 Network Systems Security (CS 4840)	3
**CSIS 222 Object-Oriented Programming with Java (CS 1110)	3
#CSIS 228 Advanced Web Development (CS 3120)	3
#CSIS 265 .NET Web Programming with C# (CS 3110)	3
**CSIS 271 Data Structures and Algorithm Analysis (CS 2300)	3
**MATH 141 Discrete Structures for CS I (CS 2400)	3
**MATH 175 Calculus for Business & Social Science (MATH 1131) <i>or</i> 3	
**MATH 180 Analytic Geometry and Calculus I (MATH 1151)	

### YEARS 3 AND 4 AT UCM

#### MAJOR REQUIREMENTS - 39 Credit Hours

CS 3100 Programming Languages	3
CS 3200 Computer Architecture	3
CS 3910 Software Engineering	3
CS 4300 Algorithm Design & Analysis	3
CS 4500 Operating Systems	3
CS 4820 Introduction to Information Assurance	3
CS 4920 Senior Project	3

#### Option 1: Software Development – 27 Credit Hours

##### Electives from the following 9-21

CS 3110 Applications Programming in C# and .NET	3
CS 3130 Secure Programming	3
CS 3900 Software Requirements Engineering	3
CS 4120 Adv. Applications Prog. in Java	3
CS 4930 Software Testing and Quality Assurance	3
CS 4940 Software Design and Architecture	3
CS 4950 Secure Software Engineering	3

##### Electives from the following 6-18

CS 1500 Command Line Environments	3
CS 2500 Computer Systems Administration	3
CS 3120 Client Side Web Programming	3
CS 3300 Introduction to Cryptography	3
CS 3600 Introduction to Data Visualization	3
CS 3800 Applications Development with VB.NET	3
CS 3810 Introduction to Game Design	3
CS 4000 Special Problems CS	3
CS 4020 Internship in CS	3
CS 4110 Mobile Applications Programming with Android	3
CS 4130 Server Side Web Programming	3
CS 4140 Web Applications Security	3
CS 4510 Introduction to Distributed Systems	3
CS 4610 Introduction to Cloud Computing	3
CS 4620 Big Data Systems	3
CS 4630 Data Mining	3
CS 4640 Data Warehousing and Business Intelligence	3
CS 4700 Artificial Intelligence	3
CS 4800 Computer Networking	3
CS 4810 Computer Graphics	3
CS 4830 Game Development	3
CS 4840 Ethical Hacking	3

#### FREE ELECTIVES – 12 – 18 Credit Hours

#### GENERAL EDUCATION REQUIREMENTS - 3 Credit Hours

CS 1000 Computers and Modern Society	3
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\*\*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 Option 1 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 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 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 MCCCKC 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.ucmo.edu/catalogs](http://www.ucmo.edu/catalogs)

### 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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