

UNIVERSITY OF CENTRAL MISSOURI

SFCC A.A. to UCM B.S. in Computer Science: Data Science

YEARS 1 AND 2 AT SFCC		YEARS 3 AND 4 AT UCM	
(UCM equivalencies in parentheses)		MAJOR REQUIREMENTS - 39 Hours	
COMMUNICATIONS – 9 Hours		CS 2300 Data Structures	3
ENGL 101 English Composition I (ENGL 1020)	3	CS 2400 Discrete Structures	3
ENGL 102 English Composition II (ENGL 1030)	3	CS 3100 Programming Languages	3
**COMM 101 Public Speaking (COMM 1000)	3	CS 3200 Computer Organization and Architecture	3
AMERICAN INSTITUTIONS – 3 Hours		CS 3500 C & UNIX Environment	3
POLS 101 (POLS 1510), HIST 101 (HIST 1350), or HIST 102 (HIST 1351)	3	CS 3910 Software Engineering	3
SOCIAL SCIENCES – 3 Hours		CS 4300 Algorithm Design & Analysis	3
BADM 101 (MGT 1300), ECON 101 (ECON 1010), 102 (ECON 1011), GEOG 101 (GEOG 2212), HIST 108 (HIST 1400), 109 (HIST 1402), or POLS 103 (POLS 1500)	3	CS 4500 Operating Systems	3
BEHAVIORAL SCIENCE – 3 Hours		CS 4600 Database Theory & Applications	3
PSY 101 (PSY 1100), 102 (PSY 2220), 104 (PSY 1320), BADM 107 (FIN 1820), SOC 100 (SOC 1800), or 102 (SOC 2825)	3	CS 4820 Introduction to Information Assurance	3
LITERATURE – 3 Hours		CS 4920 Senior Project	3
LIT 101, LIT 107 (ENGL 2200 or 2205), LIT 109 (ENGL 2210 or 2215), LIT 112 (ENGL 2220), or LIT 114.	3	Option 5: Data Science – 27 Credit Hours	
FINE ARTS – 3 Hours		CS 3600 Introduction to Data Visualization	3
ART 101 (ART 1800), 120 (ART 1825), MUS 101 (MUS 1210), 103 (MUS 2311), 104 (MUS 3212) or THEA 107 (THEA 2400) THEA 125	3	MATH 3710 Linear Algebra	3
HUMANITIES – 3 Hours		CS 4620 Big Data Systems	3
AGRI 106, FREN 101 (FREN 1201), PHIL 101 (PHIL 1000), 102 (PHIL 2300), 104, SOC 120 (ECEL 2110) or SPAN 101 (SPAN 1601)	3	ACST 2310 Statistics and Data Analysis or ACST 3311 Introduction to Mathematical Statistics	3
MATHEMATICS – 3 Hours		CS 4630 Data Mining or CS 4710 Introduction to Machine Learning	3
**MATH 125 Calculus for Business (MATH 1131) OR **MATH 130 Calculus & Analytic Geometry I (MATH 1151)	5	Electives from the following 12	
LIFE AND PHYSICAL SCIENCES – 8 Hours		ACST 4321 Regression Analysis	3
Choose one course from life sciences and one from physical sciences.		CS 1500 Command Line Environments	3
Life sciences: BIO 100 (BIOL 1110), 103 (BIOL 2010), 105 (BIOL 3721), 112 (BIOL gened), 125 (BIOL 1111), 126 (BIOL 1112), 208 (BIOL 3401 & BIOL 3402 if taken w/ BIO 207)	3-5	CS 2500 Computer Systems Administration	3
Physical sciences: CHEM 101 (CHEM 1104), 123 (CHEM 1131) AGRI 119 (AGRI 2330), EASC 101 (EASC 1004), 106 (EASC 1004), 118 (EASC 3010), 120 (EASC 3112), PHYS 103 (PHYS 1103), 105 (PHYS 1101), or 118 (PHYS 2121)	3-5	CS 3110 Applications Programming in C# and .NET	3
^WELLNESS – 1 Hour Minimum		CS 3120 Client Side Web Programming	3
HLTH 101 (PE 1206), WELL 116, 117, 118, 119, 121 or 122, or EDUC 110	1-2	CS 3130 Secure Programming	3
GENERAL EDUCATION ELECTIVE – 1-3 Hours		CS 3300 Introduction to Cryptography	3
Choose one course to total 42 hours In general education.	1-3	CS 3800 Applications Development with VB.NET	3
ELECTIVES – 22 Hours Minimum		CS 3810 Introduction to Game Design	3
**CIS 158 JAVA (CS 1100)	3	CS 3900 Software Requirements Engineering	3
**CIS 169 Advanced JAVA (CS 1110)	3	CS 4000 Special Problems CS	3
**Course fulfills a major requirement at UCM and if not taken as part of AA must be taken at UCM		CS 4020 Internship in CS	3
Minimum Hours Required for A.A.: 64 Hours		CS 4110 Mobile Applications Programming with Android	3
Minimum Hours Required for B.S.: 120 Hour		CS 4120 Advanced Applications Programming in Java	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 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
		CS 4930 Software Testing and Quality Assurance	3
		CS 4940 Software Design and Architecture	3
		CS 4950 Secure Software Engineering	3
		FREE ELECTIVES – 12 – 18 Credit Hours	
		GENERAL EDUCATION REQUIREMENTS - 3 Credit Hours	
		CS 1000 Computers and Modern Society	3
		CS 1030 Introduction to Computer Programming	3

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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 SFCC 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 SFCC 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 SFCC 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

State Fair Community College catalog: <http://www.sfccmo.edu/pages/104.asp>
UCM catalog: 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. 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.

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.

CREDIT FOR MILITARY SERVICE

^Veterans, members of the National Guard and active duty military personnel may receive 2 hours of wellness credit by presenting a copy of their DD214 or similar record. See your SFCC navigator for more information.
