

COMPUTER SCIENCE-B.S.

COLLEGE OF ARTS AND SCIENCES

Undergraduate Degree Requirement - 120 hours (minimum)

Any student earning a Bachelor’s degree must complete a minimum of 120 hours. See the complete description of College requirements for a Bachelor’s degree in the Bulletin: <http://www.ums.edu/bulletin/>.

Computer Science Core Requirements# 67

CMP SCI 1250: Introduction to Computing.....	3
CMP SCI 2250: Programming and Data Structures.....	3
CMP SCI 2261: Object-Oriented Programming.....	3
CMP SCI 2700: Computer Organization and Architecture.....	3
CMP SCI 2750: System Programming and Tools.....	3
CMP SCI 3010: Web Programming.....	3
CMP SCI 3130: Design and Analysis of Algorithms.....	3
CMP SCI 4250: Programming Languages.....	3
CMP SCI 4280: Program Translation.....	3
CMP SCI 4500: Introduction to the Software Profession.....	3
CMP SCI 4760: Operating Systems.....	3
(5) Computer Science electives above 3000 Level.....	15
MATH 1800**: Analytic Geometry and Calculus I.....	5
MATH 1320: Introduction to Probability and Statistics.....	3
MATH 1900: Analytic Geometry and Calculus II.....	5
MATH 2450: Elementary Linear Algebra.....	3
MATH 3000: Discrete Structures.....	3

General Electives 15

- At least 12 hours of math or computer science courses at the 3000 level or above must be taken at UMSL.
- At least 45 graded hours must be taken at the 2000 level or above.
- At least a 2.0 grade point average is required for graduation.
- At least 30 of the last 36 hours must be taken at UMSL (Grades of S do not count in the 30).

UMSL General Education Requirements

See the General Education section of the Undergraduate Bulletin for the complete requirements. Students must successfully complete the general requirements of the university, the college or school in which they are enrolled, and the specific requirements of their area of specialization.

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Core Areas:	
First Year Writing	3
Math Proficiency	Satisfied by Major..... 3
Communication Proficiency	3
Information Literacy	Satisfied by Major..... 3
American History or Government	3
Explore Areas:	
Humanities and Fine Arts	9
Social Sciences.....	9
Math and Life/Natural Sciences	Satisfied by Major..... 9

Courses selected in the explore areas must be from at least two different subjects.

Other Requirements 3

Cultural Diversity*	3
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Junior Level English Composition 3

ENGL 3130: Technical Writing.....	3
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Math Proficiency can be satisfied with a grade of C- in college level math or a score of 26 on the MMPT or ACT Math sub score. A graded course in this area may fulfill a portion of the Math/Life Science general education requirement.

*Requirement may be fulfilled by courses taken in General Education
 **Course fulfills General Education Requirement
 #Coursework must be completed with a minimum grade of C-

Sample Schedule, 4 year plan to graduation

Year 1

Semester 1: 14-15 Credit Hours

INTDSC1003: University Studies (1)
ENGL 1100: First Year Writing (3)
MATH 1030: College Algebra (3)
MATH 1035: Trigonometry (2)
Humanities and Fine Arts Gen Ed (3)
Social Science Gen Ed (3)

Semester 2: 17 Credit Hours

CMP SCI 1250: Intro to Computing (3)
MATH 1800: Analytical Geometry and Calculus (5)
Humanities and Fine Arts Gen Ed (3)
US History & Government Requirement (3)
Social Science Gen Ed (3)

Year 3

Semester 5: 15 Credit Hours

CMP SCI 3130: Design and Analysis of Algorithms (3)
CMP SCI 4250: Programming Languages (3)
MATH 2450: Elementary Linear Algebra (3)
ENGL 3130: Technical Writing (3)
CMP SCI 3000+ Level Elective (3)

Semester 6: 15 Credit Hours

CMP SCI 4280: Programming Translation (3)
CMP SCI 3000+ Level Elective (3)
CMP SCI 3000+ Level Elective (3)
Elective (3)
Elective (3)

Year 2

Semester 3: 17 Credit Hours

CMP SCI 2250: Programming and Data Structures (3)
CMP SCI 2700: Computer Organization and Architecture (3)
MATH 1320: Introduction to Probability and Statistics (3)
MATH 1900: Analytical Geometry and Calculus II (5)
Humanities and Fine Arts Gen Ed (3)

Semester 4: 15 Credit Hours

CMP SCI 2261: Object-Oriented Programming (3)
CMP SCI 2750: System Programming and Tools (3)
CMP SCI 3010: Web Programming (3)
Math 3000: Discrete Structures (3)
Communication Proficiency (3)

Year 4

Semester 7: 15 Credit Hours

CMP SCI 4500: Intro to the Software Profession (3)
CMP SCI 3000+ Level Elective (3)
Social and Behavioral Science Elective (3)
Cultural Diversity Requirement (3)
Elective (3)

Semester 8: 12 Credit Hours

CMP SCI 4760: Operating Systems (3)
CMP SCI 3000+ Level Elective (3)
Elective (3)
Elective (3)

- INTDSC1003 is required only for first-time freshmen and transfer students with less than 24 college credits.
- A minor is not required, but is recommended.

Please Note: This plan is an example of what a four year plan could look like for a typical student. Placement exam scores in math as well as the completion of coursework may change the plan. It should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor each semester to discuss course scheduling. All requirements are subject to change by UMSL.