

MATH AND COMPUTER SCIENCE DIVISION
2005-2007 CATALOG UPDATE
Changes effective 2006-2007

Degree Update

COMPUTER SCIENCE
BACHELOR OF SCIENCE

Semester

Hours

Liberal Studies Program Requirements32-59

Missouri Statute Requirement..... 1-3

Bachelor of Science Requirements6-8

MATH 357 Linear Algebra **OR**

MATH 285 Matrix Algebra

And one additional course from the following list:

MATH 200 Foundations of Mathematics

MATH 264 Analytic Geometry and Calculus III

CHEM 121 Chemical Principles II with Inorganic
Chemistry

PHYS 196 Physics with Calculus II

BIOL 108 Introductory Biology II

BIOL 200 Cell Biology

BIOL 300 Genetics

Any MATH course numbered 300 or above

Any STAT course numbered 300 or above

Required Support5-17

MATH 198 Analytic Geometry and Calculus I** 5

MATH 263 Analytic Geometry and Calculus II..... 5

STAT 290 Statistics** 3

CHEM 120 Chemical Principles I** **OR** 5

PHYS 195 Physics with Calculus I** **OR** 4

BIOL 107 Introductory Biology I**..... 4

**May be used to fulfill Liberal Studies Program Requirements

MAJOR REQUIREMENTS41

FOUNDATIONS

CS 100 Computer Science Seminar..... 1

CS 180 Foundations of Computer Science I..... 3

CS 185 Foundations of Computer Science II..... 3

CS 285 Foundations of Computer Science III 3

CS 310 Data Structures and Algorithms 3

CS 330 Computer Architecture and Organization ...3

CS 345 Cyberethics 3

LANGUAGE SUPPORT

CS 250 Systems Programming 3

CS 260 Object-Oriented Programming 3

ADVANCED COURSES*

Area A: Choose two courses from the following list 6

CS 315 Internet Programming

CS 360 Systems Analysis and Design

CS 370 Software Engineering

CS 430 Database Systems

Area B: Choose one course from the following list 3

CS 390 Operating Systems

CS 420 Compilers

CS 435 Parallel and Distributed Processing

Catalog Update 2006

CS	470 Networks and Teleprocessing	
Area C: Choose two courses from the following list		6
CS	380 Programming Languages	
CS	420 Compilers	
CS	430 Database Systems	
CS	435 Parallel and Distributed Processing	
CS	460 Computer Graphics	
CS	480 Artificial Intelligence	
CS	490 Automata Theory and Formal Languages	
*Note: A course cannot be used to fulfill the requirements for more than one of Areas A, B or C above.		
SENIOR SEMINAR		
CS	495 Senior Computer Science Seminar	1
Electives to Total		124

Computer Science majors should elect to take MATH 198 Analytic Geometry and Calculus I as the Mathematics requirement in the Liberal Studies Program. Either CHEM 120 Chemical Principles I or PHYS 195 Physics with Calculus I should be taken as partial fulfillment of the Scientific: Physical Science Mode of Inquiry. Transfer students majoring in Computer Science must complete at least 18 semester hours in the major at Truman. This coursework must include 15 semester hours at the 300 level or higher.

Capstone Experience for Computer Science

Each senior shall present to the Computer Science faculty for acceptance a project demonstrating the ability to work independently and to integrate the knowledge gained in the major. It is anticipated that most students will present a substantial software development project, which could take diverse forms. No project undertaken as part of a course taken for credit in the major will be accepted. Avenues which are acceptable include:

- An internship
- A readings class (CS 485, 2-3 hours) undertaken with a Computer Science faculty member.
- With prior approval, a project directed by a faculty member in another discipline
- With prior approval, a project for an employer, or as a volunteer, or for a faculty member at KCOM.

Each capstone experience shall be supervised by a Computer Science faculty member who will monitor progress and provide direction as needed.

Course Updates

CS 275 Computer Science Language Lab

1-3 hours

Independent or classroom study of a programming language, programming techniques, or programming environments not offered elsewhere in the curriculum. May be repeated for credit with consent of the student's advisor.

CS 495 Senior Computer Science Seminar

Prerequisite = Senior Computer Science Major

New Course

CS 345 Cyberethics

3 hours

Study of the social, ethical, and professional issues of computing and the Internet. Prerequisite: junior status.