Computer Information Systems and Computer Science Majors

Computer Information Systems mission:

The mission of the Missouri Valley College Computer Information Systems (CIS) program is to assist students in acquiring the skills, knowledge, and experience necessary to become successful in careers or graduate study involving the information sciences. The CIS curriculum emphasizes best practices in the field as well as practical skills that allow students to remain productive in an ever-changing technological environment. The CIS program strives to incorporate the most current technologies and techniques available to provide students with the expertise to meet the demands of academic and business standards.

Computer Science mission:

Through instruction and application, provide students knowledge, skills, and abilities to be successful in computer and technology fields now and in the future.

Computer Information Systems Learning Outcomes:

- Students will achieve knowledge of computer components, programs, programming languages, careers, networking, and fields of study in the computing world.
- Students will demonstrate the ability to develop computer programs by utilizing structured programming techniques including data validation, error trapping, and the development of test cases to ensure a reliable and accurate program.
- Students will demonstrate the ability to develop computer programs by utilizing procedural and object-oriented programming techniques.
- Students will demonstrate the utilization of modeling techniques such as Unified Modeling Language, Data Flow Diagrams, and Wainer-Orr diagrams to develop a blueprint of the program to be developed.
- Students will be able to discuss and utilize the phases of the system development cycle and Object-Oriented Design to determine program requirements and perform program design.
- Students will also be able to discuss and perform file normalization in the development of a database to meet the user's requirements.
- Students will develop a knowledge of business, the importance of statistical analysis, and accounting techniques in the development of business-based computer systems.

Computer Science Learning Outcomes:

- Students will demonstrate knowledge of computer components, programs, and programming languages.
- Students will demonstrate the ability to develop computer programs by utilizing procedural and object-oriented programming techniques.
- Students will demonstrate an ability to analyze a problem or need, and then design, implement, and evaluate a computer-based solution.
- Students will demonstrate an ability to work effectively as part of a team to accomplish a goal or solve a problem.

Major assessment: **All seniors completing a major in computer information systems are required to take a comprehensive examination.**

A student in the Computer Information Systems degree program shall complete all CS coded courses within 7 years of enrollment in the program. If the student for whatever reason does not complete the CS graduation requirements within that time frame the student must repeat any courses that exceeded the 7 year time limit.

Program: Computer Science
Type: Major

Computer Information Systems:

CIS REQUIREMENTS

CS110, CS120, CS170, CS250, CS270, CS305, CS320, CS370, CS380, CS410 OR CS450, AC210, AC220, BA212, BA232, EN327 OR BA412, MA185 OR MA190, MA200 OR BA302

PLUS 6 HOURS OF UPPER DIVISION CS ELECTIVES

Item #	Title	Hours
CS 110	Introduction to Computer Information Systems	3
CS 120	Introduction to Programming	3
CS 170	Programming I	3
CS 250	Systems Analysis and Design	3
CS 270	Programming II	3
CS 305	Website Design	3
CS 320	Data Communications	3
CS 370	Structured System Design	3
CS 380	Database Management	3
CS 410	Applied Software Development Project	3
CS 450	Internet Programming	3
AC 210	Financial Accounting	3
AC 220	Managerial Accounting	3
BA 212	Principles of Management	3
BA 232	Principles of Marketing	3
EN 327	Technical and Professional Writing	3
BA 412	Administrative Communications	3
MA 185	Calculus for Business and Social Sciences	3
MA 190	Analytic Geometry and Calculus I	5
MA 200	Introduction to Statistics	3
BA 302	Statistics	3

Computer Science:

CS REQUIREMENTS

CS105, CS120, CS170, CS250, CS270, CS310, CS320, CS340, CS360, CS375, CS405, MA170, MA190, MA200, MA250

Item #	Title	Hours
CS 105	Principles of Computer Science	3
CS 120	Introduction to Programming	3
CS 170	Programming I	3
CS 250	Systems Analysis and Design	3
CS 270	Programming II	3
CS 310	Computer Systems Architecture	3
CS 320	Data Communications	3
CS 340	Computer Software Engineering	3
CS 360	Design and Analysis of Algorithms	3
CS 375	Programming III	3
CS 405	Operating Systems	3
MA 170	Pre-calculus	3
MA 190	Analytic Geometry and Calculus I	5
MA 200	Introduction to Statistics	3
MA 250	Introduction to Mathematical Reasoning	3
	Total credits:	**45-57**