Computer Science - Management Information Systems (AS)

Associate in Science

Minimum of 62 credit hours

If you are organized and analytical and interested in playing a role in company management, a career in Management Information Systems (MIS) could be right for you. MIS is a planned system of collecting, processing, storing and giving out data in the form of information needed to carry out the functions of a company’s management team. It involves analyzing computer-stored data relating to employees, business documents, technologies and procedures and using that data to aid in business decision-making processes. This career field is made up of a unique blend of computer system and business knowledge. According to the U.S. Department of Labor, employment of computer and information systems managers is expected to grow faster than average through the year 2016. OCCC provides a strong foundation in management information systems with excellent transfer to the University of Oklahoma and other four-year colleges and universities.

Course Sequence

<table>
<thead>
<tr>
<th>Course ID</th>
<th>Course Name</th>
<th>Credits</th>
<th>Type</th>
<th>Min Gd</th>
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<tbody>
<tr>
<td>SCL 1001</td>
<td>Success in College and Life</td>
<td>1</td>
<td>Life Skills</td>
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<tr>
<td>CS 1103</td>
<td>Introduction to Computers and Applications</td>
<td>3</td>
<td>Gen Ed</td>
<td>C</td>
</tr>
<tr>
<td>CS 2113</td>
<td>Computer Based Information Systems</td>
<td>3</td>
<td>Major</td>
<td>C</td>
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<tr>
<td>ENGL 1113</td>
<td>English Composition I</td>
<td>3</td>
<td>Gen Ed</td>
<td></td>
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<tr>
<td>HIST 1483</td>
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<td>OR</td>
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<td>HIST 1493</td>
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<td>3</td>
<td>Gen Ed</td>
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<tr>
<td>MATH 1513</td>
<td>College Algebra for Business, Life Sciences and Social Sciences</td>
<td>3</td>
<td>Gen Ed</td>
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Suggested Freshman 2nd Semester

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<tbody>
<tr>
<td>CS 1143</td>
<td>Beginning Programming</td>
<td>3</td>
<td>Major</td>
<td>C</td>
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<td>POLSC 1113</td>
<td>American Federal Government</td>
<td>3</td>
<td>Gen Ed</td>
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<td>ENGL 1213</td>
<td>English Composition II</td>
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<td>Calculus I for Business, Life Sciences, and Social Sciences</td>
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<td>Gen Ed</td>
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Suggested Sophomore 1st Semester

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<tr>
<td>CS 2163</td>
<td>Java</td>
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<td>Major</td>
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<tr>
<td>CS 2453</td>
<td>Visual Basic</td>
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<tr>
<td>ACCT 2113</td>
<td>Accounting II/Financial</td>
<td>3</td>
<td>Support</td>
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<tr>
<td>MATH 2123</td>
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<td>OR</td>
<td>Support</td>
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<td>ECON 2023</td>
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<td>Support</td>
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<td>PSY 1113</td>
<td>General Psychology</td>
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<td>Principles of Macroeconomics</td>
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<td>HUM</td>
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<tr>
<td>PHYS</td>
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Course Grouping

Major Courses: (9 credit hours)
Computer Science: CS 2113 (C), CS 1143 (C), *CS 2163 (C) or *CS 2453 (C)
*Transfer to University of Oklahoma requires either CS 2163 or CS 2453
*Transfer to Oklahoma State University requires CS 2163
*Transfer to University of Central Oklahoma requires CS 2453
General Education Courses: (37 credit hours)
Biological Science: **Any general education biological science except BIO 1023
**The University of Central Oklahoma requires a four credit hour Biological Science with a lab
Computer Science: CS 1103 (C)
English: ENGL 1113, ENGL 1213
History: HIST 1483 or HIST 1493
Humanities: 6 credit hours of Humanities electives
Mathematics: ***MATH 1513, MATH 1743
***The University of Oklahoma requires MATH 1513
Political Science: POLSC 1113
Social Sciences: PSY 1113 or SOC 1113
Any general education Physical Science chosen from ASTR; PHYS; CHEM; or GEOL prefixes; one of the science courses must include a lab component.
Life Skills Courses: (1 credit hour) Life Skills: SCL 1001
Support Courses: (15 credit hours)
Accounting: ACCT 2113; ACCT 2123
Economics: ECON 2123; ECON 2143
Mathematics: ****MATH 2123 or BUS 2023
The University of Oklahoma requires MATH 2123

Program Notes
Notes: This program is designed for students planning to continue their education at a four-year college or university. See the front general section for information and requirements about University Parallel/Transfer Programs.
Must have a grade of “C” or higher in all Computer Science courses.
ACCT 2113 - Accounting I/Financial
Prerequisites: MATH 0403 or adequate math placement test score and ENGL 0203 or adequate placement score, or by meeting determined placement measures.
3 Credits Students will demonstrate an understanding of basic accounting concepts, theories, and procedures and their effects on the financial reporting and analysis of a business.

ACCT 2123 - Accounting II/Managerial
Prerequisites: Completion of ACCT 2113 with a grade of "C" or better.
3 Credits A continuation of ACCT 2113. Students will demonstrate an understanding of managerial accounting concepts by properly classifying basic cost elements, allocating these costs to the manufacturing processes of a product, performing cost-volume-profit analysis, preparing operating and capital budgets, analyzing the decision-making process, and making business decisions.

BIO - Biological Science
3 Credits Biological Science

CS 1103 - Introduction to Computers and Applications
Prerequisites: Math 0103 or adequate math placement test score; ENGL 0203, adequate placement score, or by meeting determined placement measures
3 Credits This hands-on course affords students a basic understanding of computers and their application. Upon completion of this course, the student will be able to demonstrate the ability to use a computer operating system, an office suite, productivity tools, as well as the Internet at an introductory level. Advanced Standing is available. This course satisfies the computer proficiency requirement.

CS 1143 - Beginning Programming
Prerequisites: ENGL 0203, adequate placement score, or by meeting determined placement measures; Math 0303 or adequate math placement test score or by evaluation. § Criteria for evaluation is in division office.
3 Credits This four-week course is designed for Computer Science majors, this course affords students a basic understanding of computer programming. Students will utilize accepted programming concepts and perform number system conversions and arithmetic. In addition, they will design and code structured modular programs using design tools such as hierarchy charts, flowcharts, and pseudocode. This course satisfies the computer proficiency requirement.

CS 2113 - Computer Based Information Systems
Prerequisites: ENGL 0203, adequate placement score, or by meeting determined placement measures; Math 0203 or adequate math placement test score.
3 Credits Covers theory and practice for the design and use of computer-based information systems in organizations, with a focus on the relational database. Students project will include designing and implementing relational database applications and designing a web page. This course satisfies the computer proficiency requirement.

CS 2163 - Java
Prerequisites: Math 0303 or adequate math placement test score, CS 1143 or by evaluation. § Criteria for evaluation is in division office.
3 Credits Students will develop object-oriented Java applications and applets, which demonstrate comprehension of fundamental programming structures, object-oriented programming, graphics, event handling, interface components, programming for the Internet, data structures, and exception handling. This course satisfies the computer proficiency requirement.

CS 2453 - Visual Basic
Prerequisites: Math 0303 or adequate math placement test score, CS 1143 or by evaluation. § Criteria for evaluation is in division office.
3 Credits The students will use Visual Basic to create object-oriented, event-driven programs. This course teaches the students to handle the visual interface and also learn programming concepts that include objects, decisions, loops, dialog boxes, arrays, menus, subs, functions, files, simple data access and various other programming topics as they apply to Visual Basic. This course satisfies the computer proficiency requirement.

ECON 2023 - Statistics for Business and Economics
Prerequisites: MATH 1743 and ENGL 0203 or adequate placement score, or by meeting determined placement measures.
3 Credits Basic statistics course for undergraduate business majors. Introductory statistical methods are presented employing statistical computer software and applications to typical business and economic problems. Topics include descriptive statistics, probability concepts, probability distribution, estimation, hypothesis testing, and introduction to econometric/regression analysis, and correlation.

ECON 2123 - Principles of Microeconomics
Prerequisites: MATH 0303 or adequate math placement test score and ENGL 0203 or adequate placement score, or by meeting determined placement measures.
3 Credits The student will apply microeconomic theories in analyzing concepts by which business maximizes profit, consumers maximize satisfaction, government allocates goods and services, and international trade affects the domestic economy.

ECON 2143 - Principles of Macroeconomics
Prerequisites: ECON 2123 or by evaluation
3 Credits This course is a continuation of the Principles of Economics involving the production, consumption and distribution of wealth in a market economy, with major emphasis macroeconomics theory, particularly the general price level, output and income, and interrelations among sectors of the economy, determinants of aggregate demand and aggregate supply, as well as monetary and fiscal policy tools that can be used to achieve particular policy objectives. The basics of international finance will be reviewed.

ENGL 1113 - English Composition I
Prerequisites: ENGL 0203, adequate placement score, or by meeting determined placement measures
3 Credits This course is a continuation of ENGL 1103 taken within the last year, with strong encouragement for immediate continuation.

ENGL 1213 - English Composition II
Prerequisites: ENGL 1103 or ENGL 1113 taken within the last year, with strong encouragement for immediate continuation.
3 Credits In this advanced writing course, students will create essays that explore and evaluate a variety of issues and perspectives suggested by fiction, poetry, drama, essays, and other types of cultural texts. Students will refine and augment the writing techniques learned in ENGL 1113 or ENGL 1103 to develop well-reasoned, well-structured arguments in a clear, fluid, and engaging prose style.

HIST 1483 - U.S. History to 1877
Prerequisites: ENGL 0203, adequate placement score, or by meeting determined placement measures
3 Credits After analyzing events in American history from 1400 to 1877 in such areas as revolution, geographic and social mobility,
political reform, government precedents and war, students will be able to identify patterns of present day mobility, describe governmental operations in their society and help resolve conflict in society based on the student’s search for change, precedents, and conflict in the American past. A general education requirement.

HIST 1493 - U.S. History 1877 to Present
Prerequisites: ENGL 0203, adequate placement score, or by meeting determined placement measures
3 Credits After analyzing events in American history from 1877 to the present in such areas as geographic and social mobility, political reform, government precedents and war, students will be able to identify patterns of present day mobility, describe governmental operations in their society and help resolve conflict in society based on the student’s search for change, precedents, and conflict in the American past. A general education requirement.

HIST 1493 - U.S. History 1877 to Present
Prerequisites: ENGL 0203, adequate placement score, or by meeting determined placement measures
3 Credits After analyzing events in American history from 1877 to the present in such areas as geographic and social mobility, political reform, government precedents and war, students will be able to identify patterns of present day mobility, describe governmental operations in their society and help resolve conflict in society based on the student’s search for change, precedents, and conflict in the American past. A general education requirement.

HUM - Humanities Elective
3 Credits Humanities elective

MATH 1513 - College Algebra for Business, Life Sciences and Social Sciences
Prerequisites: MATH 0403 or adequate math placement test score; ENGL 0203, adequate placement score, or by meeting determined placement measures
3 Credits The student will demonstrate an understanding of the general concepts of relation and function and specifically of polynomial, exponential, and logarithmic functions; the ability to solve systems of equations by utilizing matrices and determinants; and the ability to solve practical problems using algebra.

MATH 1743 - Calculus I for Business, Life Sciences, and Social Sciences
Prerequisites: MATH 1513 or adequate math placement test score.
3 Credits This is the first of a two-semester sequence in elementary calculus in which students use the concepts of differential and integral calculus to solve theoretical and applied problems in business, life sciences, and social sciences.

MATH 2123 - Calculus II for Business, Life Sciences and Social Sciences
Prerequisites: MATH 1743
3 Credits MATH 2123 is the second of a two-semester sequence in elementary calculus in which students use the concepts of differential and integral calculus to solve theoretical and applied problems in business, life sciences, and social sciences.

PHYS - Any Physical Science
3 Credits Any Physical Science

POLSC 1113 - American Federal Government
Prerequisites: ENGL 0203, adequate placement score, or by meeting determined placement measures
3 Credits A study of the principles, structure, processes and functions of the United States federal government.

PSY 1113 - General Psychology
Prerequisites: ENGL 0203, adequate placement score, or by meeting determined placement measures
3 Credits A survey of the major areas of study in psychology such as motivation, learning, physiology, personality, social psychology, abnormal behavior, perception, memory, cognition/thought, and treatment.

SCL 1001 - Success in College and Life
Prerequisites: ENGL 0106 or adequate reading/writing assessment scores
1 Credit Students will learn best practices for academic, career, and personal success. Students will discover their individual strengths, interests, and values to create a personalized plan; select and utilize resources that are applicable to their growth and success; and engage as active and responsible members of the academic community. This course should be taken during a student's first semester of college work at Oklahoma City Community College and is a required course in degree plans to satisfy the Life Skills requirement.

SOC 1113 - Introduction to Sociology
Prerequisites: ENGL 0203, adequate placement score, or by meeting determined placement measures
3 Credits The student will identify the sociological dimensions of human behavior by analyzing the concepts of society, culture, socialization, institutions, social stratification and social change.