Computer Science (CS)

CS 100  S,F,W,Sp  5 credits
INTRODUCTION TO INFORMATION SYSTEMS  E
Presents a general overview of information technology. Introduces the student to the complex array of components that make up an information system. The technology and human issues involved in developing a successful information system as well as career paths and ethical issues facing these professionals will be covered. (Formerly known as CIS 100)
Prerequisite: None.

CS 102  W,Sp  5 credits
INTRODUCTION TO INTERNET THEORY/APP/WEB PAGE DESIGN  RE
Offers concepts, fundamentals, and techniques of web page design, and introduction to Internet networking principles. Topics include web page usability, design principles and development, site planning, and implementation. (X)HTML scripting language and Cascading Style Sheets are used to create structural and presentational web pages. Students will use concepts presented in the course for development of personal and commercial web pages.
Prerequisite: CS 100 with a grade of C or better, or instructor permission.

CS 104  S  5 credits
INTERMEDIATE WEB PAGE DESIGN  RE
Continuation of Web Page Design using client and server side scripted/programming languages and dynamic page coding to extend design capabilities and Web Site effectiveness. Methods introduced include browser control, security related issues, and Web Page structural/presentational control using these languages. (Formerly known as CIS 104)
Prerequisite: CS 102 (was CIS 102), CS 170 (was CIS 180) or equivalent, or instructor permission.

CS 110  S,F,W,Sp  3 credits
INTRODUCTION TO MICROCOMPUTER APPLICATIONS  E
Introduces the student to microcomputers and software applications. Windows, word processing, and electronic spreadsheets basics are presented. (Formerly known as CIS 110)
Prerequisite: Ability to use a keyboard.

CS 111  F,W,Sp  4 credits
INTRODUCTION TO WINDOWS  RE
Offers an introduction to the study of the Microsoft Windows operating systems. Presents fundamental concepts of a Microsoft Windows client operating system such as file management and customizing a graphical user interface (GUI). (Formerly known as CIS 150)
Prerequisite: None.

CS 121  5 credits
INTRODUCTION TO SPREADSHEETS  E
Introduces the use of spreadsheet programs in business applications. Provides practical experience in using a spreadsheet to solve common business problems. Prerequisites: BTEC 104 or CS 110, and MATH 089 or TECH 089 or BUS 104 or MATH 097, or instructor permission.

CS 122  5 credits
ADVANCED SPREADSHEET APPLICATIONS  E
Introduces advanced spreadsheet topics. Explores complex features such as macros, data management, and advanced formulas and functions to solve business problems. Demonstrates spreadsheets as business analytics and statistical analysis tools.
Prerequisite: CS 121 with a grade of C or better, or instructor permission.

CS 130  5 credits
INTRODUCTORY DATABASE APPLICATIONS  E
Offers an introduction to the study and use of computerized database management systems. This course provides basic database theory and application in a disciplined approach to problem solving in a business environment. (Formerly known as CIS 130)
Prerequisite: CS 121 (was CIS 120) with a grade of C or better, or concurrent enrollment with CS 121, or instructor permission.

CS 141  F,W  5 credits
PC TECHNICIAN I  RE
Provides an overview of the roles of the PC technician. Prepares students for PCPro and CompTIAA A+ certification exams. The roles of a PC Technician including protection and safety of users, acting in a professional manner, communication and documentation are examined. Technical topics covered include installation, maintenance and troubleshooting of system components, peripheral devices, storage, printers, and networking. Prerequisite: CS 100 with a C or better, or concurrent enrollment with CS 100, or instructor permission.
Prerequisite: CS 100 with a C or better, or concurrent enrollment with CS 100, or instructor permission.
Concurrent requirements: MATH 078/079 or instructor permission.

CS 142  5 credits
PC TECHNICIAN II  RE
Continues student’s preparation for the PC Pro and the A+ certification exams. Topics include installation, maintenance and troubleshooting mobile devices, Microsoft Windows system management and installation, security and troubleshooting stand-alone and networked systems.
Prerequisites: CS 141 and MATH 089 or MATH 097 or instructor permission with a grade of C or better.
<table>
<thead>
<tr>
<th>Course</th>
<th>Term</th>
<th>Credits</th>
<th>Description</th>
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<tbody>
<tr>
<td>CS 143</td>
<td>Sp</td>
<td>5</td>
<td>Preparis students for Microsoft's Certification: Configuring Windows operating system. It focuses on installing, deploying, configuring, monitoring, and maintaining systems that run Microsoft Windows OS. Installation, system images, application, networking, resource allocation, mobile computing, monitoring, maintenance, backup and recovery topics are included. Prerequisite: CS 142 with a C or better, or concurrent enrollment with CS 142, or instructor permission.</td>
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<tr>
<td>CS 170</td>
<td>F,W,Sp</td>
<td>5</td>
<td>Offers an introduction to computer programming concepts and the development of applications. Program development, style, testing, and documentation are presented, discussed and applied using the C++ programming language. This course is a beginning course for CS majors and others, such as engineering transfer students, wishing an introduction to structured computer programming. Prerequisites: MATH 089 or TECH 089 or MATH 097 with a grade of C or better and knowledge of Windows is required; or instructor permission.</td>
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<tr>
<td>CS 175</td>
<td>E</td>
<td>5</td>
<td>Offers an introduction to designing and implementing Windows applications using Visual Basic. Concepts involving event-driven programming, graphical user interface design, and algorithm implementation are covered. (Formerly known as CIS 185) Prerequisite: CS 170 (was CIS 180) with a grade of C or better, or instructor permission.</td>
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<tr>
<td>CS 208</td>
<td>W</td>
<td>5</td>
<td>Introduction to the principles, roles, and application of Management Information Systems (MIS) in business. Investigations into MIS include hands-on lab experiences and case studies. (Formerly known as CIS 260) Prerequisite: BUS&amp; 101 (was BSAD 110), ENGL&amp; 101, or instructor permission. CS 110 (was CIS 110) recommended.</td>
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<tr>
<td>CS 211</td>
<td>F</td>
<td>5</td>
<td>Prepares students for TestOut's Network Pro and CompTIA's Network+ certification exams. Focuses on configuring, managing and troubleshooting the elements of a basic network infrastructure. Emphasis is on network fundamentals including design, hardware, software and security. Prerequisite: CS 141 with a grade of C or better or instructor permission.</td>
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<tr>
<td>CS 212</td>
<td>W</td>
<td>5</td>
<td>Preparis students for Microsoft's Configuring Windows Server active Directory Exam. Focuses on configuring, managing and troubleshooting the computing environment of medium to large companies. Prerequisites: CS 211 with a grade of C or better or instructor permission.</td>
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<tr>
<td>CS 213</td>
<td>Sp</td>
<td>5</td>
<td>Preparis students for the Microsoft Technology Specialist exam: Windows Server Network Infrastructure Configuring. Focuses on the details of configuring the infrastructure of a network. Prerequisites: CS 212 with a grade of C or better or instructor permission.</td>
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<tr>
<td>CS 230</td>
<td>E</td>
<td>5</td>
<td>Offers further study and use of computerized database management systems. Provides intermediate theory and practice in a disciplined approach to problem solving using a database management system in a business environment. (Formerly known as CIS 230) Prerequisite: CS 130 (was CIS 130) with a grade of C or better or instructor permission.</td>
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<tr>
<td>CS 249</td>
<td>W</td>
<td>5</td>
<td>Prepares students for application of Linux+ certification knowledge and skills. Course is focused on meeting Comptia Linux+ certification objectives in both knowledge and hands on lab practice. It is recommended that most students will need some experience with Linux in the work place prior to attempting the Linux+ exam. Prerequisites: CS 143 and CS 211 each with a grade of C or better, or instructor permission.</td>
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<tr>
<td>CS 260</td>
<td>Sp</td>
<td>5</td>
<td>Prepares students for application of Security+ certification knowledge and skills. Course is focused on meeting Comptia Security+ certification objectives in both knowledge and hands on lab practice. It is recommended that most students will need some experience with Linux in the work place prior to attempting the Security+ exam. Completion of this course does not guarantee passing the certification exam. Prerequisites: CS 211 with a grade of C or better, or instructor permission.</td>
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CS 270  F  5 credits  
DATA STRUCTURES I  
Offers a detailed study of structured and object-oriented programming, including algorithms, searching and sorting, and data structures using the programming language C++. (Formerly known as CIS 280)  
Prerequisite: MATH 099 or TECH 099 and CS 170, both with a grade of C or better, or instructor permission.

CS 275  W  5 credits  
OBJECT-ORIENTED PROGRAMMING IN JAVA  
Offers an introduction to the object-oriented programming paradigm using Java. Various object-oriented programming concepts will be discussed. Object-oriented programs will be developed and implemented. (Formerly known as CIS 285)  
Prerequisite: CS 170 (was CIS 180) with a grade of C or better, or instructor permission.

CS 280  Sp  5 credits  
ADVANCED DATA STRUCTURES  
Offers a detailed study of advanced data structures, including the analysis of algorithms and object-oriented programming using the programming language C++.  
Prerequisites: CS 270 and MATH& 141 (was MATH 112), both with a grade of C or better, or instructor's permission.

CS 281  F  5 credits  
DIGITAL DESIGN AND COMPUTER ORGANIZATION  
Introduces elementary digital logic design and the organization of computers.  
Prerequisites: MATH& 141 (was MATH 112) and CS 270, both with a grade of C or better, or instructor permission.

CS 282  W  5 credits  
ASSEMBLY LANGUAGE PROGRAMMING(WAS MICROPROCESS.)  
Introduces protected-mode assembly language programming. Covers assembly language concepts and code in the context of either "C" or C++.
Prerequisites: CS 281 with a grade of C or better, or instructor permission.

CS 285  S  5 credits  
PROGRAMMING TOOLS  
Covers tools and techniques which facilitate programming and debugging, including debuggers, profilers, scripting, and C and C++ programming under the Linux operating system. Formerly known as CIS 235.
Prerequisite: CS 270 (was CIS 280) with a grade of C or better, or instructor permission.