

COMPUTER TECHNOLOGY (OECS)

OECS 101 Computer Basics 1 Credit (1)

Hands-on instruction to introduce computer use and commonly used software. Graded S/U.

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OECS 105 Introduction to Information Technology 3 Credits (3)

Examination of information systems and their impact on commerce, education, and personal activities. Utilization of productivity tools for communication, data analysis, information management and decision-making.

Repeatable: up to 3 credits

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OECS 110 Introduction to Power Point 1-3 Credits

An introduction to Power Point software to develop business presentations. Includes concepts of basic presentation methods and graphic design principles. Students will create and deliver presentations using text, charts, digitized images, and sound.

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OECS 125 Operating Systems 1-3 Credits

Installation, configuration and optimization of current operating systems.

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OECS 128 Operating Systems Linux/Unix 3 Credits (3)

Installation, configuration, and use of Linux/Unix operating system software and utilities including hardware management, file management, use of command line, and scripting.

Learning Outcomes

1. Introduction to Linux
2. Introduction to Installing Linux
3. Fedora and RedHat Enterprise Linux fundamentals
4. The SHELL
5. The LINUX filesystem
6. Networking and the Internet
7. The Bourne Again Shell (bash)
8. System Administration Core Concepts
9. Files, Directories, and Filesystems 1
10. Finding, Downloading, and installing the software 1
11. Printing 1
12. Building a Linux Kernel 1
13. Administration tasks 1
14. Configuring and monitoring a LAN 1
15. Programming the Bourne Again Shell (bash) 1
16. The Python Programming LanguagePoints/Grading conversion:

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OECS 145 Mobile Application Development 1-3 Credits

Introduction to elements of mobile application coding including concepts, design strategies, tools needed to create, test and deploy applications for mobile devices.

Repeatable: up to 6 credits

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OECS 155 Special Topics Introductory Computer Technology 0.5-3 Credits

Topics to be announced in the Schedule of Classes.

Repeatable: up to 8 credits

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OECS 185 PC Maintenance and Repair I 1-3 Credits

Introduction to most common types of PC configurations, installations, and failures. This course will explore troubleshooting skills for maintaining and repairing common hardware and software related problems.

Repeatable: up to 3 credits

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OECS 192 C++ Programming I 3 Credits (3)

Development of skills in programming using the C++ programming language.

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OECS 195 Java Programming I 1-3 Credits

Developing of skills in programming using the Java programming language.

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OECS 200 Accounting on Microcomputers 3 Credits (3)

Fundamental accounting principles using popular microcomputer software to include G/L, A/R, A/P, purchase order, billing, inventory, and forecasting modules.

Prerequisite(s): ACCT 2110 or OATS 121

Learning Outcomes

1. Effective communication skills in reading, writing, listening, and speaking.
2. Basic critical thinking skills including problem identification, evidence acquisition, evidence evaluation, and problem solving and analytical decision making.
3. An understanding of personal and social responsibility
4. An ability to apply the fundamental concepts of quantitative reasoning in mathematics and science.

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OECS 204 Linux Operating System 1-3 Credits

Install and configure the Linux operating system on X86 systems. Covers issues involved in maintaining operating system, networking, creating and managing users, and installing and updating software. General procedures for working with operating system includes maintaining disk space, preserving system security, and other related topics.

Repeatable: up to 3 credits

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OECS 207 Windows 3 Credits (3)

Covers local installation, configuration of core local services, managing users, and the general local management and maintenance of Windows workstations.

Prerequisite(s)/Corequisite(s): OECS 185

Repeatable: up to 6 credits

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OECS 208 Internet Applications 1-3 Credits

Survey of the Internet to include e-mail, file transfer, current search techniques, the World Wide Web and basic Web page development.

Repeatable: up to 6 credits

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OECS 209 Computer Graphic Arts 1-3 Credits

Basic graphics composition using computer programs to include editing and manipulating graphic images, clip-art, and printing of pictures.

Prerequisite(s): OECS 105, BCIS 1110, or OECS 10

Repeatable: for a maximum of 6 credits under different subtitles listed in the Schedule of Classes

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OECS 211 Word Processing Applications 1-3 Credits

Basic word processing to include composing, editing, formatting, and printing of documents. Prerequisites: BCIS 1110 or OECS 105

Repeatable: under different subtitles listed in the Schedule of Classes for a maximum of 6 credits

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OECS 215 Spreadsheet Applications 1-3 Credits

Use of spreadsheets to include graphics and business applications.

Prerequisites: BCIS 1110 or OECS 105

Repeatable: for a maximum of 6 credits

Learning Outcomes

1. Create and format worksheets/workbooks using features of Microsoft Excel including chart data, styles, and themes.
2. Utilize formulas and functions to create worksheets suitable for professional and personal purposes.
3. Utilize the advanced function of Excel to create templates, work with multiple worksheet, advanced sorting and filtering and data analysis.

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OECS 220 Database Application and Design 1-3 Credits

Creating, sorting, and searching of single and multifile databases to include report generation and programming database commands.

Prerequisite(s): BCIS 1110 OR E T 120 OR OECS 105

Repeatable: for a maximum of 6 credits under different subtitles listed in the Schedule of Classes

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OECS 221 Internship I 1-3 Credits

Work experience that directly relates to a student's major field of study that provides the student an opportunity to explore career paths and apply knowledge and theory learned in the classroom. Internships may be paid or unpaid. Students are supervised/evaluated by both the employer and the instructor. Consent of Instructor required. OECS majors. Graded: S/U Grading (S/U, Audit).

Prerequisite(s): Consent of instructor

Repeatable: up to 3 credits

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OECS 222 Internship II 1-3 Credits

Continuation of OECS 221. Each credit requires specified number of hours of on-the-job work experience. Consent of Instructor required. OECS majors. Graded: S/U Grading (S/U, Audit).

Prerequisite(s): OECS 221 and consent of instructor

Repeatable: up to 3 credits

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OECS 223 Web Design for Business 3 Credits (3)

Design and create a website using HTML, CSS, web development tools and industry-recognized software while applying best practices in site management and business web presence.

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OECS 227 Computer Applications for Technicians 3 Credits (3)

Computer applications for service technicians in various disciplines. Hardware and software applications explored. Includes operating systems, high level programming, and networking hardware and software. [View Course Outcomes](#)

OECS 230 Data Communications and Network I 1-3 Credits

Definition of data communication; survey of hardware applications and teleprocessor software; examination and design of networks.

Prerequisite(s): OECS 185

Repeatable: for a maximum of 6 credits

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OECS 231 Data Communications and Network II 1-3 Credits

Installation and application of popular microcomputer network software.

Prerequisite(s): OECS 230

Repeatable: for a maximum of 6 credits

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OECS 234 Linux Server 3-4 Credits

This course addresses the implementation and support needs of IT professionals that are planning to deploy and support Linux Server(s). It provides in-depth, hands-on training for planning, implementation, management and support of Linux networking services.

Prerequisite(s)/Corequisite(s): OECS 204

Repeatable: up to 8 credits

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OECS 235 Structured Query Language (SQL) 1-3 Credits

Installation, configuration, administration, and troubleshooting of SQL client/server database management system.

Prerequisite(s)/Corequisite(s): OECS 220

Repeatable: up to 3 credits

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OECS 237 Windows Server 3-4 Credits

This course addresses the implementation and support needs of IT professionals that are planning to deploy and support Microsoft Windows Server Active Directory Domain Services in medium to large businesses. It provides in-depth, hands-on training for Information Technology (IT) professionals responsible for the planning, implementation, management, and support of Windows Active Directory services.

Prerequisite(s)/Corequisite(s): OECS 207

Repeatable: up to 4 credits

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OECS 245 Game Programming I 3 Credits (3)

Development of programming skills for games and animation using current programming languages and tools.

Prerequisite(s): consent of instructor

Repeatable: for a maximum of 6 credits

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OECS 246 Game Programming 3 Credits (3)

Continuation of OECS 245.

Prerequisite(s): OECS 245

Repeatable: for a maximum of 6 credits

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OECS 253 Applied Data Analysis and Management 3 Credits (3)

Applied use of advanced spreadsheet tools for data analysis and database tools for data and information management. Connect emerging topics in business to tools used in analyzing data and making raw data useful for business decision making.

Prerequisite(s): BCIS 1110

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OECS 255 Special Topics 1-4 Credits

Topics to be announced in the Schedule of Classes.
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OECS 261 Introduction to Networks 3-4 Credits

Introduction to networking principles including the practical and conceptual skills for understanding basic networking, planning and designing networks, implementing IP addressing schemes, examining the OSI and TCP/IP layers, and performing basic configurations for routers and switches. Aligns to the first course of the Cisco Networking Academy CCNA curriculum.

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OECS 262 Essentials of Routing and Switching 3-4 Credits

Examination of the architecture, components, and operations of routers and switches in a small network. Student will learn how to configure, verify and troubleshoot: routers and switches, static routing, default routing, VLANs, and ACLs. Aligns to the second course of the Cisco Networking Academy CCNA curriculum.

Prerequisite(s)/Corequisite(s): OECS 261

Repeatable: up to 4 credits

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OECS 263 Network Fundamentals 3-4 Credits

Fundamentals of networking architecture, components, and operations including practical and conceptual skills using routers and switches. Student will learn how to configure, verify and troubleshoot static routing, default routing, VLANs, and ACLs. This course aligns to the third course of the Cisco Networking Academy CCNA curriculum.

Prerequisite(s)/Corequisite(s): OECS 262

Repeatable: up to 4 credits

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OECS 264 Network Routing Protocols 3-4 Credits

Fundamentals of routing protocols for troubleshooting advanced network operations. Covers common networking issues such as RIP, OSPF, and EIGRP for IPv4 and IPv6 networks. This course aligns to the fourth course of the Cisco Networking Academy CCNA curriculum.

Prerequisite(s)/Corequisite(s): OECS 263

Repeatable: up to 4 credits

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OECS 269 Network Security 3 Credits (3)

Fundamentals of design and implementation of network security solutions that will reduce the risk of system vulnerability.

Prerequisite(s): OECS 204 or OECS 207 or OECS 261 or consent of instructor

Repeatable: up to 8 credits

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OECS 275 PC Maintenance and Repair II 1-3 Credits

Continuation of OECS 185.

Prerequisite(s): OECS 185

Repeatable: up to 6 credits

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OECS 280 Desktop Publishing I 3 Credits (3)

Design and production of publication materials to fill the needs of business communities, using a microcomputer. Prerequisites: either BCIS 1110, OECS 105.

Repeatable: for a maximum of 6 credits

Crosslist: OATS 280

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OECS 290 Computer Technology Capstone 1-3 Credits

Refines skills learned in the OECS program. Culminates in a review and practice of advanced software applications. Restricted to: OECS & OECT majors.

Prerequisite(s): (OECS 125, OECS 128, OECS 207, OR OECS 203) AND (OECS 185 OR E T 283)

Repeatable: up to 3 credits

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OECS 299 Independent Study 1-3 Credits

Specific subjects to be determined based on need.

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