

COMPUTER INFORMATION SYSTEM (CISS)

CISS 115, INTERNET RESEARCH AND TOOLS 1 (1.5)

The Internet is a global information infrastructure that offers many services. This course will review the characteristics and trends that will continue to impact these technologies in the areas of collaboration, creativity, communication, research, applications, privacy, security, etc. Laboratory required. (A special fee will be assessed.)

General Education: IN1, IN4, IN5

Typically Offered: Spring Semester

CISS 121, MICROCOMPUTER APPLICATIONS I 3 (4)

Introduction to microcomputer applications. Survey of application packages including Windows, word processing, spreadsheets, Internet, presentation and graphics. Includes hardware concepts and basic computer terminology and email. Guidelines for selecting and evaluating hardware and software. Students may go to the LCCC computer lab or use a computer that supports the Microsoft Windows operating system and Microsoft Office application software. Laboratory required. (A special fee will be assessed.) (TAG)

General Education: IN2, IN4, IN5

Typically Offered: Summer, Fall and Spring Semesters

CISS 122, MICROCOMPUTER APPLICATIONS II 3 (4)

Basic concepts of personal finance software and presentation software. Procedures for installing and upgrading software, virus detection and removal software and modem software. Additional topics on customizing the operating system environment, configuring computer for an ISP, and troubleshooting software conflicts. Laboratory required. (A special fee will be assessed.)

General Education: IN1, IN2, IN4

Course Entry Requirement(s): Prerequisite: CISS 121

Typically Offered: Spring Semester

CISS 125, OPERATING SYSTEM INTERFACES 3 (4)

Theory of single user, multitasking, and multi-user operating systems. The user interface will be examined as well as the operating system commands, command syntax, parameters, and operating systems troubleshooting. Topics on OS layering, hardware, disk storage, file management utilities, directory management utilities, backup, recovery, and editors. UNIX and Windows will be installed and used in the labs. Laboratory required. (A special fee will be assessed.) (CTAG, MTAG)

General Education: IN1, IN4

Course Entry Requirement(s): Concurrent: CISS 121 or division approval

Typically Offered: Summer, Fall and Spring Semesters

CISS 143, DATABASE DESIGN AND IMPLEMENTATION 3 (4)

Relational database theory, database design, implementation using microcomputer software, use of command language and application generator, database administration. Laboratory required. (A special fee will be assessed.)

General Education: IN1, IN2

Course Entry Requirement(s): Prerequisite: CISS 121 or division approval

Typically Offered: Fall and Spring Semesters

CISS 145, LOCAL AREA NETWORKS 4 (5)

Theory, installation, and operating principles behind local area networks. Topics on topologies, hardware configuration for topologies, network operating systems, server administration, media and software installation will be covered. Students will install and administer a local area network. Laboratory required. (A special fee will be assessed.) (CTAG, MTAG)

General Education: IN1, IN2, IN4

Course Entry Requirement(s): Prerequisite: CISS 125

Typically Offered: Fall and Spring Semesters

CISS 155, FUNDAMENTALS OF NETWORK SECURITY 3 (4)

CCNA Security equips students with the knowledge and skills needed to prepare for entry-level security specialist careers. Students will learn about IT security principles, risk assessment and basic network related attack methodologies. Specific skills to mitigate these risks will be developed in the use and configuration of firewalls, intrusion detection/prevention and virtual private networking technologies. Other topics include configuration standards and secure networking equipment and the use of protocols to authenticate and authorize users. Cisco Curriculum provided to LCCC under contract with Cisco Systems, Inc. as part of LCCC's Cisco Networking Academy.

General Education: IN1, IN2, IN4

Course Entry Requirement(s): Prerequisite: CISS 165 or division approval

Typically Offered: Fall and Spring Semesters

CISS 160, INTRODUCTION TO PROGRAMMING IN C# 4 (5)

An introduction to the program development process and business programming using the C# (C-sharp) programming language. Topics include programming fundamentals, algorithm design, functions and procedures, arrays, sequential file processing, and database access. The object-oriented programming (OOP) model is emphasized throughout the course. Laboratory required. (A special fee will be assessed.)

General Education: IN1, IN4

Course Entry Requirement(s): Prerequisite: CISS 121 or division approval

Typically Offered: Fall and Spring Semesters

CISS 161, CISCO CCNA INTRODUCTION TO NETWORK 3 (4)

This course introduces the architecture, structure, functions, components, and models of the Internet and other computer networks. The principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations are introduced to provide a foundation for the curriculum. By the end of the course, students will be able to build simple LANs, perform basic configurations for routers and switches, and implement IP addressing schemes. Laboratory required. (A special fee will be assessed.) (CTAG, MTAG)

General Education: IN1, IN2, IN4

Course Entry Requirement(s): Prerequisite: CISS 145 or CMNW 145 or division approval

Typically Offered: Summer, Fall and Spring Semesters

CISS 162, CISCO CCNA ROUTING & SWITCHING ESSENTIALS 3 (4)

This course describes the architecture, components, and operations of routers and switches in a small network. Students learn how to configure a router and a switch for basic functionality. By the end of this course, students will be able to configure and troubleshoot routers and switches and resolve common issues with RIPv1, RIPv2, single-area and multi-area OSPF, virtual LANs, and inter-VLAN routing in both IPv4 and IPv6 networks. Laboratory required. (A special fee will be assessed.) (CTAG, MTAG)

General Education: IN1, IN2

Course Entry Requirement(s): Prerequisite: CISS 161

Typically Offered: Summer, Fall and Spring Semesters

CISS 164, CISCO CCNA CONNECTING NETWORKS 3 (4)

This course discusses the WAN technologies and network services required by converged applications in a complex network. The course enables students to understand the selection criteria of network devices and WAN technologies to meet network requirements. Students learn how to configure and troubleshoot network devices and resolve common issues with data link protocols. Students will also develop the knowledge and skills needed to implement IPsec and virtual private network (VPN) operations in a complex network. Laboratory required. (A special fee will be assessed.)(CTAG)

General Education: IN1, IN2, IN4

Course Entry Requirement(s): Prerequisite: CISS 163

Typically Offered: Fall and Spring Semesters

CISS 165, CISCO CCNA V7 INTRODUCTION TO NETWORKING 3 (4)

This course introduces the architecture, structure, functions, components, and models of the Internet and other computer networks. The principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations are introduced to provide a foundation for the curriculum. By the end of the course, students will be able to build simple LANs, perform basic configurations for routers and switches, and implement IP addressing schemes. Laboratory required. (A special fee will be assessed.)(CTAG, ITAG, MTAG)

General Education: IN1, IN2

Course Entry Requirement(s): Prerequisite: CISS 145 or CMNW 145 or division approval

Typically Offered: Summer, Fall and Spring Semesters

CISS 166, CISCO CCNA V7 LOCAL AREA NETWORK OPERATIONS 3 (4)

This course describe how switched Ethernet LANs are architected and configured. Students will learn how routing concepts are deployed in multi-layered switched networks, the configuration of VLANs, and implementation of wireless networking components. These concepts will be taught within the context of network security needs and troubleshooting techniques. Laboratory required. (A special fee will be assessed.)(CTAG, ITAG, MTAG)

General Education: IN1, IN2

Course Entry Requirement(s): Prerequisite: CISS 165

Typically Offered: Summer, Fall and Spring Semesters

CISS 167, CISCO CCNA V7 ROUTING AND WIDE AREA NETWORK OPERATIONS 3 (4)

This course describes the architecture, components, and operations of routers, network. Students learn how to configure routers for advanced functionality. Students will learn about routing protocols (OSPF), network address translation (NAT), virtual private networking (VPN) and the use of access lists (ACLs). These topics will be presented within the context of good security practice, applied troubleshooting and management techniques. Laboratory required. (A special fee will be assessed.)(CTAG, ITAG)

General Education: IN1, IN2, IN4

Course Entry Requirement(s): Prerequisite: CISS 165

Typically Offered: Fall and Spring Semesters

CISS 212, SPREADSHEET APPLICATIONS 3 (4)

Use of spreadsheet software to create templates as well as menu-driven spreadsheets. Focus will be on using functions, databases, data tables, macros, charts, advanced formulas, pivot tables, pivot charts, and graphics. Additional topics include multiple worksheets, financial and what-if analyses, external data usage, and Visual Basic application integration. (A special fee will be assessed.)

General Education: IN1, IN2, IN4, IN5

Course Entry Requirement(s): Prerequisite: CISS 121

Typically Offered: Summer, Fall and Spring Semesters

CISS 215, MULTIMEDIA FUNDAMENTALS 3 (4)

Theory and techniques for developing multimedia projects. Principles of effective design. Use of multimedia tools, including video, audio and animation to develop a variety of projects. Laboratory required. (A special fee will be assessed.)

General Education: IN1, IN2, IN3, IN4

Course Entry Requirement(s): Prerequisite: CISS 121 or division approval

Typically Offered: Spring Semester

CISS 216, WEB DEVELOPMENT 3 (4)

Web site development with a focus on design strategies, electronic publishing, and graphic layout for the evolving business world. An overview of copyright, security, and domain name registration issues will also be covered. HTML/XHTML, JavaScript, CSS and/or emerging languages will be used. Laboratory required. (A special fee will be assessed.)

General Education: IN1, IN2, IN3, IN4

Course Entry Requirement(s): Prerequisite: CISS 121 or division approval

Typically Offered: Summer, Fall and Spring Semesters

CISS 222, ADVANCED PROGRAMMING IN C# 3 (4)

Advanced object-oriented programming techniques in C# including using class instances, creating new classes, and using the .NET base class libraries. Topics include object-oriented analysis and design, inheritance, polymorphism, interfaces, namespaces, delegates, and events. The role of object-orientation in effective software development is emphasized. Laboratory required. (A special fee will be assessed.)

General Education: IN1, IN4

Course Entry Requirement(s): Prerequisite: CISS 135 or CISS 160 or division approval

Typically Offered: Fall Semester

CISS 226, INTRODUCTION TO PROGRAMMING IN JAVA 3 (4)

An introduction to programming using the JAVA programming language. Topics include language fundamentals, GUI design tools including Swing and AWT, object class design and implementation, and applets. Both desktop and web applications are introduced using an object-oriented methodology. Laboratory required. (A special fee will be assessed.)(CTAG)

General Education: IN1, IN2, IN3, IN4

Course Entry Requirement(s): Prerequisite: CISS 135 or CISS 160

Typically Offered: Fall and Spring Semesters

CISS 227, INTRANET/INTERNET NETWORKING 4 (5)

Installation and support of Intranet/Internet servers. Site planning, performance and resource monitoring, security planning and troubleshooting. Students will install, configure, manage, and troubleshoot DNS servers, web servers, FTP servers, e-mail servers with both Windows and Linux operating systems. Additional topics on firewalls, DMZ, NAT, PAT, domain registration, Internet routing and VPN tunnels. Laboratory required. (A special fee will be assessed.)

General Education: IN1, IN2, IN4

Course Entry Requirement(s): Prerequisite: CISS 145

Typically Offered: Spring Semester

CISS 232, SCRIPTING IN THE CLIENT SERVER ENVIRONMENT 3 (4)

Study the principles of Client/Server programming. Development of web application interfaces using current web standards such as XHTML, CSS, Client side JavaScript and server side programming. Development of Web applications that include Server Side processing using current languages such as PHP. Laboratory required. (A special fee will be assessed.)

General Education: IN1, IN2, IN3, IN4

Course Entry Requirement(s): Prerequisite: CISS 216 and CISS 160 or CISS 135

Typically Offered: Fall and Spring Semesters

CISS 236, VIRTUALIZATION AND CLOUD COMPUTING 3 (4)

This course will equip the student with the knowledge, skills and abilities to build and run a VMware vSphere environment. This course focuses on the installation and configuration of VMware ESXi hosts and vCenter server. This course also focuses on the management of ESXi hosts and virtual machines utilizing the vCenter server. Upon completion of this course, students will be able to deploy, configure and manage ESXi, vCenter and storage subsystems. Laboratory required. (A special fee will be assessed.)

General Education: IN1, IN2, IN4

Course Entry Requirement(s): Prerequisite: CISS 145 or division approval

Typically Offered: Not offered this year

CISS 240, CERTIFICATION EXAM PREP 2 (3)

This lab course is designed as a self-study Certification exam preparation course for Computer Information systems students who have completed a sequence of courses and wish to prepare or review for Microsoft, Cisco, or other IT certification exams. Students will have access to lab equipment and software to help them review for one or more of the certifications.

General Education: IN1, IN2, IN4

Course Entry Requirement(s): Prerequisite: CISS 136 or CISS 225 or CISS 154

Typically Offered: Offer as required

CISS 243, WEB DATABASE INTEGRATION 4 (5)

Theory and strategies for development of integrated web database applications. Students will create SQL-based applications that view, search, and modify databases, using current Server Side languages/frameworks, such as ASP.NET. Strategies for building robust Internet applications, and database theory will also be covered. (A special fee will be assessed.)

General Education: IN1, IN2, IN3, IN4

Course Entry Requirement(s): Prerequisite: CISS 216 and CISS 160 or CISS 135

Typically Offered: Fall and Spring Semesters

CISS 245, NETWORK INTEGRATION AND MANAGEMENT 4 (5)

Theory and best practices for larger networks and the interconnection of local area networks and wide area networks. Topics on routers, network servers, virtualization of servers, virtualization of clients, network attached storage, remote storage, and video conferencing. Integration of both Windows and Linux servers and clients, biometric security devices, automated backups, and other emerging technologies. Topics on IP addressing, subnetting, WAN topologies, management issues, and disaster recovery. Laboratory required. (A special fee will be assessed.) (CTAG) (MTAG)

General Education: IN1, IN2, IN4

Course Entry Requirement(s): Prerequisite: CISS 145

Typically Offered: Fall and Spring Semesters

CISS 247, SYSTEMS DEVELOPMENT 3 (4)

Methodologies implemented by project teams. Includes initial investigation, feasibility study, systems analysis, systems design, and implementation planning. Laboratory required. (A special fee will be assessed). Prerequisite: Completion of 40 credit hours, which include 18 Computer Information Systems credit hours including CISS 143.

General Education: IN1, IN2, IN3, IN4

Course Entry Requirement(s): Prerequisite: Completion of 40 credit hours which include 18 computer information systems credit hours including CISS 143

Typically Offered: Spring Semester

CISS 260, INTRODUCTION TO IPHONE/IPAD PROGRAMMING 4 (5)

This course will introduce the development of software applications for the Apple iPhone and iPad. Applications will be created using the Objective-C programming language and the Xcode development environment. Additional topics include application distribution through the Apple App Store as well as requirements and techniques for distribution through private computer networks. (A special fee will be assessed.)

General Education: IN1

Course Entry Requirement(s): Prerequisite: CISS 160 or CISS 135

Typically Offered: Spring Semester

CISS 264, INTRODUCTION TO ANDROID PROGRAMMING 3 (4)

This course will introduce the development of software applications for mobile Android devices (phone and tablets). Applications will be developed using Java and the Android SDK, tested and deployed. Application development will adhere to object oriented programming techniques. Additional topics include addressing resource issues, user interface design, and access to Android System Components. (A special fee will be assessed.)

General Education: IN1

Course Entry Requirement(s): Prerequisite: CISS 160 or division approval; Corequisite: CISS 226 or division approval

Typically Offered: Fall Semester

CISS 266, ADVANCED ANDROID PROGRAMMING 4 (5)

Advanced design and development of software applications for mobile Android devices. Building of more complex applications that meet the needs of the user clientele. Additional topics on applications that take advantage of the rich features of mobile devices such as GPS location, motion sensation, and voice recognition.

General Education: IN1

Course Entry Requirement(s): Prerequisite: CISS 264

Typically Offered: Spring Semester

CISS 268, MOBILE WEB DEVELOPMENT 4 (5)

Design and development of web sites that are optimized for mobile devices. Course will cover both the technical and design aspects associated with mobile platforms. Attention will be given to developing web sites that work well both when browsed from a computer and a mobile device without excessive duplication of effort. Additional topics on the development of web applications and rich multimedia. (A special fee will be assessed.)

General Education: IN1

Course Entry Requirement(s): Prerequisite: CISS 232

Typically Offered: Fall Semester

CISS 285, INFORMATION SYSTEMS PRACTICUM 2 (11)

Students are placed in MIS departments for the purpose of observing and performing various computing activities. Students will be assigned an on-the-job sponsor who will be responsible for directing and evaluating their activities.

Course Entry Requirement(s): Prerequisite: Completion of 40 credit hours which include 18 Computer Information System credits

CISS 287, WORK-BASED LEARNING I - CISS 1-3 (1)

This course provides supervised, paid work experience with approved employer(s) in an area related to the student's program. Emphasis is placed on integrating prior or concurrent classroom learning with work experience through career readiness competencies. Students will be able to evaluate career selection and satisfactorily demonstrate work-related competencies.

General Education: IN1, IN2, IN3, IN4

Course Entry Requirement(s): A student must be pursuing a degree seeking program at LCCC; have completed 12 semester hours with a minimum of 6 semester hours in the discipline of placement; have a min GPA of 2.5 in the discipline and a 2.0 overall GPA; and have division approval.

Typically Offered: Offer as required

CISS 288, WORK-BASED LEARNING II - CISS 1-3 (1)

Building on experiences from Work Based Learning I, this course provides supervised, paid work experience with approved employer(s) in an area related to the student's program. Emphasis is placed on integrating prior or concurrent classroom learning with work experience through career readiness competencies. Students will be able to evaluate career selection and satisfactorily demonstrate work-related competencies.

General Education: IN1, IN2, IN3, IN4

Course Entry Requirement(s): Prerequisite: CISS 287

Typically Offered: Offer as required

CISS 289, WORK-BASED LEARNING III - CISS 1-3 (1)

Building on experiences from Work Based Learning II, this course provides supervised, paid work experience with approved employer(s) in an area related to the student's program. Emphasis is placed on integrating prior or concurrent classroom learning with work experience through career readiness competencies. Students will be able to evaluate career selection and satisfactorily demonstrate work-related competencies.

General Education: IN1, IN2, IN3, IN4

Course Entry Requirement(s): Prerequisite: CISS 288

Typically Offered: Offer as required

CISS 299, INDIVIDUALIZED STUDIES IN CISS 1-3 (1)

An in-depth study of areas in computer information systems presented by discussion and/or individual research and reading. Topics will vary. Repeatable up to six (6) times for a total of six (6) credit hours.

Course Entry Requirement(s): Prerequisite: Second-year standing and division approval

Typically Offered: Offer as required