

**PASADENA CITY COLLEGE
CURRICULUM AND INSTRUCTION COMMITTEE
MINUTES OF MEETING
THURSDAY, NOVEMBER 17, 2016**

CALLED TO ORDER: 1:34 p.m.

CO-CHAIRPERSONS: Janis Dwyer
Alicia Vargas

The following Curriculum and Instruction Committee members were present:

FACULTY CHAIRPERSONS

Janis Dwyer
Alicia Vargas

INSTRUCTIONAL UNITS

Jason Huh, Business and Computer Technology
Jeff Hupp, Counseling and Career Services
Ruoyi Wu, English
Walter Butler, Library
Karyn Skiathitis, Health Sciences
Wendy Lucko, Engineering and Technology
Tamara Knott-Silva, Kinesiology, Health and Athletics
Sharon Bober, Mathematics
Kerin Huber, Natural Science
Mariella Baldo, Noncredit
Brad Steed, Performing and Communication Arts
Charlotte Williams, Social Science
Michael Cranfill, Visual Arts and Media Studies

DIVISION DEANS

Rocco Cifone, Career and Technical Education
Natalie Russell, Humanities
Carrie Starbird, Natural Science
James Arnwine, Fine Arts

STUDENTS

Julie Ngov, ASB Representative

MEMBERS EX-OFFICIO

Armando Duran, Counseling/Student Success Services
Terry Giugni, VP/Asst Superintendent, Instruction
Edward Martinez, Interim Articulation Officer
Katie Datko, Distance Education

RESOURCE EXPERTS

None

In accordance with the Ralph M. Brown Act and SB 751, the minutes of the Curriculum and Instruction Committee of Pasadena City College record the votes of all committee members as follows: (1) Members not present are presumed not to have voted; (2) the names of members of minority or abstaining votes are recorded; (3) all other members are presumed to have voted in the majority.

VISITORS

Kwan Ho Ryan Chen
Dan Cole
Melissa Anderson
Paul Price
Anne Ostrander
Earlie Douglas
Will Hickman
Zachary Matthews
Eric Larson
Maria Fortuna Dean
Seung Yang
Cheryl Banks-Smith
Ed Lowry

I. WELCOME

Self-introductions were made.

II. PUBLIC COMMENT

None.

III. APPROVAL OF MINUTES

Meeting Minutes for the Emergency Meeting, November 10, 2016.

ON MOTION by Michael Cranfill and seconded by Tammy Knott-Silva, the committee voted to approve the minutes of the emergency meeting.

Meeting Minutes for November 10, 2016

ON MOTION by Brad Steed and seconded by Karyn Skiathitis, the committee voted to approve the minutes of meeting 8.

IV. COMMITTEE DISCUSSION (with vote)

ON MOTION by Wendy Lucko and seconded by Jason Huh, the committee voted unanimously to approve the modification of CIS 192.

ON MOTION by Karyn Skiathitis and seconded by Jason Huh, the committee voted unanimously to approve the additions of CIS 041, 042, 045, 061, 063, 065, 142A, 142B, 142C, and 146.

ON MOTION by Katie Datko and seconded by Brad Steed, the committee voted unanimously to approve the modifications of CIS 014, 016, 031, 036, 038, 040, 137, 163, and 164.

ON MOTION by Jason Huh and seconded by Katie Datko, the committee voted unanimously to approve the addition of the CIS – IT Technician and CIS – Help Desk/User Support Certificates of Achievement/Associate of Science Degrees.

ON MOTION by Karyn Skiathitis and seconded by Jason Huh, the committee voted unanimously to approve the addition of the CIS – Microsoft Enterprise Database Administrator Certificate of Achievement/Associate of Science Degree.

ON MOTION by Michael Cranfill and seconded by Jason Huh, the committee voted unanimously to approve the modifications of the CIS – CCNA Routing & Switching Preparation [Formerly known as CIS – CISCO Certified Network Associate (CCNA) Preparation] and CIS – MCSA Windows Server Preparation (Formerly known as CIS – Microsoft Certified Solutions Expert (MCSE): Server Infrastructure Preparation) Occupational Skills Certificates and the CIS – Microsoft Enterprise System Administrator and CIS – System and Network Administrator (Formerly known as CIS – Information Technology Support) Certificates of Achievement.

ON MOTION by Ruoyi Wu and seconded by Jason Huh, the committee voted unanimously to approve the deletions of the CIS – Database Fundamentals Occupational Skills Certificate.

ON MOTION by Karyn Skiathitis and seconded by Natalie Russell, the committee voted to approve the deletions of CIS 140A, 140B, 160A, 160B, 161, 162, 180, 181, 182, and 183.

CIS 030 and 062 will be considered at a later date.

V. COMMITTEE DISCUSSION

Will Hickman, Dan Cole, Zac Matthews, Cheryl Banks-Smith, Maria Fortuna Dean, and Eric Larson discussed upcoming proposals of courses and programs from Performing and Communication Arts.

Jim Arnwine discussed the change of SPCH 121 to SPSV 101. He also talked about renumbering the SPCH 005 courses.

Jeff Hupp discussed the changes to COUN 010 and 012.

VI. ANNOUNCEMENTS

Julie Ngov mentioned the Circle of Support meetings in light of recent political events.

Rocky Cifone reminded the committee about the 4th Annual Million Meals Marathon for pets and people next weekend (November 19).

Janis and Alicia will be going to the Academic Senate on Monday to present the addition to AP 4020, Calculation of Units.

VII. ADJOURNMENT

ON MOTION by Karyn Skiathitis and seconded by Wendy Lucko, the meeting adjourned at 3:59 p.m.

ADDENDUM

DIVISION OF BUSINESS AND COMPUTER TECHNOLOGY

ADDITION – Effective Summer 2017

CIS 041 CCNA R&S: INTRODUCTION TO NETWORKS

3 units

Recommended Preparation: *CIS 011.*

Architecture, structure, functions, components, and models of the Internet and other computer networks. Principles and structure of IP (Internet Protocol) addressing and the fundamentals of Ethernet concepts, media, and operations are introduced to provide a foundation for further study of computer networks. Use of the OSI (Open Systems Interconnection) and TCP/IP (Transmission Control Protocol / Internet Protocol) layered models to examine the nature and roles of protocols and services at the application, network, data link, and physical layers. Preparation for the CompTIA Network+, Cisco CCENT and CCNA Routing and Switching certification exams. **No credit** if taken after CIS 161. Total of 36 hours lecture and 54 hours laboratory.

Transfer Credit: CSU; UC credit under review.

Rationale: Currently CIS 161 CCNA: INTRODUCTION TO NETWORKS covers the topics of C-ID descriptor ITIS 150 COMPUTER NETWORK FUNDAMENTALS, which is based on the Cisco Networking Academy's CCNA Introduction to Networks curriculum. CIS 161 was created before ITIS 150 was approved. This proposal is to create a transferable course which aligns with C-ID descriptor ITIS 150. CIS 041 CCNA R&S: INTRODUCTION TO NETWORKS aligns with C-ID descriptor ITIS 150 and replaces CIS 161.

CIS 042 CCNA R&S: ROUTING AND SWITCHING ESSENTIALS

3 units

Prerequisites: *CIS 041 or CIS 161.*

Configuration and troubleshooting of static routing, Routing Information Protocol (RIP), Open Shortest Path First (OSPF), Virtual LANs (VLANs), Inter-VLAN routing, Access Control Lists (ACLs), Dynamic Host Configuration Protocol (DHCP), and Network Address Translation (NAT). Preparation for the Cisco CCENT and CCNA Routing & Switching certification exams. No credit if taken after CIS 162. Total of 36 hours lecture and 54 hours laboratory.

Transfer Credit: CSU; UC credit under review.

Rationale: Currently CIS 162 CCNA: ROUTING AND SWITCHING ESSENTIALS covers the topics of C-ID descriptor ITIS 151 ROUTING AND SWITCHING ESSENTIALS, which is based on the Cisco Network Academy's CCNA Routing and Switching Essentials curriculum. CIS 162 was created before ITIS 151 was approved. This proposal is to create a transferable course which aligns with C-ID descriptor ITIS 151. CIS 042 CCNA R&S: ROUTING AND SWITCHING ESSENTIALS aligns with C-ID descriptor ITIS 151 and replaces CIS 162.

CIS 045 MCSA: MICROSOFT WINDOWS SYSTEM ADMINISTRATION 1

4 units

Prerequisite: *CIS 011.*

Recommended Preparation: *CIS 010.*

Deploy, configure, maintain, troubleshoot, and support server hardware and server software technologies in a small to enterprise environment, including a cloud computing environment with an emphasis on the administration of Microsoft Windows Server operating systems infrastructure; storage solutions, server virtualization using Hyper-V, failover clustering, Network Load Balancing. ADDS, DNS, DHCP, MDT,

WDS, WSUS, IPAM, remote access, DirectAccess, VPNs, BranchCache, network virtualization, network controller, IPv4 and IPv6, system and data recovery. Preparation for the CompTIA Server+ and Microsoft MCSA Windows Server certification exams. Total of 54 hours lecture and 54 hours laboratory.

Transfer Credit: CSU; UC credit under review.

Rationale: Currently CIS 140A MCSE: MICROSOFT WINDOWS SYSTEM ADMINISTRATION 1 covers the topics of C-ID descriptor ITIS 155 SYSTEMS AND NETWORK ADMINISTRATION. This proposal is to create a transferable course which aligns with C-ID descriptor ITIS 155. CIS 045 MCSA: MICROSOFT WINDOWS SYSTEM ADMINISTRATION 1 aligns with C-ID descriptor ITIS 155 and replaces CIS 140A. Microsoft has released new Microsoft Certified Solutions Associate (MCSA) Windows Server 2016 certification. This proposal also aligns this course with the MCSA: Windows Server 2016 70-740 and 70-741 certification exams, and CompTIA Server+ certification exam.

CIS 061 INTRODUCTION TO INFORMATION SYSTEMS SECURITY

3 units

Prerequisite: *CIS 011 and either CIS 041 or CIS 161.*

Principles of information systems security related to providing, managing, and maintaining secure systems at various organizational levels. Administration of network protocols, analysis of hardware/software processes, communications, applications, policies, and procedures. Principles of cybersecurity, risk management/assessments, reporting, dealing with social challenges and demands, legal and ethical issues, security planning, physical security, and technology. Preparation for the CompTIA Security+ certification exam. Total of 36 hours lecture and 54 hours laboratory.

Transfer Credit: CSU; UC credit under review.

Rationale: To align with C-ID descriptor, ITIS 160 Introduction to Information Systems Security. IT Technician Pathways (ITTP) program has been developed by the Information Communication Technologies & Digital Media sector navigation team and California Community Colleges. ITTP program consists of three certificates: Computer Retail Sales and Support, Help Desk / User Support, and IT Technician. CIS-Help Desk /User Support has been created to align with the Help Desk / User Support certificate. CIS-IT Technician has been created to align with the IT Technician certificate. CIS 061 (ITIS 160) is a required course for the CIS-Help Desk / User Support certificate and CIS-IT Technician certificate.

CIS 063 INTRODUCTION TO CYBERSECURITY: ETHICAL HACKING

3 units

Prerequisite: *CIS 061.*

Concepts, principles, and techniques for attacking and disabling a network within the context of properly securing a network. Emphasis on network attack methodologies and appropriate defenses and countermeasures. Preparation for the EC Council's Certified Ethical Hacking certification exam. Total of 36 hours lecture and 54 hours laboratory.

Transfer Credit: CSU; UC credit under review.

Rationale: To align with C-ID descriptor, ITIS 164 Introduction to Cybersecurity: Ethical Hacking. IT Technician Pathways (ITTP) program has been developed by the Information Communication Technologies & Digital Media sector navigation team and California Community Colleges. ITTP program consists of three certificates: Computer Retail Sales and Support, Help Desk / User Support, and IT Technician. CIS-IT Technician has been created to align with the IT Technician certificate. CIS 063 (ITIS 164) is a required course for the CIS-IT Technician certificate.

CIS 065 COMPUTER FORENSICS FUNDAMENTALS

3 units

Prerequisite: *CIS 061.*

Methods used to properly conduct a computer forensics investigation based on objectives of the International Association of Computer Investigative Specialists (IACIS) certification. Topics covered include an overview of computer forensics as a profession, the computer investigation process, ethics, operating systems boot processes and disk structures, data acquisition and analysis; technical writing, and computer forensics tools. Total of 36 hours lecture and 54 hours laboratory.

Transfer Credit: CSU; UC credit under review.

Rationale: This proposal creates a new transferable course, which aligns with C-ID Descriptor, ITIS 165 Computer Forensics Fundamentals; also, course is part of 2 certificates.

CIS 142A MCSA SQL: MICROSOFT DATABASE DEVELOPMENT

3 units

Recommended Preparation: *CIS 011 and CIS 031.*

Program databases and manage and query data with Microsoft Transact-SQL language. Design, implement, and maintain SQL Databases using Microsoft SQL Server product features and tools. Preparation for the Microsoft Certified Solutions Associate (MCSA) SQL: Database Development certification. Total of 36 hours lecture and 54 hours laboratory.

Rationale: Microsoft has released new Microsoft Certified Solutions Associate (MCSA) SQL 2016 certifications. This proposal is to align this course with the Microsoft Certified Solutions Associate (MCSA) SQL 2016: Database Development certification. This course is a required course for CIS - Microsoft Enterprise Database Administrator certificate.

CIS 142B MCSA SQL: MICROSOFT DATABASE ADMINISTRATION

3 units

Prerequisites: *CIS 045 and CIS 142A.*

Install, configure, and maintain Microsoft SQL Server and databases including managing storage, setting up user accounts, authenticating and authorizing users, securing SQL Server, backing up and restoring databases, performing other administrative tasks, transferring data in and out of SQL Server databases, diagnosing system problems, and ensuring high-availability. Preparation for the Microsoft Certified Solutions Associate (MCSA) SQL: Database Administration certification. Total of 36 hours lecture and 54 hours laboratory.

Rationale: Microsoft has released new Microsoft Certified Solutions Associate (MCSA) SQL 2016 certifications. This proposal is to align this course with the Microsoft Certified Solutions Associate (MCSA) SQL 2016: Database Administration certification. This course is a required course for CIS - Microsoft Enterprise Database Administrator certificate.

CIS 142C MCSA SQL: MICROSOFT BUSINESS INTELLIGENCE DEVELOPMENT

3 units

Prerequisite: *CIS 142A.*

Implementation of a data warehouse platform using Microsoft SQL Server to support Business Intelligence (BI) solutions. Topics include SQL Server Integration Services, SQL Server Data Quality Services and SQL Server Master Data Services. Preparation for the Microsoft Certified Solutions Associate (MCSA) SQL: Business Intelligence certification. Total of 36 hours lecture and 54 hours laboratory.

Rationale: Microsoft has released new Microsoft Certified Solutions Associate (MCSA) SQL 2016 certifications. This proposal is to align this course with the Microsoft Certified Solutions Associate (MCSA) SQL 2016: Business Intelligence certification. This course is a required course for CIS - Microsoft Enterprise Database Administrator certificate.

CIS 146 MCSA: MICROSOFT WINDOWS SYSTEM ADMINISTRATION 2

4 units

Prerequisite: *CIS 045.*

Implementation and administration of Active Directory Domain Services (AD DS), distributed AD DS, AD DS sites and replication, users and groups, Group Policy Objects (GPOs), Azure Active Directory, Active Directory Certificate Services (AD CS), Active Directory Rights Management Services (AD RMS), and Active Directory Federation Services (AD FS). Preparation for the Microsoft MCSA Windows Server certification exam. Total of 54 hours lecture and 54 hours laboratory.

Rationale: Currently, CIS 140A MCSE: MICROSOFT WINDOWS SYSTEM ADMINISTRATION 1 and CIS 140B MCSE: MICROSOFT WINDOWS SYSTEM ADMINISTRATION 2 are aligned with the Microsoft Certified Solutions Engineer (MCSE) Server Infrastructure certification. Due to the release of new Microsoft Certified Solutions Associate (MCSA) Windows Server 2016 certification and C-ID Descriptor ITIS 155 Systems and Network Administration, CIS 045 MCSA: MICROSOFT WINDOWS SYSTEM ADMINISTRATION 1 has been created to align with ITIS 155 and MCSA Windows Server 2016. CIS 045 replaces CIS 140A.

CIS - HELP DESK / USER SUPPORT

23 units

The curriculum prepares students with necessary skills to seek employment in help desk / user support in the field of Information Technology. Instruction includes training in computer hardware, software, Microsoft Windows server operating systems and Microsoft Windows client operating systems in a networked environment with an emphasis on Local Area Networks (LANs) and security.

A Certificate of Achievement is awarded upon completion of all required courses with a grade of C or better.

CIS 010 - Introduction to Information Systems (3)

CIS 011 - Information and Communication Technology Essentials (4)

CIS 012 - Introduction to Programming (3)

CIS 041 - CCNA R&S: Introduction to Networks (3)

CIS 045 - MCSA: Microsoft Windows System Administration 1 (4)

CIS 061 - Introduction to Information Systems Security (3)

CIS 137 - MCSA: Microsoft Windows Client Operating Systems (3)

Rationale: IT Technician Pathways (ITTP) program has been developed by the Information Communication Technologies & Digital Media sector navigation team and California Community Colleges. ITTP program consists of three certificates: COMPUTER RETAIL SALES AND SUPPORT, HELP DESK / USER SUPPORT, and IT TECHNICIAN.

This proposal is to align CIS - HELP DESK / USER SUPPORT with the HELP DESK / USER SUPPORT certificate.

CIS - IT TECHNICIAN

23 units

The curriculum prepares students with necessary skills to seek employment in IT support in the field of Information Technology. Instruction includes training in installing, configuring, maintaining, and troubleshooting Cisco routers and switches; training in computer hardware, software, Microsoft Windows Server operating systems, Microsoft Windows client operating systems, and Linux operating systems in a networked environment with an emphasis on system and network security.

A Certificate of Achievement is awarded upon completion of all required courses with a grade of C or better.

CIS 011 - Information and Communication Technology Essentials (4)

CIS 040 - UNIX/LINUX Administration (3)

CIS 041 - CCNA R&S: Introduction to Networks (3)

CIS 042 - CCNA R&S: Routing and Switching Essentials (3)

CIS 045 - MCSA: Microsoft Windows System Administration 1 (4)

CIS 061 - Introduction to Information Systems Security (3)

CIS 063 - Introduction to Cybersecurity: Ethical Hacking (3)

Recommended Electives

ENGL 100 - Reading and Writing Skills (4)

CIS 065 - Computer Forensics Fundamentals (3)

CIS 163 - CCNA R&S: Scaling Networks (3)

CIS 164 - CCNA R&S: Connecting Networks (3)

CIS 141 - MCSE: Microsoft Exchange Server Administration (4)

CIS 142A - MCSA SQL: Microsoft Database Development (3)

CIS 142B - MCSA SQL: Microsoft Database Administration (3)

CIS 146 - MCSA: Microsoft Windows System Administration 2 (4)

CIS 151 - VMWARE VSPHERE: Install, Configure, Manage (3)

CIS 165 - CCNP R&S ROUTE: Implementing IP Routing (4)

CIS 167 - CCNP R&S Implementing CISCO IP Switched Networks (4)

CIS 168 - CCNP TSHOOT: Troubleshooting and Maintaining IP Networks (4)

CIS 169A - CCNA Security (4)

Rationale: IT Technician Pathways (ITTP) program has been developed by the Information Communication Technologies & Digital Media sector navigation team and California Community Colleges. ITTP program consists of three certificates: COMPUTER RETAIL SALES AND SUPPORT, HELP DESK / USER SUPPORT, and IT TECHNICIAN.

This proposal is to align CIS - IT TECHNICIAN with the IT TECHNICIAN certificate.

CIS - MICROSOFT ENTERPRISE DATABASE ADMINISTRATOR

20 units

This curriculum provides students with necessary skills to seek entry-level employment in the field of Information Technology to administer Microsoft SQL database infrastructure. Instruction includes training in installing, configuring, maintaining, monitoring, and troubleshooting Microsoft SQL Server in a networked environment; develop, implement, and administer SQL databases; implement a SQL data warehouse and develop SQL data models.

A Certificate of Achievement is awarded upon completion of all required courses with a grade of C or better.

CIS 011 - Information and Communication Technology Essentials (4)

CIS 045 - MCSA: Microsoft Windows System Administration 1 (4)

CIS 031 - Introduction to Database Management Systems (3)
CIS 142A - MCSA SQL: Microsoft Database Development (3)
CIS 142B - MCSA SQL: Microsoft Database Administration (3)
CIS 142C - MCSA SQL: Microsoft Business Intelligence Development (3)

Recommended Electives

ENGL 100 - Reading and Writing Skills (4)
CIS 040 - UNIX/LINUX Administration (3)
CIS 041 - CCNA R&S: Introduction to Networks (3)
CIS 042 - CCNA R&S: Routing and Switching Essentials (3)
CIS 163 - CCNA R&S: Scaling Networks (3)
CIS 164 - CCNA R&S: Connecting Networks (3)
CIS 061 - Introduction to Information Systems Security (3)
CIS 063 - Introduction to Cybersecurity: Ethical Hacking (3)
CIS 065 - Computer Forensics Fundamentals (3)
CIS 146 - MCSA: Microsoft Windows System Administration 2 (4)
CIS 151 - VMWARE VSPHERE: Install, Configure, Manage (3)

Rationale: This proposal is to replace the outdated CIS-OPERATIONS certificate and align with Microsoft Certified Solutions Associate (MCSA) SQL 2016 certifications: MCSA: SQL 2016 Database Development, MCSA: SQL 2016 Database Administration, MCSA: SQL 2016 Business Intelligence Development.

MODIFICATION – SPOs, SPOS, content – Effective Summer 2017

CIS 014 C++ PROGRAMMING

3 units

Prerequisite: *CIS 012*.

Foundations of C and C++. Operators, functions, arrays, pointers, structures, unions, classes, C++ data types, polymorphism, inheritance, encapsulation, virtual functions, templates, file processing, control structures, and an emphasis on object oriented program design. Total of 36 hours lecture and 54 hours laboratory.

Transfer Credit: CSU; UC

Rationale: Update prerequisite, discipline, and top code. Currently CIS 012 and CIS 036 are prerequisites for this course. CIS 012 is enough to prepare students for this course. The existing discipline and top code are incorrect.

CIS 016 JAVA PROGRAMMING

3 units

Prerequisite: *CIS 012*.

Java programming language: classes, methods, operators, encapsulation, polymorphism, inheritance, dynamic binding, file processing, control structures, function overloading, use of AWT, creation and use of applets in Internet applications, and an emphasis on object oriented program design. Total of 36 hours lecture and 54 hours laboratory.

Transfer credit: CSU; UC

Rationale: Update prerequisite, discipline, and top code. Currently CIS 012 and CIS 036 are prerequisites for this course. CIS 012 is enough to prepare students for this course. The existing discipline and top code are incorrect.

CIS 031 INTRODUCTION TO DATABASE MANAGEMENT SYSTEMS

3 units

Prerequisite: *CIS 011.*

Introduction to concepts in data and information management centered around the core skills of identifying organizational information requirements, conceptual data modeling techniques, conversion of conceptual data models into relational data models, verification of structural characteristics with normalization techniques, and implementation of a relational database using an industrial-strength database management system. Overview of data quality and data security tasks, database application development, and data and information management technologies that provide decision support capabilities under the broad business intelligence umbrella. Total of 36 hours lecture and 54 hours laboratory.

Transfer Credit: CSU; UC credit under review.

Rationale: This proposal updates the outdated course content and aligns with C-ID descriptor, ITIS 180 Introduction to Database Management Systems. Modification to title, SLOs, SPOs, content, addition of MOIs, MOEs, assignment, modification of catalog description, prereq (from enrollment in or completion of CIS 010 to CIS 011), contact hours (from 54 hours lecture to 36 lec /54 lab), TOP code (from 070100 to 070720).

CIS 036 INTRODUCTION TO VISUAL BASIC

3 units

Prerequisite: *CIS 010.*

Recommended Preparation: *CIS 012.*

Introduction to programming using Visual Basic. Course will cover guidelines to build a simple application; and how to create a graphical user interface (GUI) design utilizing various design tools. Fundamentals will be presented on basic coding elements, data file manipulation, use of variables, constants, selection and branching structures, looping, data validation, sub and function procedures, string manipulation, and creating and accessing arrays. Total of 36 hours lecture and 54 hours laboratory.

Transfer Credit: CSU; UC

Rationale: To update discipline, CareerTech certificate, top code, and prerequisite. Currently, CIS 036 has incorrect discipline and top code. CIS 012 is a prerequisite for CIS 036. Since there are some overlapping topics between CIS 012 and CIS 036, this proposal changes CIS 012 as a recommended preparation for CIS 036.

CIS 038 ADVANCED VISUAL BASIC

3 units

Prerequisite: *CIS 036.*

Advanced techniques in the use of VISUAL BASIC, such as user-friendly menus, internal program documentation and program structure; subroutines, file manipulation, special functions, problem solving and graphics. Total of 36 hours lecture and 54 hours laboratory.

Transfer Credit: CSU; UC

Rationale: To update the incorrect top code and discipline.

CIS 040 UNIX/LINUX ADMINISTRATION

3 units

Recommended Preparation: *CIS 011.*

Installation, configuration, and troubleshooting of Unix/Linux operating systems in a small or enterprise environment: types of installation, device drivers, kernel, process management, scripting, packages, networking services, system services, storage, cloud computing, remote management, updates, monitoring, system and data recovery, authorization and authentication, and advanced management tools. Preparation for

the CompTIA Linux+, LPIC-1: Certified Linux Administrator, and LPIC-2: Certified Linux Engineer certification exams. Total of 36 hours lecture and 54 hours laboratory.

Transfer Credit: CSU

Rationale: This proposal is to update this outdated course and align with the CompTIA Linux+, LPIC-1: Certified Linux Administrator, and LPIC-2: Certified Linux Engineer certification exams. Modification to course title (from Unix Administration), SLOs, SPOs, CCOs, addition of MOIs, MOEs, assignment, modification of catalog description, contact hours (units remain the same).

CIS 137 MCSA: MICROSOFT WINDOWS CLIENT OPERATING SYSTEMS

3 units

Recommended Preparation: *CIS 011*.

Installation, configuration, and troubleshooting of Microsoft Windows client operating systems in a small or enterprise environment: different types of installation, device drivers, networking services, storage, apps, remote management, updates, monitoring, system and data recovery, authorization and authentication, and advanced management tools. Preparation for the Microsoft Certified Solutions Associate (MCSA): Windows client operating systems certification exam. Total of 36 hours lecture and 54 hours laboratory.

Rationale: Microsoft has released Windows 10 and new certification for Windows 10, Microsoft Certified Solutions Associate (MCSA): Windows 10. This proposal updates the course to align with the MCSA: Windows 10 certification. Modification to course title, SLOs, SPOs, CCOs, addition of MOIs, MOEs, assignment, catalog description, change prereq from CIS 010 to CIS 011, change of contact hours; units remain the same.

CIS 163 CCNA R&S: SCALING NETWORKS

3 units

Prerequisite: *CIS 042 or CIS 162*.

Spanning Tree Protocols (STP), VLAN Trunk Protocol (VTP), Wireless LAN, Multi-area Open Shortest Path First (OSPF), Enhanced Interior Gateway Routing Protocol (EIGRP), Wireless LANs, and Cisco IOS software management. Preparation for the CCNA Routing & Switching certification exam. Total of 36 hours lecture and 54 hours laboratory.

Rationale: To update prerequisite, discipline, title, catalog description, and CareerTech certificates. Cisco Systems has changed the certification title from CCNA to CCNA Routing and Switching. This proposal updates the title and catalog description to reflect the change. CCNA (Cisco Certified Network Associate).

CIS 164 CCNA R&S: CONNECTING NETWORKS

3 units

Prerequisite: *CIS 163*.

Point-to-Point Protocol (PPP), Frame Relay, Network Address Translation (NAT), broadband solutions, Virtual Private Networks (VPNs), Syslog, Simple Network Management Protocol (SNMP), Netflow, and network trouble-shooting. Preparation for the CCNA Routing & Switching certification exam. Total of 36 hours lecture and 54 hours laboratory.

Rationale: To update discipline, title, catalog description, and CareerTech certificates. Cisco Systems has changed the certification title from CCNA to CCNA Routing and Switching. This proposal updates the title and catalog description to reflect the change. CCNA (Cisco Certified Network Associate).

CIS 192 INTRODUCTION TO WEB AUTHORING

3 units

Principles of web page design using HTML, XHTML, CSS, and JavaScript. Practical solutions to building multimedia-based Web Pages using emerging technologies. Total of 36 hours lecture and 54 hours laboratory. No credit if taken after GRFX 192.

Rationale: Update course content, update text book, and remove prerequisite (CIS 010). Modifications to SLOs, SPOs, contact hours (to 36 hrs/lec and 54hrs/lab) and catalog description. Addition of MOIs, MOEs, assignment. Change TOP code from 070100 to 070710.

CIS - CCNA ROUTING & SWITCHING PREPARATION

12 units

The Cisco Networking Academy's Cisco Certified Network Associate (CCNA) Routing & Switching curriculum provides students with necessary skills to seek entry-level employment in the field of Information Technology. Instruction includes training in installing, configuring, maintaining, and troubleshooting Cisco routers and switches in a small to enterprise environment. These certificate courses are followed by Cisco Certified Network Professional (CCNP) Routing & Switching, and CCNA Security.

An Occupational Skills Certificate is awarded upon completion of all required courses with a grade of C or better.

CIS 041 - CCNA R&S: Introduction to Networks (3)

CIS 042 - CCNA R&S: Routing and Switching Essentials (3)

CIS 163 - CCNA R&S: Scaling Networks (3)

CIS 164 - CCNA R&S: Connecting Networks (3)

Rationale: Formerly known as CIS - CISCO CERTIFIED NETWORK ASSOCIATE (CCNA) PREPARATION. Cisco Systems has changed the certification title from CCNA to CCNA Routing and Switching. This proposal updates the program to reflect the new change. CIS 041 has been created to align with C-ID descriptor, ITIS 150 Computer Network Fundamentals. CIS 041 replaces CIS 161. CIS 042 has been created to align with C-ID descriptor, ITIS 151 Routing and Switching Essentials. CIS 042 replaces CIS 162.

CIS - MCSA WINDOWS SERVER PREPARATION

12 units

This curriculum provides students with necessary skills to seek entry-level employment in the field of Information Technology to administer Microsoft Windows Server operating system and Microsoft client operating system. Instruction includes training in installing, configuring, maintaining, monitoring, and troubleshooting Microsoft Windows Server operating system networking services and Windows client operating system features in a networked environment.

An Occupational Skills Certificate is awarded upon completion of all required courses with a grade of C or better.

CIS 011 - Information and Communication Technology Essentials (4)

CIS 045 - MCSA: Microsoft Windows System Administration 1 (4)

CIS 146 - MCSA: Microsoft Windows System Administration 2 (4)

Rationale: Formerly known as CIS – MICROSOFT CERTIFIED SOLUTIONS EXPERT (MCSE): SERVER INFRASTRUCTURE PREPARATION. Two of the courses in this certificate were renumbered: CIS 140A was renumbered to CIS 045 to align with C-ID and CIS 140B was renumbered to CIS 146 to eliminate

confusion since CIS 140A is being archived. This proposal updates the program to reflect the changes to the course numbers.

CIS - MICROSOFT ENTERPRISE SYSTEM ADMINISTRATOR

18 units

This Microsoft Enterprise System Administrator program provides students with necessary skills to seek entry to mid-level employment in the field of Information Technology to administer Microsoft Windows systems infrastructure in a small to enterprise environment, including a cloud computing environment. Instruction includes advanced training in planning, deploying, configuring, maintaining, monitoring, and troubleshooting Microsoft Windows Server operating systems' networking services and Windows client operating systems' features in a networked environment with an emphasis on Local Area Network and security.

A certificate of Achievement is awarded upon completion of all required courses with a grade of C or better.

Required Courses

CIS 011 - Information and Communication Technology Essentials (4)
CIS 041 - CCNA R&S: Introduction to Networks (3)
CIS 042 - CCNA R&S: Routing and Switching Essentials (3)
CIS 045 - MCSA: Microsoft Windows System Administration 1 (4)
CIS 146 - MCSA: Microsoft Windows System Administration 2 (4)

Recommended Electives

ENGL 100 - Reading and Writing Skills (4)
CIS 040 - UNIX/LINUX Administration (3)
CIS 061 - Introduction to Information Systems Security (3)
CIS 063 - Introduction to Cybersecurity: Ethical Hacking (3)
CIS 065 - Computer Forensics Fundamentals (3)
CIS 141 - MCSE: Microsoft Exchange Server Administration (4)
CIS 142B - MCSA SQL: Microsoft Database Administration (3)
CIS 151 - VMWARE VSPHERE: Install, Configure, Manage (3)
CIS 163 - CCNA R&S: Scaling Networks (3)
CIS 164 - CCNA R&S: Connecting Networks (3)
CIS 165 - CCNP R&S ROUTE: Implementing IP Routing (4)
CIS 167 - CCNP R&S Implementing CISCO IP Switched Networks (4)
CIS 168 - CCNP TSHOOT: Troubleshooting and Maintaining IP Networks (4)
CIS 169A - CCNA Security (4)

Rationale: This certificate is being modified to reflect the renumbering of nontransferable courses to transfer courses based on alignment with C-ID. The following courses were renumbered: CIS 045 replaces CIS 140A; CIS 041 replaces CIS 161; CIS 042 replaces CIS 162. Additionally, CIS 020 was removed from the certificate and CIS 140B was renumbered 146 since CIS 140A is being archived.

CIS - SYSTEM AND NETWORK ADMINISTRATOR

20 units

This system and network administrator program provides students with necessary skills to seek entry-level employment in the field of Information Technology to administer network infrastructure and Windows systems. Instruction includes training in installing, configuring, maintaining, and troubleshooting network devices (routers, switches, and access points) and end devices (computers, servers, printers, and mobile devices) with an emphasis on Cisco network infrastructure administration.

A Certificate of Achievement is awarded upon completion of all required courses with a grade of C or better.

CIS 011 - Information and Communication Technology Essentials (4)
CIS 041 - CCNA R&S: Introduction to Networks (3)
CIS 042 - CCNA R&S: Routing and Switching Essentials (3)
CIS 163 - CCNA R&S: Scaling Networks (3)
CIS 164 - CCNA R&S: Connecting Networks (3)
CIS 045 - MCSA: Microsoft Windows System Administration 1 (4)

Recommended Electives

ENGL 100 - Reading and Writing Skills (4)
CIS 040 - UNIX/LINUX Administration (3)
CIS 061 - Introduction to Information Systems Security (3)
CIS 063 - Introduction to Cybersecurity: Ethical Hacking (3)
CIS 065 - Computer Forensics Fundamentals (3)
CIS 141 - MCSE: Microsoft Exchange Server Administration (4)
CIS 146 - MCSA: Microsoft Windows System Administration 2 (4)
CIS 151 - VMWARE VSPHERE: Install, Configure, Manage (3)
CIS 165 - CCNP R&S Route: Implementing IP Routing (4)
CIS 167 - CCNP R&S Implementing CISCO IP Switched Networks (4)
CIS 168 - CCNP TSHOOT: Troubleshooting and Maintaining IP Networks (4)
CIS 169A - CCNA Security (4)

Rationale: Formerly known as CIS - INFORMATION TECHNOLOGY SUPPORT. This certificate is being modified to reflect the renumbering of nontransferable courses to transfer courses based on alignment with C-ID. The following courses were renumbered: CIS 045 replaces CIS 140A; CIS 041 replaces CIS 161; CIS 042 replaces CIS 162. Additionally, CIS 020 was removed from the certificate.

DELETIONS – Effective Summer 2017

CIS 140A MCSE: MICROSOFT WINDOWS SYSTEM ADMINISTRATION 1
4 units

Rationale: Currently, CIS 140A MCSE: MICROSOFT WINDOWS SYSTEM ADMINISTRATION 1 and CIS 140B MCSE: MICROSOFT WINDOWS SYSTEM ADMINISTRATION 2 are aligned with the Microsoft Certified Solutions Engineer (MCSE) Server Infrastructure certification. Due to the release of new Microsoft Certified Solutions Associate (MCSA) Windows Server 2016 certification and C-ID Descriptor ITIS 155 Systems and Network Administration, CIS 045 MCSA: MICROSOFT WINDOWS SYSTEM ADMINISTRATION 1 has been created to align with ITIS 155 and MCSA Windows Server 2016. CIS 045 replaces CIS 140A.

CIS 140B MCSE: MICROSOFT WINDOWS SYSTEM ADMINISTRATION 2
4 units

Rationale: Currently, CIS 140A MCSE: MICROSOFT WINDOWS SYSTEM ADMINISTRATION 1 and CIS 140B MCSE: MICROSOFT WINDOWS SYSTEM ADMINISTRATION 2 are aligned with the Microsoft Certified Solutions Engineer (MCSE) Server Infrastructure certification. Due to the release of new Microsoft Certified Solutions Associate (MCSA) Windows Server 2016 certification and C-ID Descriptor ITIS 155 Systems and Network Administration, CIS 045 MCSA: MICROSOFT WINDOWS SYSTEM ADMINISTRATION 1 has been created to align with ITIS 155 and MCSA Windows Server 2016. CIS 045 replaces CIS 140A. Since students have to take CIS 045 and then CIS 140B for the Microsoft certification, to avoid any confusion with the course numbering, CIS 146 MCSA: MICROSOFT WINDOWS SYSTEM ADMINISTRATION 2 has been created to replace CIS 140B.

CIS 160A CCNA: CISCO NETWORK ADMINISTRATION 1

5 units

Rationale: Due to new C-ID courses, this course won't be offered anymore. CIS 041 (ITIS 150) and CIS 042(ITIS 151) replace CIS 160A.

CIS 160B CCNA: CISCO NETWORK ADMINISTRATION 2

5 units

Rationale: Due to new C-ID courses, CIS 041 (ITIS 150) and CIS 042(ITIS 151) are created to replace CIS 160A. For better transition, CIS 163 and CIS 164 were updated to replace CIS 160B.

CIS 161 CCNA: INTRODUCTION TO NETWORKS

3 units

Rationale: Currently CIS 161 CCNA: INTRODUCTION TO NETWORKS covers the topics of C-ID descriptor ITIS 150 COMPUTER NETWORK FUNDAMENTALS. CIS 041 CCNA R&S: INTRODUCTION TO NETWORKS, a transferable course, has been created to align with C-ID descriptor ITIS 150. CIS 041 replaces CIS 161.

CIS 162 CCNA: ROUTING AND SWITCHING ESSENTIALS

3 units

Rationale: Currently CIS 162 CCNA: ROUTING AND SWITCHING ESSENTIALS covers the topics of C-ID descriptor ITIS 151 ROUTING AND SWITCHING ESSENTIALS. CIS 042 CCNA R&S: ROUTING AND SWITCHING ESSENTIALS, a transferable course, has been created to align with C-ID descriptor ITIS 151. CIS 041 replaces CIS 162.

CIS 180 ORACLE DATABASE FUNDAMENTALS

3 units

Rationale: This course won't be offered anymore. It will be replaced with Microsoft Database Administration courses.

CIS 181 ORACLE SQL

3 units

Rationale: This course won't be offered anymore. It will be replaced with Microsoft Database Administration courses.

CIS 182 ORACLE LS/SQL

3 units

Rationale: This course won't be offered anymore. It will be replaced with Microsoft Database Administration courses.

CIS 183 ORACLE FORMS DEVELOPMENT

3 units

Rationale: This course won't be offered anymore. It will be replaced with Microsoft Database Administration courses.

CIS - ORACLE DATABASE FUNDAMENTALS

13 units

Rationale: This Occupational Skills Certificate won't be offered anymore. It will be replaced with Microsoft Database Administrator program.