Instructional Council
Meeting Agenda
3:30 PM-5:00 PM
02/23/2016
Jackson 14

Roxanne Kelly, VPI Kristi Hurt (Sec.) Jason Aase Debbie Hill
Jesse Morrow Martha Joyce ASUCC Public Relations
David Farrington Cheryl Yoder Mandie Pritchard Alysha Barraz0
Paula Usrey Amy Fair Susan Rochester Lisa Fields
Ken Carloni Mary Morris Ian Fisher Sandra Angeli-Gade
Michelle Bergmann Joan Campbell Clay Baumgartner Tamra Samson
Marjan Coester Elizabeth Bastian Jessica Richardson Crystal Sullivan
ASUCC Senator 6

Approval of Instructional Council Minutes-November 24 and Dec 1, 2015

New Programs:
To Be Presented By:

New Courses:
To Be Presented By: John Blackwood
  • CIS 285A
  • CIS 285B
  • CIS 285C
  • CIS 286A

Program Revisions:
To Be Presented By:

Course Revisions:
To be presented by:

New Program Concepts:

Informational:
To Be Presented By: John Blackwood
  • Suspending AAS-Health Informatics

Curriculum Committee Winter Term & Instructional Council Winter Term
Approval of Instructional Council Minutes- M/S/A

New Programs:
To Be Presented By: Clay Baumgartner
- Forest Engineering M/S/A
- Forest Management M/S/A
- Forest Operations M/S/A
- GIS Pathways M/S/A
- Occupational Skills Training Completion Certificate M/S/A, program revision going to use 280, not needed related to 280

New Courses:
To Be Presented By: Jason Aase
- Course Outcomes Guide-for new or revised courses- To be included in the packet-need to post with forms on the web. Starting in the next IC meeting.

To Be Presented By: Ken Carloni
- NR 141 M/S/A, Tree and Scrub Identification
- NR 261 M/S/A, Recreation Resource Management

To Be Presented By: Dee Winn
- MTH 265 M/S/A, Prerequisite of MTH 252

To Be Presented By: Clay Baumgartner
- CIV 290 Not needed, not entered
- GIS 203 M/S/A, Digital Earth and Geospatial Concepts
- OST 290 Not needed, not entered
- SOILS 206 M/S/A, soils lab for soil, 1 credit
- SUR 209 M/S/A, Photogrammetry and Introduction into Remote Sensing, Co-Requisite MTH 112

To Be Presented By: Joel King
Program Revisions:

To Be Presented By: Ken Carloni
- NR-LM M/S/A, Add BOT 203 or 204, add Forest Biology/lab NR 240, Change NR 205 Soil 205-soil science lecture GIS 134 changes to GIS 234 Intro to GIS and GIS 135 is no longer required

To Be Presented By: Roger Kennedy
- AAS in Paramedicine M/S/A, Add new courses soil 205, NR 201, NR 221, NR 240, NR 241, NR 242, NR 243, NR 251, NR 255A, NR 255b, NR 255c, NR 295. BOT 203 or BOT 204 and CH 112 or CH 104 or 221. Credit total is 92

To Be Presented By: Joel King
- Fire Science M/S/A, EMS 175 or ES 101, FRP 201a or ES 113, FRP 201b or ES 113, FRP 201c or ES 113. Delete FRP 163 and FRP 240. Add FRP 159, ES 101 and FRP 135. Remove CH, GS and PH Remove CIS 120

To Be Presented By: Clay Baumgartner
- AAS, Civil and Surveying Technology Not needed, not entered
- Engineer and Drafting Technician Completion Certificate Not needed, not entered
- Drafting Pathways Certificate M/S/A, Remove DRF 116 and add approved drafting electives, remove MTH 111, Total credits 12
- AS Surveying and Geomatics M/S/A, CIV 114 changes to CIV 214

Course Revisions:

To be presented by: Mariah Beck
- MTH 105 M/S/A, Course description change, credits stay the same, can take MTH 95 or 98 as pre-req.

To Be Presented By: Ken Carloni
- BOT 204 M/S/A, Flowering Plants of SW Oregon and n California, was BOT 203a changes to BOT 204 4 credits, 3 lecture hours/3 lab hours
- NR 230 M/S/A, Was NR 240, changes to NR 230
- NR 240 M/S/A, New course

To Be Presented By: Clay Baumgartner
- CIV 214 M/S/A, Was CIV 114
- ENGR 112 M/S/A, Name change to Problem Solving and Technology
- GIS 234 Information Systems M/S/A, was GIS 134, GIS I Introduction to Geographic
- GIS 235 Prerequisite GIS 234 GIS I M/S/A, GIS II Data Analysis and Application, Was GIS 135,
- SUR 162 M/S/A, Change credits from 5 to 4
- SUR 163  M/S/A, Route Surveying, Change credits from 5 to 4
- WQT 227  M/S/A, Change MTH requirement to MTH 052
- WQT 228  M/S/A, Change MTH requirement to MTH 052
- WQT 260  M/S/A, Change MTH requirement to 052
- WQT 261  M/S/A, Change MTH requirement to 052
- WQT 290  Delete this course

To Be Presented By: Roger Kennedy
- EMS 175  M/S/A, Remove Co-Requisite of EMS 151

To Be Presented By: Joel King
- Delete CH, GS, PH  M/S/A No longer required for Fire Investigation
- FRP 123  M/S/A, Change course description
- FRP 163  This course will be deleted
- FRP 230  M/S/A, Change course description
- FRP 240  Delete this course, same content as FRP 230
- FRP 121A  M/S/A, Was FRP 121 changes to FRP 121A, Elementary Fire Science Part I
- FRP 121B  M/S/A, Was FRP 121, changes to FRP 121B, Elementary Fire Science Part 2
- FRP 101  M/S/A, Minor course description change, credits change from 2 to 3
- FRP 122  M/S/A, Minor course description change
- FRP 202  M/S/A, Minor course description change
- FRP 111  M/S/A, Credit change from 2 to 3 credits
- FRP 212  M/S/A, Minor course description and learning outcome changes
- FRP 213  M/S/A, Minor course description and learning outcome changes
- FRP 230  M/S/A, Change course description

To Be Presented By: Mary Stinnett
- MTH 211  M/S/A, Change prerequisite to MTH 95 not MTH 98

New Program Concepts:

Informational:
Ken Carloni-Inclusions to AAOT Tables  Informational summary of all approved changes

Next Curriculum Committee, Winter Term & Instructional Council Winter Term
Instructional Council  
Meeting Agenda  
3:30 PM-5:00 PM  
12/01/2015  
Jackson 14

Roxanne Kelly, VPI  Kristi Hurt (Sec.)  Jason Aase  Debbie Hill  
Jesse Morrow  Martha Joyce  ASUCC Public Relations  
David Farrington  Cheryl Yoder  Mandie Pritchard  Alysha Barraza  
Paula Usrey  Amy Fair  Susan Rochester  Lisa Fields  
Ken Carloni  Mary Morris  Ian Fisher  Sandra Angeli-Gade  
Michelle Bergmann  Joan Campbell  Clay Baumgartner  Tamra Samson  
Marjan Coester  Elizabeth Bastian  Jessica Richardson  Crystal Sullivan  

ASUCC Senator 6

Approval of Instructional Council Minutes-

New Programs:  
To Be Presented By:  

New Courses:  
To Be Presented By: Ian Fisher  

- WLD 160 M/S/A, Prerequisite WLD 101 1 lecture/4 lab hours a week  
  Aluminum Arc Welding and Fabrication I 3 credits  
- WLD 261 M/S/A, Prerequisite WLD 160 1 lecture/4 lab hours a week  
  Aluminum Arc Welding and Fabrication II 3 credits  
- WLD 262 M/S/A, Prerequisite WLD 261 1 lecture/4 lab hours a week  
  Aluminum Arc Welding and Fabrication III 3 credits  

To Be Presented By: Sandra Angeli-Gade  

- HS 108 M/S/A, Replaces course HS 107 3 credits lower division  
  collegiate 33 hours  
  Understanding Behavior and Emotional Issues in Older Populations  

Program Revisions:  
To Be Presented By: Martha Joyce  

- Hospitality and Restaurant Management M/S/A, Approved without the required 3 credits of  
  approved human relations. This change will add SDP 113, Human Relations for Supervisors to  
  the program. Credits increase from 47 to 50  

To Be Presented By: Ian Fisher  

- AAS for Welding M/S/A, Revision is to switch 6 credits of CWE 280 to  
  DRF 114 and DRF 116. Credit total will be 49 OR option to switch out CWE 280 for WLD 160 and  
  WLD 261 and WLD 262, credit total 54  
- Aluminum Only Certificate M/S/A, Includes WLD 160, 261 and 262
To Be Presented By: Clay Baumgartner

- OST Program M/S/A, Correct course number to 280 not 290, 280 is already in the system
- AAS Civil Engineering and Surveying Technology M/S/A, Changes CIV 114 to CIV214, Removes MTH 095
- Completion Certificate Engineering and Drafting M/S/A, Removes DRF 116 and MTH 095. Adds two GIS courses. Aligns with overall changes being made to the AAS degree.

To Be Presented By: Alysha Barraza

- Pathway Certificate Wine Making Assistant M/S/A, Name change and credits for 204, 205, and 206

Course Revisions:
To be presented by: Alysha Barraza

- VE 201 M/S/A, Change contact hours 2 lecture/2 lab/lecture
- VE 203 M/S/A, Name change to Wines of Europe, change course description 3 credits
- VE 204 M/S/A, Name change to Wines of the Southern Hemisphere, change course description 3 credits
- VE 205 M/S/A, Name change to Wines of North America, change from 1 credit to 3 2 lecture/2 lecture/lab hours per week
- VE 210 M/S/A, Remove prerequisite of GS 105 from course requirements
- VE 211 M/S/A, Remove prerequisite of GS 105 from course requirements
- VE 212 M/S/A, Remove prerequisite of GS 105 from course requirements

New Program Concepts:

Informational:

To Be Presented By: Tamra Samson

- Nursing Assistant

Next Curriculum Committee Winter Term & Instructional Council
Course title: Ethical Hacking

Supervisor Signature:

Division CTE  Department CIS  Program AAS-CIS Cybersecurity

Course No CIS 285A Title Ethical Hacking Terms Offered Winter

Credits 4 Lecture hrs/wk 3 Lec/Lab hrs/wk 2 Lab hrs/wk 0 Practicum hrs/wk

Banner Pre-req. CIS 152C Instructor Pre-req. Co-requisites Length (wks) 11

Proposed implementation date Term Fall Year 2017 Grading Option Load Factor 4.4

Catalog Course Description

This course focuses on hacking techniques and technologies, with an emphasis on the ethics and legality of hacking. Course content will include coverage in topics such as scanning, testing, and hacking of systems such as PCs, switches, and web servers.

Students will also learn about the attack process, intrusion detection, intrusion prevention, social engineering, DDoS and other attacks, buffer overflows, and virus creation.

All activities are performed in a safe environment and no actual network is harmed.

VOCAITIONAL TECHNICAL PROPOSALS ONLY  LOWER DIVISION COLLEGIATE PROPOSALS ONLY

☑ Approved by Advisory Committee (Minutes Attached): Entire new CIS degree was approved during Spring 2015 Advisory Committee Meeting and again in Fall 2015 when I emailed the degree to all members of the advisory committee as a refresher.

Is this course on the "LDC Course List" of the State Department
☐ To be ☑ Yes ☐ No
If no, this course has been approved for transfer to: (college or university) (attached syllabus, course description, and outcomes): N/A

☑ Occupational Preparatory (organized degree/cert program)
☐ Occupational Supplementary

NEW COURSE APPROVAL FORM - Page2 of

Support Course: Indicate all programs for which this course will be required.

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Overlap Indicate departments and courses

None

COURSE DEVELOPED BY: John Blackwood DATE: Summer 2015

ATTACH the documents below:

- COMPLETE COURSE OUTLINE
- COMPLETE NEW COURSE JUSTIFICATION FORM
Course No: CIS 285A
Course Credit: 4
Lecture Hrs/wk: 3
Lab Hrs/Wk: 0
Lecture/Lab Hrs/Wk: 2
Practicum Hrs/Wk: 0
Clock Hours: 55
Length of Course: 11 weeks
Banner enforced Prerequisite: CIS 152C or instructor approval
Instructor enforced Prerequisite:
Co-Requisite:
Load Factor: 4.4
Activity Code: 210
CIPS: 52.2101

Course Title: Ethical Hacking
Developed By: John Blackwood
Development Date: Summer 2015
Revision Date: N/A

COURSE DESCRIPTION:
This course focuses on hacking techniques and technologies, with an emphasis on the ethics and legality of hacking. Course content will include coverage in topics such as scanning, testing, and hacking of systems such as PCs, switches, and web servers.

Students will also learn about the attack process, intrusion detection, intrusion prevention, social engineering, DDoS and other attacks, buffer overflows, and virus creation.

All activities are performed in a safe environment and no actual network is harmed.

COURSE OUTCOMES: Upon completion of this course the student should be able to:
• Define the term and concept of an ethical hacker
• Differentiate between ethical and illegal hacking activities
• Explain US and state law applicable to cybercrime
• List and describe the process by which an attacker works to compromise a target
• Define common attack types and their methods, such as enumeration and system hacking
• Implement penetration testing processes to test and discover system vulnerabilities

OUTLINE: [Topics taught by week 1-10.]

Note: this outline is subject to change and depends on current wireless technologies & practice.

Week 1  Ethical Hacking Basics and the Technical Foundations of Hacking
Week 2  Footprinting and Scanning; Enumeration and System Hacking
Week 3  Linux and Automated Assessment Tools
Week 4  Trojans, Backdoors, Sniffers, Session Hijacking, and Denial of Service
Week 5  Web Server Hacking, Web Applications, and Database Attacks
Week 6  Wireless Technologies, Mobile Security, and Attacks
Week 7  IDS, IPS, Firewalls, and Honeypots
Week 8  Buffer Overflows, Viruses, and Worms
Week 9  Cryptographic Attacks and Defenses
Week 10 Physical Security and Social Engineering
New Course title: Ethical Hacking

X________________________________________
Supervisor Signature:

CIS 185A: Ethical Hacking

Student need for course: Skill in hacking mitigation techniques is considered an essential skill in the emerging CIS security job market.

Course Information:

☐AA  ☐AS  ☒AAS  ☐Below 100 level  ☐Elective  ☐Certificate

☐ AAOT (Area of distribution): ______________

Cost of this course:

☐ No additional instructional costs (staff, material, equipment, or facilities) are required. The cost of this course will be covered by (i.e. fewer sections of ________ course):

☒ Additional instructional costs (staff, materials, equipment or facilities) are needed to offer this course. Itemize and estimate: 1 adjunct instructor to teach this or another course: $2500. This is one of three new courses in the new Cybersecurity degree.

Course impact on:

a. Student enrollment in other courses: None

b. Current program: None

Replacement course for: Course Number: Title:

Disposition: Signature Date Recommendation

________________________________________
Curriculum Committee Chair

________________________________________
Vice President of Instruction
Course title: Advanced Network Device Security (CCNA Security)

Supervisor Signature:

Division CTE  Department CIS  Program AAS-CIS and AAS-CIS Cybersecurity

Course No CIS 285B Title Advanced Network Device Security (CCNA Security) Terms Offered Winter

Credits 4 Lecture hrs/wk 3 Lec/Lab hrs/wk 2 Lab hrs/wk 0 Practicum hrs/wk

Banner Pre-req. CIS 155C Instructor Pre-req. Co-requisites .Length (wks) 11

Proposed implementation date Term Fall Year 2017 Grading Option Load Factor 4.4

Catalog Course Description

This course is a Cisco Networking Academy course, mapped to the Cisco Certified Network Administrator Security (CCNA Security) industry credential. This course will expose students to the array of security features that can be implemented using Cisco switches and routers.

Instruction will include, but is not limited to, authentication methods, common network attacks and how to safeguard against them, communication security (remote access, e-mail, the web, directory and file transfer, and wireless data), infrastructure security (network devices and media), and the proper use of perimeter topologies such as demilitarized zones (DMZs), Extranets, and Intranets to establish network security.

Cryptography basics are also introduced, including the differences between asymmetric and symmetric algorithms, and the different types of Public Key Infrastructure (PKI) certificates and their usage. Operational/organizational security is discussed as it relates to physical security, and disaster recovery.
Approved by Advisory Committee (Minutes Attached): Entire new CIS degree with emphasis in cybersecurity was approved during Spring 2015 Advisory Committee Meeting.

Is this course on the "LDC Course List" of the State Department

☐ To be ☑ Yes ☐ No

If no, this course has been approved for transfer to: (college or university) (attached syllabus, course description, and outcomes): N/A

☑ Occupational Preparatory (organized degree/cert program)

☐ Occupational Supplementary

Support Course: Indicate all programs for which this course will be required.

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Overlap Indicate departments and courses

None

COURSE DEVELOPED BY: John Blackwood DATE: Summer 2015

ATTACH the documents below:

- COMPLETE COURSE OUTLINE
- COMPLETE NEW COURSE JUSTIFICATION FORM
COURSE DESCRIPTION:

This course is a Cisco Networking Academy course, mapped to the Cisco Certified Network Administrator Security (CCNA Security) industry credential. This course will expose students to the array of security features that can be implemented using Cisco switches and routers.

Instruction will include, but is not limited to, authentication methods, common network attacks and how to safeguard against them, communication security (remote access, e-mail, the web, directory and file transfer, and wireless data), infrastructure security (network devices and
media), and the proper use of perimeter topologies such as demilitarized zones (DMZs), Extranets, and Intranets to establish network security.

Cryptography basics are also introduced, including the differences between asymmetric and symmetric algorithms, and the different types of Public Key Infrastructure (PKI) certificates and their usage. Operational/organizational security is discussed as it relates to physical security, and disaster recovery.

COURSE OUTCOMES: Upon completion of this course the student should be able to:

- Describe the security threats facing modern network infrastructures
- Secure network device access using common router and switch security features
- Implement Authentication, Authorization, and Accounting (AAA) on network devices
- Mitigate threats to networks using Access Control Lists (ACLs)
- Implement secure network management and reporting
- Mitigate common Layer 2 attacks
- Implement the Cisco IOS firewall feature set
- Implement the Cisco IOS Intrusion prevention system (IPS) feature set
- Implement site-to-site Internet Protocol Security (IPsec) virtual private networks (VPNs)
- Administer effective security policies

REQUIRED TEXT/MATERIALS: To be determined prior to when course is taught. The Cisco Networking Academy provides most of the instruction material required for this course at no cost to the student.
OUTLINE: [Topics taught by week 1-10.]

Note: this outline is subject to change and depends on current technologies & practice.

Week 1  Modern Network Security Threats
Week 2  Securing Network Devices
Week 3  Authentication, Authorization, and Accounting (AAA)
Week 4  Implementing Firewall Technologies; Implementing Intrusion Prevention
Week 5  Securing the LAN
Week 6  Cryptographic Systems
Week 7  Implementing VPNs
Week 8  Implementing the Cisco ASA
Week 9  Advanced Cisco ASA Concepts
Week 10 Managing a Secure Network
New Course title: Advanced Network Device Security (CCNA Security)

X________________________________________

Supervisor Signature:

CIS 185B: Advanced Network Device Security (CCNA Security)

Student need for course: Skill in device security techniques is considered an essential skill in the emerging CIS security job market.

Course Information:

☐ AA ☑AS ☑AAS ☐ Below 100 level ☐ Elective ☐ Certificate

☐ AAOT (Area of distribution): _______________

Cost of this course:

☒ No additional instructional costs (staff, material, equipment, or facilities) are required. The cost of this course will be covered by (i.e. fewer sections of ________ course): This course replaces CIS 289M - Microsoft Windows Server Administration III (same ILC) because that course is not needed to fully cover Server concepts.

☐ Additional instructional costs (staff, materials, equipment or facilities) are needed to offer this course. Itemize and estimate:

Course impact on:

a. Student enrollment in other courses: None

b. Current program: None

Replacement course for: Course Number: CIS 289M, course title: Microsoft Windows Server Administration III

Disposition: Signature Date Recommendation

________________________________________

Curriculum Committee Chair Vice President of Instruction
Course title: Cloud Services Technologies

Supervisor Signature:

Division CTE  Department CIS  Program AAS-CIS Cybersecurity

Course No CIS 285C Title Cloud Services Technologies Terms Offered Spring

Credits 3 Lecture hrs/wk 3 Lec/Lab hrs/wk 0 Lab hrs/wk 0 Practicum hrs/wk

Banner Pre-req. CIS 288M Instructor Pre-req. Co-requisites Length (wks) 11

Proposed implementation date Term Fall Year 2017 Grading Option Load Factor 3.0

Catalog Course Description

This course introduces students to the technologies and theory of Infrastructure as a Service (IaaS) using common cloud providers such as Microsoft Windows Azure and/or Amazon Web Services (AWS).

Students will learn cloud computing, cloud storage and content delivery, cloud database types and uses, cloud networking (private and hybrid uses), cloud security, and the basics of cloud analytics.

VOCATIONAL TECHNICAL PROPOSALS ONLY  LOWER DIVISION COLLEGIATE PROPOSALS ONLY

☐ Approved by Advisory Committee (Minutes Attached): Entire new CIS degree with emphasis in cybersecurity was approved during Spring 2015 Advisory Committee Meeting and again in Fall 2015 when I emailed the degree to all members of the advisory committee as a refresher.

Is this course on the "LDC Course List" of the State Department

☐ To be ☒ Yes ☐ No
If no, this course has been approved for transfer to: (college or university) (attached syllabus, course description, and outcomes): N/A

☑ Occupational Preparatory (organized degree/cert program)
☐ Occupational Supplementary

NEW COURSE APPROVAL FORM - Page 2 of

Support Course: Indicate all programs for which this course will be required.

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Overlap: Indicate departments and courses

None

COURSE DEVELOPED BY: John Blackwood DATE: Summer 2015

ATTACH the documents below:

- COMPLETE COURSE OUTLINE
- COMPLETE NEW COURSE JUSTIFICATION FORM
COURSE OUTLINE – Page 1 of

Course No: CIS 285C
Course Credit: 3
Lecture Hrs/wk: 3
Lab Hrs/Wk: 0
Lecture/Lab Hrs/Wk: 0
Practicum Hrs/Wk: 0
Clock Hours: 33
Length of Course 11 weeks
Banner enforced Prerequisite: CIS 288M or instructor approval
Instructor enforced Prerequisite:
Co-Requisite:
Load Factor: 3.0
Activity Code: 210
CIPS: 52.2101

Course Title: Cloud Services Technologies
Developed By: John Blackwood
Development Date: Summer 2015
Revision Date: N/A

COURSE DESCRIPTION:
This course introduces students to the technologies and theory of Infrastructure as a Service (IaaS) using common cloud providers such as Microsoft Windows Azure and/or Amazon Web Services (AWS).

Students will learn cloud computing, cloud storage and content delivery, cloud database types and uses, cloud networking (private and hybrid uses), cloud security, cloud deployment and management; and Enterprise IT applications.

COURSE OUTCOMES: Upon completion of this course the student should be able to:
• Design and implement websites
• Create and manage virtual machines
• Design and implement cloud services
• Design and implement a storage strategy
• Manage application and network services

REQUIRED TEXT/MATERIALS: To be determined prior to when course is taught. Texts are constantly changing in this field and this course will not be offered to students until Spring 2018 act the earliest.
OUTLINE: [Topics taught by week 1-10.]

Note: this outline is subject to change and depends on current technologies & practice.

Week 1  Introduction to cloud technologies & new student account setup
Week 2  Cloud websites
Week 3  Virtual machines in the cloud
Week 4  Virtual machines in the cloud (cont’d)
Week 5  Introduction to cloud services
Week 6  Cloud storage options and implementation
Week 7  Cloud applications and networking services
Week 8  Active Directory in the Cloud
Week 9  Active Directory in the Cloud (cont’d)
Week 10 Virtual networks and networking
New Course title: Cloud Services Technologies

X________________________________________

Supervisor Signature:

CIS 285C: Cloud Services Technologies

Student need for course: Skill in cloud (IaaS) techniques is considered an essential skill in the emerging CIS security job market.

Course Information:

☐ AA  ☐ AS  ☑ AAS  ☐ Below 100 level  ☐ Elective  ☐ Certificate

☐ AAOT (Area of distribution): ________________

Cost of this course:

☐ No additional instructional costs (staff, material, equipment, or facilities) are required.

☐ Additional instructional costs (staff, materials, equipment or facilities) are needed to offer this course. Itemize and estimate: One adjunct instructor to teach this or another course: $2500. This is one of three new courses in the new Cybersecurity degree.

Course impact on:

a. Student enrollment in other courses: None

b. Current program: None

Replacement course for: Course Number: N/A  Title: N/A

Disposition: Signature Date Recommendation

________________________________________

Curriculum Committee Chair  Vice President of Instruction
Course title: Virtualization Technologies

X______________________________

Supervisor Signature:

Division CTE  Department CIS  Program AAS-CIS Cybersecurity

Course No CIS 286A Title Virtualization Technologies Terms Offered Spring

Credits 3 Lecture hrs/wk 3 Lec/Lab hrs/wk 0 Lab hrs/wk 0 Practicum hrs/wk

Banner Pre-req. CIS 288M Instructor Pre-req. Co-requisites .Length (wks) 11

Proposed implementation date Term Fall Year 2017 Grading Option Load Factor 3.0

Catalog Course Description

This course introduces students to the technologies and theory of operating system virtualization.

This course is designed for system administrators, system engineers, operators responsible for ESXi and vCenter server, and VMware IT Academy instructors. Students will learn installation, configuration, and management of VMware vSphere, which consists of VMware ESXi and VMware vCenter Server. This course is based on the current versions of ESXi and vCenter Server.

VOCATIONAL TECHNICAL PROPOSALS ONLY  LOWER DIVISION COLLEGIATE PROPOSALS ONLY

☑ Approved by Advisory Committee (Minutes Attached): Entire new CIS degree with emphasis in cybersecurity was approved during Spring 2015 Advisory Committee Meeting and again in Fall 2015 when I emailed the degree to all members of the advisory committee as a refresher.

Is this course on the "LDC Course List" of the State Department

☐ To be ☑ Yes ☐ No
If no, this course has been approved for transfer to: (college or university) (attached syllabus, course description, and outcomes): N/A

☑ Occupational Preparatory (organized degree/cert program)
☐ Occupational Supplementary

### NEW COURSE APPROVAL FORM - Page2 of

**Support Course:** Indicate all programs for which this course will be required.

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**Overlap**

Indicate departments and courses

None

COURSE DEVELOPED BY: John Blackwood DATE: **Summer 2015**

**ATTACH the documents below:**

- COMPLETE COURSE OUTLINE
- COMPLETE NEW COURSE JUSTIFICATION FORM
COURSE OUTLINE – Page 1 of

Course No: CIS 286A
Course Credit: 3
Lecture Hrs/wk: 3
Lab Hrs/Wk: 0
Lecture/Lab Hrs/Wk: 0
Practicum Hrs/Wk: 0
Clock Hours: 33
Length of Course: 11 weeks
Banner enforced Prerequisite: CIS 288M or instructor approval

Instructor enforced Prerequisite:

Co-Requisite:

Load Factor: 3.0
Activity Code: 210
CIPS: 52.2101

Course Title: Virtualization Technologies

Developed By: John Blackwood
Development Date: Summer 2015
Revision Date: N/A

COURSE DESCRIPTION:

This course introduces students to the technologies and theory of operating system virtualization.

This course is designed for system administrators, system engineers, operators responsible for creating and implementing virtualization. Students will learn installation, configuration, and management of Hyper-V and Hyper-V Manager; and/or VMware vSphere, which consists of VMware ESXi and VMware vCenter Server. This course is based on the current versions of Hyper-V, ESXi, and vCenter Server.

Technologies covered will vary by term, depending on industry trends.
COURSE OUTCOMES: Upon completion of this course the student should be able to:

- Describe OS virtualization and its uses
- Create a virtualized topology that supports a complete virtualization solution
- Deploy a virtualized environment
- Manage virtual machines
- Deploy and manage thin-provisioned virtual machines
- Migrate running virtual machines from one hypervisor to another
- Manage access control to a hypervisor
- Monitor resource usage
- Manage high availability, fault tolerance, and data protection using common technologies and practices
- Apply a patch to a hypervisor

REQUIRED TEXT/MATERIALS: To be determined prior to when course is taught. Texts are constantly changing in this field and this course will not be offered to students until Spring 2018 at the earliest.
OUTLINE: [Topics taught by week 1-10.]

Note: this outline is subject to change and depends on current technologies & practice.

Week 1  Introduction to virtualization technologies & new student setup
Week 2  The virtualized data center
Week 3  Create virtual machines (VMs)
Week 4  Configure and manage VMs
Week 5  Configure and manage virtual storage
Week 6  VM management (cloning and migrations)
Week 7  Access and authentication control to hypervisors
Week 8  Resource management and monitoring
Week 9  High availability, scalability, and fault tolerance
Week 10 Patch management
New Course title: Virtualization Technologies

Supervisor Signature:

CIS 286A: Virtualization Technologies

Student need for course: Skill in virtualization technologies is considered an essential skill in the emerging CIS security job market.

Course Information:

☐ AA  ☐ AS  ☑ AAS  ☐ Below 100 level  ☐ Elective  ☐ Certificate

☐ AAOT (Area of distribution): ____________

Cost of this course:

☐ No additional instructional costs (staff, material, equipment, or facilities) are required. The cost of this course will be covered by (i.e. fewer sections of ________ course):

☒ Additional instructional costs (staff, materials, equipment or facilities) are needed to offer this course. Itemize and estimate: One adjunct instructor to teach this or another course: $2500. This is one of three new courses in the new Cybersecurity degree.

Course impact on:

a. Student enrollment in other courses: None

b. Current program: None

Replacement course for: Course Number: N/A  Title: N/A

Disposition: Signature Date Recommendation

______________________________  __________________________  _____________  __________________________
Curriculum Committee Chair  Vice President of Instruction
January 15, 2016

To Whom It May Concern:

I recommend suspending the AAS – Health Informatics (HI) degree effective Fall 2016.

The rationale behind this decision is based on a few current events and the HI job market in Oregon. When the HI degree was created in 2010-2011, Mercy Medical Center (MMC) maintained an IT staff in Roseburg, which managed its IT and electronic medical record system. However, MMC outsourced its IT functions out of state and no longer maintains an IT department.

Further, just this month we learned that Lane Community College, with whom we have an articulation agreement for four of our required courses, will no longer be offering these courses after this school year concludes. Our enrollment is too low to offer these courses on our campus.

Additionally, even PCC has had difficulty finding adequate employment for its graduates, even though they reside in the state’s largest area of employment for HI.

Lastly, we negotiated a new transfer degree with Oregon Tech in 2015, the AS – Health Informatics option, which we intend to renegotiate annually. Students possessiong the 4-year degree stand a much better chance at obtaining gainful employment at graduation and have the option to continue their education at OHSU.

Best regards,

John Blackwood, MS
Associate Professor
Computer Information Systems