CSIT 200: INFORMATION SECURITY FUNDAMENTALS

1. Course Information

Subject
CSIT - Computer Science/ Information Technology

Course Number
200

School
Science, Technology, Engineering, Mathematics

Course Title
Information Security Fundamentals

2. Hours

Semester Hours
3.00000

Lecture
3

Lab
0

Practicum
0

3. Catalog Description

For display in the online catalog
This course equips students with fundamental concepts and principles in the area of information security. The course introduces the relationships between and concepts involved in information assets, confidentiality, data integrity and availability, security threats, and information damage. This course analyzes access control, security mechanism, cryptography, vulnerability, and risk management. Key security areas (computer security and network security) will be addressed as integral parts of the complete cyber security umbrella.

4. Requisites

Prerequisites
(1)CSIT 165, and (2) CSIT 184 or CSIT 185

Corequisites
None

5. Course Type

Course Fee Code
3

Course Type for Perkins Reporting
vocational (approved for Perkins funding)

6. Justification

Describe the need for this course
This course provides the required training in Cyber Security programs of study and helps students prepare for the basics of Information Security.

7. General Education

Will the college submit this course to the statewide General Education Coordinating Committee for approval as a course, which satisfies a general education requirement?
No

If the course does not satisfy a general education requirement, which of the following does it satisfy:
Program-specific requirement

8. Consistency with the Vision and Mission Statements, the Academic Master Plan, and the strategic initiatives of the College

Please describe how this course is consistent with Ocean County College's current Vision Statement, Mission Statement, Academic Master Plan, and the strategic initiatives of the College:

	Add item
1	Demonstrating the college's commitment to offer comprehensive educational programs that develop intentional learners of all ages. (Mission Statement)
2	Seeking to ensure that students will thrive in an increasingly diverse and complex world. (Vision Statement)
3	Preparing students for successful transfer to other educational institutions and/or for entrance into the workforce. (Academic Master Plan)
4	Seeking to empower students through the mastery of intellectual and Practical Skills. (Academic Master Plan)
5	Challenging students to transfer information into knowledge and knowledge into action. (Academic Master Plan)

9. Related Courses at Other Institutions

Comparable Courses at NJ Community Colleges
Institution
Raritan Valley CC

Course Title
Information Security Fundamentals

Course Number
CISY 229

Number of Credits
3

Institution
County College of Morris

Course Title
Foundations of Information Security

Course Number
CMP 120

Number of Credits
3

Institution
Middlesex County College

Course Title
Introduction to Information Systems Security

Course Number
CSC 116

Number of Credits

3

Institution

Atlantic Cape CC

Course Title

Issues in Computer Security

Course Number

CISM 222

Number of Credits

3

Transferability of Course

Georgian Court University

Course Code, Title, and Credits	Transfer Catagory	If non-transferable; select status
EC (Elective Credit) – No title given; 3 cr.	Elective	

Kean University

Course Code, Title, and Credits	Transfer Catagory	If non-transferable; select status
Tech X 2000 (Tech Major – guided elective); 3 cr.	CS Elective	

Monmouth University

Course Code, Title, and Credits	Transfer Catagory	If non-transferable; select status
CS000 (CS Elective) – 3 cr.	CS Elective	

Rowan University

Course Code, Title, and Credits	Transfer Catagory	If non-transferable; select status
CS01211 (Principles of Info. Security); 3 cr.	CS Elective	

Rutgers - New Brunswick, Mason Gross School of the Arts

Course Code, Title, and Credits	Transfer Catagory	If non-transferable; select status
		Will not transfer

Stockton University

Course Code, Title, and Credits	Transfer Catagory	If non-transferable; select status
CSISEC (CS & Info Systems Elective) – 3 cr.	CS and Info Systems Elective	

If not transferable to any institution, explain:

Will not transfer to most Rutgers's Schools

10. Course Learning Outcomes

Learning Outcomes

	Students who successfully complete this course will be able to:
CLO1	Describe information security topics, terms, and concepts
CLO2	Apply the Principles of Least Privilege, Confidentiality, Integrity, and Availability.
CLO3	Explain password security, encryption, phishing, browser security, etc. and identify SPAM email messages
CLO4	Demonstrate knowledge of basic cryptographic principles, processes, procedures, and applications

CLO5	Identify computer network basics and the meaning of TCP, IP, UDP, MAC, ARP, NAT, ICMP, DNS, etc. and their roles in network security.
CLO6	Utilize built-in Windows tools to observe and change network settings
CLO7	Discuss various security technologies, including anti-malware, firewalls, and intrusion detection systems.
CLO8	Describe physical security issues and how they support cybersecurity
CLO9	Demonstrate knowledge regarding incident response, business continuity, and disaster recover planning

11. Topical Outline

(include as many themes/skills as needed)

	Major Themes/ Skills	Assignments (Recommended but not limited to)	Assessments (Recommended but not limited to)	Course Learning Outcome(s)
TO1	Information Security and Risk Management Content: 1) Information Security Principles 2) Information Security Management 3) Risk management 4) Information Classification 5) Professional ethics	Reading Class discussion	Quiz Exam	CLO1,CLO2
TO2	Access Controls Content: 1) Identification and Authentication 2) Access Control Types 3) Access Control Threats 4) Access Control Technologies	Reading Research	Quiz Exam	CLO3
TO3	Cryptography Content: 1) Applications and uses of cryptography 2) Encryption methodologies 3) Management of cryptography 4) Key management	Reading Research	Quiz Exam	CLO4
TO4	Security Architecture and Design Content: 1) Security models 2) Information systems evaluation models 3) Computer hardware architecture 4) Computer software: operating systems, applications, and tools 5) Security threats and countermeasures	Reading Research	Quiz Exam	CLO5 - CLO9
TO5	Network Security Content: 1) Wired and wireless network technologies 2) Network topologies and cabling 3) The OSI and TCP/IP network models 4) TCP/IP networks, protocols, addressing, devices, routing, authentication, access control, tunneling, and services 5) Network based threats, attacks, vulnerabilities, and countermeasures	Reading Research	Quiz Exam	CLO5,CLO6

TO6	Application Security Content: 1) Types of applications 2) Application models and technologies 3) Application threats and countermeasures 4) Security in the software development life cycle 5) Application security controls 6) Databases and data warehouses	Reading Project Research	Exam Presentation	CLO6,CLO7
TO7	Operations Security Content: 1) Applying security concepts to computer and business operations 2) Records management security controls 3) Backups 4) Anti-virus software and other anti-malware controls 5) Remote access 6) Resource protection 7) Incident management 8) High availability architectures 9) Vulnerability management 10) Change management and configuration management	Reading Project Research	Exam Presentation	CLO6 - CLO8
TO8	Physical and Environmental Security Content: 1) Site access controls 2) Identifying and avoiding threats and risks associated with a building site 3) Equipment protection from theft and damage 4) Environmental controls including HVAC and backup power	Reading Class discussion Research	Quiz Exam	CLO8
TO9	Business Continuity and Disaster Recovery Planning Content: 1) Business continuity and disaster recovery planning 2) Testing business continuity and disaster recovery plans 3) Training users 4) Maintaining business continuity and disaster recovery plans	Reading Class discussion Research	Quiz Exam	CLO9

12. Methods of Instruction

In the structuring of this course, what major methods of instruction will be utilized?

o Class lecture, presentations, discussions, lab assignments/exercises, case studies and projects.

13. General Education Goals Addressed by this Course (this section is to fulfill state requirements)

Information

Communication-Written and Oral

Yes

Related Course Learning Outcome
CLO1-CLO9

Related Outline Component
TO1-TO9

Assessment of General Education Goal (Recommended but not limited to)
Exam & Project presentation

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Technological Competency
Yes

Related Course Learning Outcome
CLO1-CLO9

Related Outline Component
TO1-TO9

Assessment of General Education Goal (Recommended but not limited to)
Exam & Project presentation

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Information Literacy
Yes

Related Course Learning Outcome
CLO1-CLO9

Related Outline Component
TO1-TO9

Assessment of General Education Goal (Recommended but not limited to)
Exam & Project presentation

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Independent/Critical Thinking
Yes

Related Course Learning Outcome
CLO1-CLO9

Related Outline Component
TO1-TO9

Assessment of General Education Goal (Recommended but not limited to)
Exam & Project presentation

14. Needs

Instructional Materials (text etc.):
Text: Appropriate textbook(s) will be selected. Please contact the department for current adoptions.

15. Grade Determinants

The final grade in the course will be the cumulative grade based on the following letter grades or their numerical equivalents for the course assignments and examinations

A: Excellent

B+: Very Good

B: Good

C+: Above Average

C: Average

D: Below Average

F: Failure

I: Incomplete

R: Audit

For more detailed information on the Ocean County College grading system, please see Policy #5154.

16. Board Approval

History of Board approval dates
Board of Trustees Approval Date: November 4, 2013
Board of Trustees Approval Date: March 29, 2018