CSIT 145: COMPUTING FUNDAMENTALS

1. Course Information

Subject
CSIT - Computer Science/ Information Technology

Course Number
145

School
Science, Technology, Engineering, Mathematics

Course Title
Computing Fundamentals

2. Hours

Semester Hours
3

Lecture
3

Lab
0

Practicum
0

3. Catalog Description

For display in the online catalog
This course provides a deep understanding of hardware, operating systems, software troubleshooting, basic networking knowledge basic security concepts, mobile devices, virtualization Type 1-2, and cloud computing. Designed around the CompTIA A+ certification, this course will discuss all of the hardware components of computers, such as Central Processing Units (CPUs), Random Access Memory (RAM), Motherboards, Power Supplies, and Mass storage devices consisting of Solid-State Drives (SSDs) and Hard Drives.

4. Requisites

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
Students in the cybersecurity field will benefit from understanding and knowing how to utilize current computing fundamentals to be successful in their academic and professional careers.

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:
Elective

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 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
Bergen CC

Course Title
Introduction to Information Technology

Course Number
INF-101

Number of Credits
3

Institution
Salem CC

Course Title
Introduction to Computer Hardware and Operation

Course Number
CSC131

Number of Credits
3

Institution
Mercer County CC

Course Title
Computer Concepts/Applications

Course Number
IST-101

Number of Credits
3

Institution
Passaic County CC

Course Title
Information Technology Fundamentals and Applications

Course Number
CIS 107

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, 3	Elective	

Kean University

Course Code, Title, and Credits	Transfer Catagory	If non-transferable; select status
CPS1031 Intro to Computers, 4	Required	

Monmouth University

Course Code, Title, and Credits	Transfer Catagory	If non-transferable; select status
CS001 100 Level Computer Science Elective, 3	Computer Science Elective	

Rowan University

Course Code, Title, and Credits	Transfer Catagory	If non-transferable; select status
CST 06111, Computer Hardware and Operations, 3	Computer Science Elective	

Rutgers - New Brunswick, Mason Gross School of the Arts

Course Code, Title, and Credits	Transfer Catagory	If non-transferable; select status
01:198:110, Introduction to Computers and Their Application, 3	Computer Science Elective	Unable to determine status

Stockton University

Course Code, Title, and Credits	Transfer Catagory	If non-transferable; select status
CSISEC computer Science & Info Systems Elective, 4	Elective	

10. Course Learning Outcomes

Learning Outcomes

	Students who successfully complete this course will be able to:
CLO1	Assemble components based on customer requirements
CLO2	Install, configure, and maintain PCs, mobile devices, and software for end users.
CLO3	Recognize the basics of networking and security forensics.
CLO4	Properly and safely diagnose, resolve, and document common hardware and software issues.
CLO5	Apply troubleshooting skills.
CLO6	Provide appropriate customer support.
CLO7	Recognize the basics of scripting, virtualization, desktop imaging, and deployment.

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	Computer Hardware 1. Installing Motherboards and Connectors 2. Installing System Devices 3. Troubleshooting PC Hardware 4. Comparing Local Networking Hardware	Readings Labs Videos	Quiz Exam	CLO1, CLO4
TO2	Installing, Configuring, and Maintaining Operating Systems, Mobile Devices, and Applications (Computer Software) 8. Supporting Mobile Devices 10. Configuring Windows 11. Managing Windows 12. Identifying OS Types and Features 13. Supporting Windows 15. Managing Linux and macOS 18. Supporting Mobile Software	Readings Labs Videos	Quiz Exam	CLO2, CLO4
TO3	Fundamental Networking and Security Techniques 5. Configuring Network Addressing and Internet Connections 6. Supporting Network Services 14. Managing Windows Networking 16. Configuring SOHO Network Security 17. Managing Security Settings	Readings Labs Videos	Quiz Exam	CLO3, CLO4
TO4	Scripting, Troubleshooting, and Ticketing 19. Using Support and Scripting Tools 20. Implementing Operational Procedures	Readings Labs Videos	Quiz Exam	CLO4, CLO5, CLO6, CLO7
TO5	Supporting Virtualization and Printers 7. Summarizing Virtualization and Cloud Concepts 9. Supporting Print Devices	Readings Labs Videos	Quiz Exam	CLO1, CLO4, CLO5

12. Methods of Instruction

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

a. Class Lecture
b. Discussion
c. Demonstrations
d. Labs
e. Online presentations, online activities, and assessments.

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

Information

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Technological Competency
Yes

Related Course Learning Outcome
CL01-CL07

Related Outline Component
T01-T05

Assessment of General Education Goal (Recommended but not limited to)
N/A.

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Information Literacy
Yes

Related Course Learning Outcome
CL01-CL07

Related Outline Component
T01-T05

Assessment of General Education Goal (Recommended but not limited to)
N/A.

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Independent/Critical Thinking
Yes

Related Course Learning Outcome
CL01-CL07

Related Outline Component
T01-T05

Assessment of General Education Goal (Recommended but not limited to)
N/A.

14. Needs

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

Technology Needs:
Please contact the department for current adoptions.

Human Resource Needs (Presently Employed vs. New Faculty):
Please contact the department for current adoptions.

Facility Needs:
Please contact the department for current adoptions.

Library needs:
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: March 17, 2023