Course Number and Title: CIS 150 - Intro to Object-Oriented Programming

Campus Location:
Georgetown, Dover, Wilmington

Effective Date:
2018-51

Prerequisite:
CIS 120, SSC 100 or concurrent

Co-Requisites:
none

Course Credits and Hours:
3.00 credits
2.00 lecture hours/week
3.00 lab hours/week

Course Description:
This course introduces object-oriented programming and the construction and manipulation of classes and objects. Object-oriented programming concepts, algorithms, techniques, and libraries are also reviewed.

Required Text(s):
Obtain current textbook information by viewing the campus bookstore - https://www.dtcc.edu/bookstores online or visit a campus bookstore. Check your course schedule for the course number and section.

Additional Materials:
None

Schedule Type:
Classroom Course
Online Course

Disclaimer:
None

Core Course Performance Objectives (CCPOs):

1. Explain software concepts of object-oriented programming, data abstraction, and software design principles. (CCC 1, 2, 4, 6; PGC 2)
2. Examine and configure the features of an integrated development environment (IDE) and debugging tools. (CCC 1, 2; PGC 1, 2)
3. Develop computer programs using pre-defined and user-defined classes. (CCC 2, 4, 6; PGC 2, 4)
4. Apply the principles of encapsulation, inheritance, and polymorphism in programming. (CCC 1, 2, 4, 6; PGC 2, 4)

See Core Curriculum Competencies and Program Graduate Competencies at the end of the syllabus. CCPOs are linked to every competency they develop.

Measurable Performance Objectives (MPOs):
Upon completion of this course, the student will:

1. Explain software concepts of object-oriented programming, data abstraction, and software design principles.
    1. Identify the principles of software design.
    2. Describe the components of object-oriented programming.
    3. Explain object-oriented programming, data abstraction, and software design principles.
2. Examine and configure the features of an integrated development environment (IDE) and debugging tools.
    1. Identify components of IDE and debugging tools.
    2. Configure the IDE programming environment used in programming.
    3. Explain the use of IDE and debugging tools in creating computer programs.
3. Develop computer programs using pre-defined and user-defined classes.
    1. Identify the components of pre-defined and user-defined classes.
    2. Select the appropriate classes in creating computer programs.
    3. Implement the appropriate classes in creating computer programs.
4. Apply the principles of encapsulation, inheritance, and polymorphism in programming.
    1. Explain the principles of encapsulation, inheritance, and polymorphism in programming.
    2. Write computer programs using encapsulation, inheritance, and polymorphism.

Evaluation Criteria/Policies:
Students must demonstrate proficiency on all CCPOs at a minimal 75 percent level to successfully complete the course. The grade will be determined using the Delaware Tech grading system:

92	–	100	=	A
83	–	91	=	B
75	–	82	=	C
0	–	74	=	F

Students should refer to the Student Handbook - https://www.dtcc.edu/handbook for information on the Academic Standing Policy, the Academic Integrity Policy, Student Rights and Responsibilities, and other policies relevant to their academic progress.

Core Curriculum Competencies (CCCs are the competencies every graduate will develop):

1. Apply clear and effective communication skills.
2. Use critical thinking to solve problems.
3. Collaborate to achieve a common goal.
4. Demonstrate professional and ethical conduct.
5. Use information literacy for effective vocational and/or academic research.
6. Apply quantitative reasoning and/or scientific inquiry to solve practical problems.

Program Graduate Competencies (PGCs are the competencies every graduate will develop specific to his or her major):

1. Install, configure and secure computer applications and operating systems.
2. Design, write, and debug computer programs.
3. Design and integrate databases in computer programs
4. Analyze and design complex computer applications to solve business problems.
5. Integrate the principles of the Internet into web development.
6. Incorporate the principles of networking and information security in computer application development.

Disabilities Support Statement:
The College is committed to providing reasonable accommodations for students with disabilities. Students are encouraged to schedule an appointment with the campus Disabilities Support Counselor to request an accommodation needed due to a disability. A listing of campus Disabilities Support Counselors and contact information can be found at the disabilities services - https://www.dtcc.edu/disabilitysupport web page or visit the campus Advising Center.