



SYLLABUS

Course Title	Introduction to Programming and Problem Solving
Course Number	IST 145
Number of Credits	3
Course Dates	1/18/21 - 3/18/21 Wednesday Evening 6 PM, Hybrid (in class or Zoom)
Instructor	Steven Millet
Email Address	steven.millet@doane.edu
Office Hours/Availability	I am available before or after class. Email anytime. Immediate response between 10 AM – 12 AM daily, 10 hour delay thereafter
Phone Number	Phone texts can be sent directly to my Doane Email account. Just be sure you include your name and course number.
Textbook Information: (e.g. title, edition, publisher, ISBN)	No Textbook required. Handouts supplied by the instructor.
Additional Course Materials	Flash (thumb) Drive for saving backups
Course Description	An introduction to the science and art of implementing solutions to problems using a high-level programming language. Upon completion of this course, the student will be able to design solutions to a variety of problems using top-down and structured design techniques and implement those solutions using programming constructs such as branching, loops, arrays, and functions or procedures.

Program Outcomes	<p>a. Develop analytical and critical thinking skills to gather and analyze information, to identify and solve problems, to determine potential outcome alternatives, and to make appropriate decisions</p> <p>b. Recognize ethical issues involved in information technology and its management</p> <p>c. Understand information science and technology concepts and processes, their relationships to each other, and their relationships to existing and emerging computing technologies</p> <p>d. Develop the confidence and the skill to learn independently and apply existing and emerging computing technologies and processes</p> <p>e. Develop the confidence and the skill to solve an unknown problem and to efficiently research, learn, and apply a previously unknown topic or skill to a novel problem- solving situation</p>
Course Learning Outcomes/Objectives	<ol style="list-style-type: none"> 1. Understand the software development life cycle. 2. Have a general understanding of software design and charting techniques. 3. Understand how to implement algorithms, as part of the problem solving process. 4. Be familiar with a high level programming language and it's development environment (IDE). 5. Be familiar with the concepts of both sequential and random file access methods. 6. Be able to outline the proper testing procedures that should be followed to assure the accuracy of newly developed software.
Technology Requirements	https://www.doane.edu/faq/minimum-computer-requirements

Course Schedule

Week or Module	Topic	Content / Handout	Assessments Matched to Learning Outcomes	Due Date & Time
1	Course Overview The Software Development Life-Cycle (SWDLC)	Read Chapter 1 and 2	Visual Studio.Net IDE (LO1 and LO4)	
2	How Computers Are Programmed Ex: ISO C++ Standard / Python Variables and Constants Math Operations	Chapter 2	Lab #1 (LO4)	Week 3 by 6 p.m.
3	Strings and Screen I/O Decision Making in Program	Chapter 3	Lab #2 (LO3)	Week 4 by 6 p.m.
4	Review	Midterm Exam		
5	Loops		Lab #3 (LO3)	Week 6 by 6 p.m.
6	Functions and Pointers	Chapter 4 and 5	Lab #4 (LO3)	Week 7 by 6 p.m.
7	Data File Basics Windows Programs		Lab #5 (LO5)	Week 8 by 6 p.m.
8	Review	Final Exam		

Grading Assessments

Type of Assessment	Number of Assignments	Percent of Total
Labs	5	35
Exams	2	40
Quizzes	2	15
Class Participation	Weekly	10

Grade Scale

A+ = 97-100% A = 94-96% A- = 90-93% B+ = 87-89% B = 84-86% B- = 80-83%

C+ = 77-79% C = 74-76% C- = 70-73% D+ = 67-69% D = 64-66% D- = 60-63%

F= 59% or below

Participation Policy	A student is expected to be prompt and regularly attend on-ground classes in their entirety. Regular engagement is expected for on-line courses. Participation in class discussions is an integral part of your grade.
Study Time	Expectation of the amount of time the course requires students to spend preparing and completing assignments. Typically, students could expect to spend approximately 12 hours a week preparing for and actively participating in this 8-week 3 credit hour course. This actual time for study varies depending on students' backgrounds.
Late Work	Late work will be accepted, if for an excused reason with no reduction in grade

Submitting Assignments	Assignments submitted during class time
Communication Policy including Assignment Feedback	Emails will be responded to by the end of the day M - F. Assignments will be returned the week following their due date. Assignments will be returned or assignment grade available one week after they are submitted for grading
Academic Integrity Policy	<p>Doane University expects and requires all its students to act with honesty and integrity and respect the rights of others in carrying out all academic assignments. Academic dishonesty, the act of knowingly and willingly attempting or assisting others to gain academic success by dishonest means, is defined in four categories:</p> <ol style="list-style-type: none"> 1. Cheating - "Intentionally using or attempting to use unauthorized information or study aids in an academic exercise." 2. Fabrication - "Intentional and unauthorized falsification of invention or any information or citation in an academic exercise." 3. Facilitating Academic Dishonesty - "Intentionally or knowingly helping or attempting to help another to commit an act of dishonesty," and/or coercing others to do the same. 4. Plagiarism - "Intentionally or knowingly representing the words or ideas of another as one's own in any academic exercise," in both oral and written projects. <p><i>Gehring, D., Nuss, E.M., & Pavela, G. (1986). Issues and perspectives on academic integrity. Columbus, OH: National Association of Student Personnel Administrators</i></p> <p>For more information on the sanctions for academic dishonesty, please visit the website: http://catalog.doane.edu/content.php?catoid=18&navoid=1448#Academic_Dishonesty</p>
Academic Support	<p>Please contact academicsupport@doane.edu https://www.doane.edu/graduate-and-adult/academic-support</p>

Disability Services	https://www.doane.edu/disability-services Doane University supports reasonable accommodations to allow participation by individuals with disabilities. Any request for accommodation must be initiated by the student as soon as possible. Each student receiving accommodations is responsible for his or her educational and personal needs while enrolled at Doane University. Please contact 402-467-9031 for assistance.
Military Services	https://www.doane.edu/graduate-and-adult/military
Anti-Harassment Policy	http://catalog.doane.edu/content.php?catoid=5&navoid=452
Grade Appeal Process	http://catalog.doane.edu/content.php?catoid=5&navoid=238
Credit Hour Definition	Doane University follows the federal guideline defining a credit hour as one hour (50 minutes) of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work each week for approximately fifteen weeks (one semester), or the equivalent amount of work over a different time period (e.g., an 8-week term). This definition applies to courses regardless of delivery format, and thus includes in-person, online, and hybrid courses (combination of in-person and online). It also applies to internship, laboratory, performance, practicum, research, student teaching, and studio courses, among other contexts.
Syllabus Changes	Circumstances may occur which require adjustments to the syllabus. Changes will be made public at the earliest possible time.
Syllabus Addendum	www.doane.edu/syllabus