



SYLLABUS

Course Title	Software Development II
Course Number	ISM 102-1
Number of Credits	3
Course Dates	3/15/21 - 5/15/21 6 - 10:30 PM
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)	<u>Required : C++ A Beginners Guide, 2nd ed.</u> By Herb Schildt, McGraw-Hill, 2003, ISBN-13: 978-0072232158.
Additional Course Materials	Flash (thumb) Drive for saving backups
Course Description	This course provides, through the development of small software applications, an understanding of the process of developing software, including the identification of a problem, and the design, analysis, and implementation of algorithms and data/file structures to solve that problem. Students learn how to implement algorithms and data/file structures in a high-level language, and how to test and verify that implementation.

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 phases involved in the Software Development Life Cycle (SWDLC). 2. Understand basic data structures including arrays and structures in C++. 3. Be familiar with the Object-Oriented Programming features of C++ (i.e. classes). 4. Learn the advantage of using advanced data structures such as linked-lists, stacks and queues. 5. Be familiar with advanced algorithms for searching and sorting data sets. Including the ability to develop customized function libraries for sorting and report generation 6. Be familiar with ISO C++ software development standards versus Win 8 software development options, and, also have a basic understanding of C# and be able to track and repair development bugs through informal software testing.
Technology Requirements	https://www.doane.edu/faq/minimum-computer-requirements

Course Schedule

Week or Module	Topic	Content	Assessments Matched to Learning Outcomes	Due Date & Time
1	Course Overview	Review of ANSI/ISO C++	L01	
2	Introduction to data structures	Using Structures and Arrays in C++	L02	Lab 1 due week 3
3	Object-Oriented Programming	Classes and Objects in C++	L03	Lab 2 due week 4
4	Midterm Exam and Lab Exam	Review		Due Week 5
5	Advanced data structures	Introduction to Linked-Lists	L04	Lab 3 due week 6
6	Introduction to C#	Error Checking	L05 & L06	Lab 4 due week 7
7	Sorting	Software Testing	L05 & L06	Lab 5 due week 8
8	Final Exam and Lab 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: https://catalog.doane.edu/content.php?catoid=16&navoid=1333</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.
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