

ISM 102

Software Development II

Instructor: Steven Millet
Summer Term 2008
May 27th – July 15th

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Tuesdays, 6:00 – 10:30 PM

A continuation of Information Systems Management 101, this course provides, through the development of larger 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. ***Prerequisite: Information Systems Management 101 or competence and Mathematics 115.*** (3 Credits)

Course Objectives: At the end of this course, the student should

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.
6. Be familiar with ANSI C++ software development standards versus Win XP software development options, and also have a basic understanding of C#.
7. Be able to develop customized function libraries for sorting and report generation.
8. Be able to track and repair development bugs through informal software testing.

Required Course Texts:

C++ a Beginners Guide, 2nd Ed., by Herb Schildt, McGraw-Hill, 2004.

<u>Week</u>	<u>General Topics To Be Covered</u>
1	Course Overview Review of ANSI/ISO C++ Using Structures and Arrays in C++
2	Object-Oriented Programming
3	String Functions and Using a String Class
4	MIDTERM EXAM Midterm Lab Exam – Take Home Arrays, Templates and Vectors Multi-Dimensional Arrays and Matrices
5	Introduction to Linked-Lists Introduction to C# (handouts provided by instructor)
6	Recursion and Searching
7	Sorting Testing Your Application (Informal)
8	FINAL EXAM Final Lab Exam – In Class

Grading:

The student's final grade will be determined as follows:

35%	Course assignments and activities
25%	Exams (2 scheduled)
15%	Quizzes (2 scheduled)
15%	Lab Exams
10%	Attendance and Participation

The following Grading Scale will be used:

100 – 97	A+
96 – 94	A
93 – 90	A-
89 – 87	B+
86 – 84	B
83 – 80	B-
79 – 77	C+
76 – 74	C
73 – 70	C-
69 – 67	D+
66 – 64	D
63 – 60	D-
Below 60	F

Classroom Procedure:

The first 2 ½ to 3 hours of class will always be devoted to lecture. The remaining class time may be reserved for students to work on course assignments. Students are encouraged to make optimum use of this time, as your instructor will be readily available to answer any questions you might have. The only exceptions to this schedule may be on exam or quiz nights. Only students with excused absences will be allowed to take make-up exams and quizzes. Make-ups should be taken no later than one week after the exam (or quiz) date.

The Doane Academic Integrity Policy will be adhered to in this class. All assignments and exams/quizzes will represent your own work. Any use of others' ideas and words without proper citation of sources is plagiarism and could result in the loss of all points for that particular assignment or exam.