ITM 527 Syllabus

Winter 2012

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Course Prerequisite: none

Course Description:

This course introduces the basic concepts of program design, emphasizing an event-driven environment. Students will develop an understanding of fundamental programming logic and learn to use basic programming structures to solve simple business problems. Students are introduced to the program development cycle and programming principles, basic programming logic and structures, and common data types. Topic coverage may include an introduction to object-oriented programming and other next-generation programming environments.

Course Objectives:

ITM 527 will take an in-depth look at some basic and advanced programming concepts and techniques, in light of the unique context of management information systems. We will examine theoretical concepts through a practical hands-on approach. Along with learning different programming concepts, this course will explore the advancement of program development, as well as timeless problem solving strategies.

Upon completion of this course, you will have demonstrated an appropriated level of competence in the following:

- Recognize the need for various data types and use them in Java™
- Recognize the need for control structures and implement them in Java™
- Properly design graphic user interface using Java™
- Understand basic object-oriented programming [OOP] concepts
- Understand and use of complex data structures, such as array, vector, and user-defined data types
- Properly document programs
- Implement proper program design using Java™

MS IS Program Learning Objectives

The MS IS program at the University of Michigan-Dearborn has a set of program learning objectives. These objectives specify a set of skills and abilities that you will develop while pursuing the degree. Several of these objectives are addressed in ITM 527.

- Students will be able to implement computer programs to solve business problems.
- Students will be able to communicate complex IT concepts orally.
- Students will be able to communicate complex IT concepts effectively in writing.

Student Evaluation:

First examination	Seventh week of class	35%
Second examination	Last week of class	35%
Homework assignments	throughout	25%
On-line participation	throughout	5%

Each examination will be partly closed-book, closed-notes (you will write short paragraph answers on concepts) and open-book, open-notes (you will write a program to specifications provided).

Course Materials

Required Textbook: Malik, D. S. 2006. *Java Programming: Program Design Including Data Structures*, Course Technology Incorporated, ISBN 1-4188-3540-4

Course Topics:

Text	Topic
Chapter 1	Overview of software and hardware
Chapter 2	Basic elements of Java
Chapter 3	Basic input and output; introduction to objects
Chapters 4-5	Control structures in Java
Chapter 6	Object-oriented design (OOD)
Chapter 7	User-defined methods
Chapter 8	User-defined abstract data types (ADTs)
Chapter 9	Arrays
Chapter 10	Vectors, string, and enumeration types
Chapter 11	Introduction to inheritance and polymorphism concepts
Chapter 12	Exceptions and their handling

Java online resources:

http://www.oracle.com/technetwork/java/index.html: main place to find all things about Java, including the latest Java Development Kit (JDK). The current version is JDK 7 Update 2.
http://java.com/en/: a website devoted to Java.
http://java.sun.com/docs/books/jls/second_edition/html/j.title.doc.html#44044: Java language specification

Online Java tutorials:

– http://download.oracle.com/javase/tutorial/index.html
– http://www.ibiblio.org/javafaq/javatutorial.html
– http://www.leepoint.net/notes-java/
– http://Java.net: an online community for Java

These are just some examples, you can find out more on the Web.

Editors for Java:
http://www.jgrasp.org: jGrasp is a free editor, easy to download and install. There are other editors you can use for the purpose of Java programming.

Other Materials:
The instructor may provide notes of various related topics as the course proceeds.

Other Class Administrative Information

Statement of Academic Integrity

"The University of Michigan – Dearborn values academic honesty and integrity. Each student has a responsibility to understand, accept, and comply with the university's standards of academic conduct as set forth by the Code of Academic Conduct, as well as policies established by the schools and colleges. Cheating, collusion, misconduct, fabrication, and plagiarism are considered serious offenses. Violations will not be tolerated and may result in penalties up to and including expulsion from the University."

The Code of Academic Conduct: http://www.umd.umich.edu/policies_st-rights/
College of Business Statement on Academic Integrity:
http://www.cob.umd.umich.edu/fileadmin/template/som/files/undergrad/statement_academic.pdf

In our class, submitting any work done by another person as your own, either as quiz, or exam, is considered a violation of academic honesty and integrity. This is a serious offense, punishable by a failing grade in this course and/or suspension or expulsion from the University.

You are expected to abide by all aspects of the Statement of Student Rights and Code of Student Conduct in this course. It is assumed that you have a copy and have read and understand this code. If not, it is contained in the Undergraduate Announcement as well as the Student Handbook. Further, you are expected, especially as information systems professionals in training, to respect campus computer resources and to use them productively and wisely.

Email Account and Responsibilities:

Each of you has received a UM-Dearborn email account. It is your responsibility to read email messages sent to this account. The majority of the communication will take place in the Blackboard course page, so please familiarize yourself with it and build a habit of checking it frequently. I check both Blackboard and UMD email each day except Sunday, unless ill or otherwise indisposed.

Accommodations for Students with Disabilities:
The University will make reasonable accommodations for persons with documented disabilities. Students need to register with Disability Resource Services (DRS) every semester they are enrolled for classes. DRS is located in Counseling & Support Services, 2157 UC (313-593-5430). To be assured of having services when they are needed, students should register no later than the end of the add/drop deadline of each term.

Grade Changes

To be fair to the whole class, there are **no** opportunities to redo work or to do extra work in order to receive a higher grade. Also, a student's work cannot be reevaluated after the grades for the class have been submitted.

Acknowledgment

Professor M. Guo of the College of Business is primarily responsible for the design and content of this course. This syllabus is largely her intellectual creation and property; her permission (indeed, encouragement) to use it is gratefully acknowledged.