COURE POLICY

Code: CSC 113
Title: Computer Programming 2
Academic Year: 1433/1434 (2012-2013)
Semester: Second

1.1. Instructor Contact

Instructors: Dr. Sofien GANNOUNI (Coordinator)
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1.2. Course Objectives

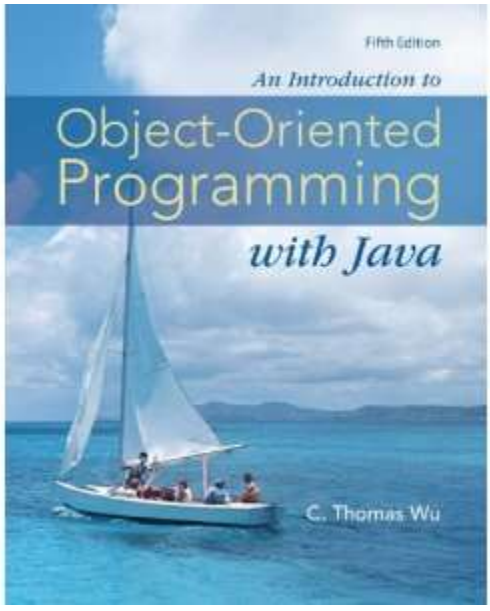
This course is a 4-credit course with 3 contact hours of lecture and 1 hour of tutorial and 2 hours of Lab. Material is covered during lectures, tutorials and labs. Through these three types of instruction, different perspectives of Object Oriented Programming are taught. At the end of this course, students will have the following capabilities:

- Understand classes and instances, and how programs can be designed as a collection of communicating objects.
- Understand and be able to design and implement programs using object oriented programming concepts like: encapsulation, inheritance, polymorphism, abstract classes and methods, and Interfaces.

- Use standard documentation, such as UML class diagrams and online Java documentation.
- Create and manipulate dynamic data structures, such us linked lists, stacks and queues.
- Create and access files with Java.
- Students should learn how to work in groups towards achieving the same goal.

1.3. Text Book

- Primary:
  - An Introduction to Object-Oriented Programming with Java, by C. Thomas Wu (Otani), McGraw-Hill Higher Education, Fifth Edition.



- Supplementary:
  - Java Programming: From Problem Analysis to Program Design,4th Edition by D.S. Malik

1.4. Tentative Schedule

Week number	Topic	Course Materials	Assignments
Week 1	- Course orientation and how to study.		
Week 2	- Reminder on arrays of primitive data types - Properties of arrays - Declaration of arrays - Manipulation of arrays	Chapter 1: Arrays of Objects	**Lab 1**
Week 3-4	- Introduction to arrays of Objects. - Declaration of arrays of objects. - Memory representation of arrays of objects. - Manipulation of objects of an array.	Chapter 1: Arrays of Objects	**Lab 2**
Week 5-6	- What is a relationship. - Types of relationships. - UML representation of relationships. - Translation of Association/Aggregation/composition relationships to attributes. - Copy constructor.	Chapter 2: Relationships between classes	**Lab 3 and 4**
Week 7-8	- What is inheritance. - Reusability and Inheritance. - UML representation of Inheritance. - Visibility of inherited attributes. - Inheritance and Constructors. - Overridden methods. - Polymorphism.	Chapter 3: Inheritance (the Is-a relationship)	**Lab 5 and 6**
20/03/2012	**Mid Term 1**		

Week 9	- Abstract Methods. - Abstract Classes. - Abstract classes and constructors. - Interfaces. - Abstract classes vs. interfaces.	Chapter 4: Abstract Classes and Interfaces	**Lab 7**
Week 10-11	- What exceptions are. - Why exceptions. - Generators and Propagators. - try and catch clauses. - The final clause.	Chapter 5: Exception Handling	**Lab 8 and 9**
Week 12	- Types of files. - Properties of files. - Input and output files. - Binary files. - Object Files.	Chapter 6: Files	**Lab 10**
15/04/2012	**Mid Term 2**		
Week 13-14	- Limits of arrays. - What a is a linked list. - Benefits of a linked list. - Memory representation of a linked list of primitive data types. - UML representation of a linked list of primitive data types. - The class Node of a linked list. - Operations on linked list of primitive data types such insert at front, insert at back, delete, search, insert after, insert before, etc.	Chapter 6: Data Structures	**Lab 11**
Week 14-15	- Linked list of objects. - Memory representation of a linked list of objects. - UML representation of a linked	Chapter 6: Data Structures	

	list of objects. - The class Node of a linked list of objects. - Operations on linked list of objects.		
	Final Exam		

1.5. Assessment Methods

	Exam Date
Midterm 1	15 %
Midterm 2	20 %
Final Exam	40 %
Lab (Exam & Attend.)	15% = 5% (attend.) + 10% (exam)
Quizzes & Homework	5 %
Tutorial (Attendance/Project)	5%

Final:

A comprehensive final examination will be given. It will be a closed book and closed note exam and will cover all course material.

Midterm:

2 Midterms will be given. It will be a closed book and closed note exam and will cover the studied part of the course.

Homework:

Homework will be assigned and graded. All homework will be given with a strict deadline, and students are required to submit their assignments on or before the deadline.

Lab:

Lab will be assigned and graded. All labs will be given with a strict deadline, and students are required to run their code during the lab session. A final lab exam will be given at the end of the semester.

1.6. Policies

- Late submission policy:
  - Maximum 2 late days per assignment/project deliverable
  - Each late day penalized with 10%
  - No subdivision of late days

- Legal notices on the world-wide web: Read and comply with accompanying legal notices of downloadable material
- Specify references used in assignments and project

- Plagiarism and cheating: Will not be tolerated. Please read the policies of the Computer Science Department,