CMIS141: Introductory Programming (3)

2012 Spring Session 2 is from 20 Mar to 10 May 2012
MCAS Iwakuni on Tuesday & Thursday from 6:00PM to 9:00PM

Faculty Contact Information:

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- Office Hours: By appointment before class is usually best time.

Course Introduction

In this course, we will introduce you to the design and implementation of programs using the object-oriented programming language Java. We will begin by showing you how to create, compile, and execute simple programs using the Java software developer's kit (SDK). We will then introduce branching and looping structures and show you how to create subroutines that are referred to as methods in Java. After working with arrays to store and manipulate data, we will end with a discussion of object-oriented concepts, including classes. Throughout the course, we will cover good software engineering procedures as well as ethical issues.

Course Description

(Not open to students who have taken CMIS 340. The first in a sequence of courses in Java.) Prerequisite: CMIS 102 or prior programming experience. Recommended: MATH 107. A study of structured and object-oriented programming using the Java language. The goal is to design, implement, test, debug, and document Java programs, using appropriate development tools. Projects require use of algorithms, simple data structures, and object-oriented concepts. Students may receive credit for only one of the following courses: CMIS 141, CMIS 141A, or CMSC 130.

Course Outcomes

Upon successful completion of this course, the student will achieve the following objectives:

1. design, implement, test, debug, and document programs that use basic data types and computation, simple I/O, conditional and iterative structures, and functions
2. apply the techniques of structured (functional) decomposition to break a program into smaller pieces
3. describe and use the mechanics of parameter passing
4. discuss and use primitive data types and built-in data structures
5. write clear and comprehensive program documentation

Course Materials:

1. Introduction to Java Programming-Comprehensive, 8th ed., Y. Liang, Prentice Hall, ISBN: 9780132130806
2. USB Thumb Drive >= 1 GigaByte

Grading Information and Criteria:

The final grade will determined as described in the tables below with points allocation and grading scale shown.

Activities	Points	Weight
Participation	50	10%
Homework	100	20%
Project 1	100	20%
Project 2	100	20%
Project 3	150	30%
Total	500	100%

Grade	Percent
A	100.0 to 90.0%
B	89.9 to 80.0%
C	79.9 to 70.0%
D	69.9 to 60.0%
F	< 60%

Homework (20%): Your instructor will assign homework related to the weekly reading topics such as I/O, sequential programming statements, selection statements, and methods.

- Homework 1: Pick your favorite geometry formula (e.g., area of a square, perimeter of a triangle …) and implement it in Java. Demonstrate your code compiles and runs without issue (you can use screen captures to demonstrate this functionality in a Word document). Name your java source code file *YourName*_hw1.java
  Name your Word document file *YourName*_hw1.doc
- Homework 2: For this program you will enter a series of test scores from with a possible range of scores between 0 and 100. The number of scores is not fixed and can be different for each run of the program. After all scores are entered the program will display the high score, the average score, and the low score for the entered series of scores. Name your Java file *YourName*_hw2.java. Name your Word document *YourName*_hw2.doc
- Homework 3: Write a Java application that prompts the user for a series of nine test scores (double precision) between 0 and 100. The program needs to load the scores into array elements and then displays the scores from lowest to highest. You should use the Arrays.sort() method. After displaying the nine sorted scores the program should calculate the high, low, mean, and median score. Demonstrate your code compiles and runs without issue Name your Java file YourName_hw3.java.
- Homework 4: Design and implement a Java class to represent a cube class. The class should contain a constructor, appropriate data fields and methods to return the volume of the cube, and the surface area of the cube. Name your Java file YourName_hw4.java.

Project 1 (20%): This project focuses on demonstrating your understanding of datatypes, input/output, sequential and selection programming statements, and mathematical operators.
Project 2 (20%): This project focuses on demonstrating your understanding of sequential, selective and repetitive programming statements, methods, and modular programming. Before attempting this project, be sure you have completed all of the reading assignments listed in the syllabus to date, and thoroughly understand the examples throughout the chapters.
Project 3 (30%): This project focuses on demonstrating your understanding of classes and objects. Before attempting this project, be sure you have completed all of the reading

assignments listed in the syllabus to date, participated in class, and thoroughly understand the examples throughout the chapters.

Additional Information:

Work Load

The University of Maryland expects students will need about 12 hours a week outside of class time preparing for classes and tests. Although each student has a different background, goals and study habits, most students will need to spend roughly that amount of time in order to succeed.

Incompletes

Students can only receive a grade of Incomplete if they have completed at least 60% of their assigned work and their average grade for work completed is at least a C (70%). You must request that this grade be given, and receive permission from me, your instructor. If your missing assignment has not been submitted within the time frame agreed by your instructor (not to exceed 4 months), your grade of Incomplete will automatically revert to an F.

Course Schedule

This is a tentative schedule and may be modified by instructor as circumstances deem necessary. Please read the sections to be covered prior to the class meeting.

Week	Readings, Assignments, and Due Dates	
1	Read:	• Liang, sections 1.1-1.9 Introduction
	Do:	• Actively participate in class discussions • Install Java and get working with a Text Editor or IDE
2	Read:	• Liang, sections 2.1-2.18 Elementary Programming
	Do:	• Actively participate in class discussions • Submit Homework 1
3	Read:	• Liang, sections and 3.1-3.19 Selections
	Do:	• Actively participate in class discussions • Submit Project 1
4	Read:	• Liang, sections 4.1-4.10 Loops
	Do:	• Actively participate in class discussions • Submit Homework 2
5	Read:	• Liang, sections 5.1-5.10, Methods
	Do:	• Actively participate in class discussions • Submit Project 2
6	Read:	• Liang, sections 6.1-6.11, 7.1-7.4 Arrays
	Do:	• Actively participate in class discussions • Submit homework 3
7	Read:	• Liang, sections 8.1-8.11 Objects and Classes
	Do:	• Actively participate in class discussions • Submit homework 4
8	Do:	• Actively participate in class discussions • Submit Project 3

UMUC Asia Administrative Policies, Procedures and Practices

Ordering Course Materials:

Textbooks can be ordered online at the Asia Web site, http://webtext.asia.umuc.edu/. Books ordered from any other source will be at the student's own risk. UMUC Asia cannot be responsible for problems encountered when textbooks are ordered from sources outside of the Asia Web site.

Contact Information (Japan Area):

- For administrative assistance contact please contact your local Enrollment Specialist Office:
  - Japan Regional Enrollment Office: ojapan@asia.umuc.edu
  - Atsugi: atsugi@asia.umuc.edu
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  - Yokota yokota@asia.umuc.edu
- For Academic Advising Support contact: japanadvisors@asia.umuc.edu
- For GoArmyEd issues contact: GoArmyEd@asia.umuc.edu
- For WebTycho assistance on workdays contact: tycho@asia.umuc.edu
- For WebTycho assistance on Saturdays and Sundays: http://support.umuc.edu/
- For MyUMUC help visit UMUC 360 Helpdesk - http://support.umuc.edu/
- Support for UMUC Asia students is also available by phone at 225-3680 (DSN) or 81-42-552-2510 Ext. 5-3680 (international comm.), Monday - Friday 7:30 a.m. - 4:30 p.m. (JST).

Plagiarism:

Ask your professor about his/her plagiarism policies. Here is a great source for further guidance on how to avoid plagiarism: UMUC's Online Writing Center "How to Avoid Plagiarism"

The University has a license agreement with Turnitin, a service that helps prevent plagiarism from Internet resources. The professor may be using this service in this class by either requiring students to submit their papers electronically to Turnitin or by submitting questionable text on behalf of a student. If you or the professor submit part or all of your paper, it will be stored by Turnitin in its database throughout the term of the University's contract with Turnitin. If you object to this temporary storage of your paper, you must let the professor know no later than two weeks after the start of this class. Please Note: If you object to the storage of your paper on Turnitin, the professor may utilize other services to check your work for plagiarism.

Students With Disabilities:

Reasonable accommodations are available for students who have disabilities and are enrolled in any program offered at UMUC. For more information, students should contact the Director, Student Affairs or e-mail SADirector@asia.umuc.edu.

Academic Policies:

Academic Policies are not course specific and are therefore created and housed separately from this document. You may access and print Academic Policies by going to this link http://www.umuc.edu/policies/academicpolicies/aa15025.cfm.

Caveat:

UMUC Asia syllabi are tentative and subject to change, if necessary. Changes will be announced with as much notice as possible.