Indiana University Southeast

Course Syllabus

CSCI 201 - Computer Programming II

INFO 210 – Information Infrastructures I

Summer 2014

Instructor: Dr. Suranga Hettiarachchi

Class Meeting Days	Time	Location
Tuesday and Thursday	7:00 PM-9:30 PM	LF-105

About the Course: This is a course about computer programming and algorithms. You will learn basic programming and program structures and how to produce computer solutions to problems. We use Java Programming Language as a tool to design, implement, and test programs. Course consists lectures, labs and discussions. This class is for students that focus on learning the subject matter rather than just a grade. If you are not willing to work hard, this might be the wrong class for you. If you work hard and learn the subject matter, you will have a good grade at the end of the semester.

A portion of this course is completed in traditional classroom setting and parts of course are offered online.

Prerequisites: Two years of high school mathematics or MATH-M 014. ***If you have a grade 3 or higher in Advance Placement exam, you may move to C202/I211 course.***

Office Hours: Tuesday & Thursday 4PM-7PM (and by appointment) at LF 114. Also can contact me anytime via OnCourse Messages (See further information at the end of this syllabus).

Course Homepage: OnCourse, see further information at the end of this syllabus.

Contact: Email: suhettia@ius.edu (best way to get hold of me)

Phone: 812-941-2698

Textbook: Comprehensive Version – Introduction to Java Programming, by Daniel Liang, 10th Edition (ISBN-13: 9780132991704).

Course Learning Objectives:

-Be able to formulate algorithms to solve problems using Natural language, pseudo-code, flowcharts, and a programming language.

-Be able to Modify and expand short programs that use conditional control structures, iterative control structures, and functions/methods.

- Be able to demonstrate Object-oriented programming concepts such as Object-oriented design, Encapsulation, Classes, subclasses, Inheritance, Polymorphism, Overloading, and overriding.

- Be able to Apply data structures to solve problems using Data representation, Arrays, Strings, and Dynamic data structures(ArrayList)

See AssessmentPlanC201.pdf for further info.

Attendance and Participation Policy:

Students are expected and advised to be present at every class that meets in traditional class room and participate in all online discussions/forums, study the material in the text/online in advance ***(absolutely important)***, bring questions to the class and is always responsible for all material discussed in the class meetings. Spending good period of time (on average about 10-12 hours a week) in the computer laboratory is very important to learning programming.

Performance Evaluation:	Points
10 - Lab assignments(L)	15%
10 - Quizzes(Q)	15%
10 - Programming Assignments(A)	20%
01 - Mid-semester Examination(E1)	25%
01 - Comprehensive Final Examination(E2)	25%

Grading Policy:
The participation in class and labs, intellectual curiosity, persistence to overcome difficulties will be considered along with the performance evaluation to attribute a final latter grade to the student. Following letter grade (in terms of %) criteria: i.e., **>97 A+**, ***>94 A; >90 A-; >87 B+;>83 B; >80 B-; >75 C+; >70 C; >67 C-; >64 D; and <=60 is F*** will be the basis in attributing the final letter grade.

Programming, Laboratory, and Test Policy:
Cooperative efforts are not admitted in the tests and programming assignments unless otherwise stated. The students are encouraged to discuss among themselves any course materials and ask questions at any time in or out of class. Do your own work. Copying programs from others is cheating, and you will receive an 'F' immediately if you get caught. The programming can only be learned by designing algorithms, writing and executing programs related to those algorithms, testing your code using multiple data items, and correcting syntax and logical errors. More you practice better you become at programming and problem solving. I am available to help you on ***all*** your assignments, so come and talk to me if you run in to difficulties.

Turning in an incomplete program is not an option! I do not give partial credit for programs (you can get help from me if you run into problems with your assignments.) The quality of your work is absolutely important, and you are required to pay close attention to improving quality of your programs (be observant and follow the examples). There are 10 in-class lab assignments. These programming labs are designed for you to get more programming practice. You must attend the labs to receive credit. If you are unable to finish the lab in class, you are required to complete it on our own time. There will be no make up assignments or exams given.
I may consider extensions to due dates only if you have a valid written medical excuse.

You may discuss the problems with other students but you must write your own programs. There are 10 programming assignments and you must complete them by your own (you can ask for help from the instructor). Exams contain both programming problems and non-programming short answer questions. During exams and quizzes, you should be able to write code on paper without access to other resources.

All assignments have firm deadlines; I will not accept late submissions without a valid written medical excuse. ***All work should be turned in at the due date***. **Instructions for turning in homework are provided in OnCourse.**

Tentative course outline and schedule

Week	Lecture Topics	[10th edit.] Reading and Activities
1	Java, OS, number system, program output(console and Dialogs), API.	Ch1, L1, Pre-Test
2	Variables, constants, data types, operators, code convention, debugging, numeric type conversion, program input(console and Dialogs)	Ch2, L2, Q1, A1
3	Strings (Intro), Selection- if/switch, conditional expressions, operator precedence, associativity, output formatting.	Ch3, L3, Q2, A2
4	Repetition- while, do/while, for, nested loops, numerical errors, abnormal termination of loops.	Ch4, L4, Q3, A3
5	Methods- defining, calling, passing parameters by value, method overloading, scope rules, visibility modifiers.	Ch5, L5, Q4, A4
6	Wrapper classes. Math class, random numbers, immutable objects, Method abstraction, Single Dimensional Arrays (Intro)	Ch 6, Q5, L6, A5

7	Review for Midterm exam, Midterm Exam	Midterm Exam
8	Array copying, Passing and returning Arrays to and from methods, Array Searching, Array Sorting.	Ch6, L7, Q6, A6
9	Arrays Class, Two Dimensional Arrays, Passing and returning Two Dimensional Arrays to and from methods. ArrayList (Intro)	Ch 7, Q7, L8, A7
10	Defining classes, Constructing Objects, visibility modifiers. this reference, Class methods vs. Client. Strings (detail)	Ch8, Ch 9, Q8, A8
11	Reference variables, static/non-static context, data encapsulation, passing objects as parameters, Inheritance.	Ch 10, Ch 11, L9, A9
12	File I/O (Intro. to IOException), GUI basics	Ch, 12, Ch 14, L10, Q9, A10
13	Use of ArrayList with Objects, Final Exam Review, Final Exam	Q10, Post-test, Final Exam.

I reserve the right to change this schedule at any time.

All work and your conduct are subject to the Indiana University Code of Student Ethics. Cheating is dealt according to the ethics code. Students with Disabilities: Please contact Office of Disability Services at University Center South, Room 207, 812-941-2243.

The Departments of CSCI and INFORMATICS have a shared Red Hat server at address csi-ada.ius.edu and it will be used for educational support. In addition, all faculty/student news and announcements will be posted there and it is reachable in your favorite browser. It can also be secure-telneted to for software development. Contact your faculty member about an account.

If you don't take the initiative to seek help, nobody would know that you needed help.

OnCourse Guide

All course material is available via OnCourse and you should have the access to following content of the course.

Home Page: Your instructor's office hours are listed with a link to help schedule. Help is available for all your work, so please make sure to get help if you are having difficulties with course material.

Announcements: Postings of deadlines, especial announcements, reminders will appear in announcements. Every time an announcement is posted, you will receive an email, and they are also visible on the Home page.

Syllabus: This syllabus can be accessed anytime thorough this tab.

Messages: I am available for you to communicate via Messages, I will reply to messages within 24hrs. I will not answer code questions without a complete program attached to your message. No questions regarding programming assignments will be answered if messages are received within the 24 hour period of due date/time. So make sure to ask your questions early! Keep all conversations professional.

Resources: All Lectures, Lab Resources, Programming Assignments, Exam related material, and Extra Examples can be found here in individual folders.

Modules: There is a module for each chapter. The modules contain links to extra tutorials, practice programs, and external online practice tests. This extra material can be helpful in your quizzes, programming assignments and exams.

Grade Book: Nobody but you and I have the access to your grades. You can keep up with your current grade as the semester progresses. If you notice any discrepancy in your grade, please contact me immediately.

Chat Room: You can use to communicate with others, discuss problems, and share extra resources. Do not post any unprofessional content, and I will immediately remove them. Do not post answers to assignments. I will check the chat room and try to give my feedback once every 24hour period.

Forums: You can use to communicate with others, discuss problems, and share extra resources. Do not post any unprofessional content, and I will immediately remove them. Do not post answers to assignments. We will have a fresh forum for each assignment. You can explain solutions to questions using algorithms, but you are not allowed to write code in Forums. You may use code examples that are not directly an answer to an assignment. I will check forums and try to give my feedback once every 24hour period.

Test & Surveys: You will fine pre/post test and all quizzes here. All graded quizzes are available with feedback to your answers until the end of semester.

Extra Links: JAVA API – Documentation for Java Programming Language that you will have to depend heavily to look up certain programming constructs throughout the semester.