Course Syllabus – COP3502

Programming Fundamentals I

Contact Information

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Course Information

This is the first course of a two-semester introductory sequence for students without prior programming experience. Topics include major concepts of computer science and computer programming processes, including object-oriented programming, procedural and data abstraction and program modularity.

Accreditation

This course contributes to meeting the professional component of ABET program criteria:

b) includes one and one-half years of engineering topics, consisting of engineering sciences and engineering design appropriate to computer engineering.

This course is used to assess program outcomes for these ABET criteria:

c) an ability to design hardware and software systems, components, or processes to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.

e) an ability to identify, formulate, and solve hardware and software computer engineering problems, accounting for the interaction between hardware and software.

k) an ability to use the techniques, skills, and modern engineering tools necessary for computer engineering practice.

Course Objectives

By the end of the semester, successful students should be able to:

- understand what programming is and the unique features of Java,
- read and understand programs written in Java,
- design and implement programs using Java,
- compile and execute programs to get results, and
- debug (identify and fix) syntax, semantic, and logic errors in Java source code.

Course Materials

Required: Programming in Java (**ONLINE**), Frank Vahid and Roman Lysecky (2015), zyBooks
Recommended: H-ITT iCue RF Clicker (TX3100) – **Must be RF** (not IR) model! (Campus EC)
Optional: Introduction to Java Programming 11E, Y. Daniel Liang (2017), Pearson

There are also lots of free Java resources available online.

Mobile Computing Requirement

The College of Engineering requires students to have a mobile computing device (standard laptop or Chromebook) with 802.11 WiFi capability. **Students are required to bring their mobile computing devices to class for in-class assignments!**

Course Overview

The following is a rough topical overview of what we will examine during the course (subject to change):

Mod.	Dates	Lecture	Lab	Project
00	08/20 – 08/26	Introduction to Computer Science	No Lab / Quiz	
01	08/27 – 09/02	Variables & Arithmetic, & IO	Lab 01 / Quiz 01	
02	09/03 – 09/09	Program Control	Quiz 02 / Lab 02	
03A	09/10 – 09/16	Built-in Data Types, Q&A	Quiz 03 / Lab 03	
E1	09/17 – 09/23	EXAM 1 (In Class 09/17)	No Lab / Quiz	P1 Due: 09/20
03B	09/24 – 09/30	Intro to Class & Unit Testing	Quiz 04 / Lab 04	
04	10/01 – 10/07	Methods & Arrays	Quiz 05 / Lab 05	
05	10/8 – 10/14	Class, Q&A	Quiz 06 / Lab 06	P2 Due: 10/10
E2	10/15 – 10/21	EXAM 2 (In Class 10/15)	No Lab / Quiz	
06	10/22 – 10/28	Inheritance	Quiz 07 / Lab 07	
07	10/29 – 11/04	Searching and Sorting Algorithms	Quiz 08 / Lab 08	P3 Due: 10/31
08	11/05 – 11/11	Recursion, Q&A	Quiz 09 / Lab 09	
E3	11/12– 11/18	EXAM 3 (In Class 11/12)	No Lab / Quiz	
09	11/19 – 11/25	File I/O & Collection	Quiz 10 / Lab 10	P4 Due: 11/20
TG	11/26 – 12/02	BREAK (Class cancelled 11/26)	No Lab / Quiz	
10	12/02 – 12/04	Software Engineering, Q&A	Quiz 11 / Lab 11	P5 Due: 12/04
FE	12/10	**FINAL EXAM, 7:30AM**		

Grading

The grade breakdown is as follows:

Grade Category	Percentage	Letter	Range (%)
Development		A	93 – 100
Labs (11-Drop-1)	10%	A-	90 – 92
Projects (5-Drop-1)	40%	B+	87 – 89
		B	83 – 86
Assessment		B-	80 – 82
Quizzes (11-Drop-1)	10%	C+	77 – 79
Exams (3)	24%	C	73 – 76
Final Exam (1)	16%	C-	70 – 72
Total	***100%***	D+	67 – 69
		D	63 – 66
		D-	60 – 62

NOTE: A C- will not be a qualifying grade for critical tracking courses. In order to graduate, students must have an overall GPA and an upper-division GPA of 2.0 or better (C or better). Note: an average of C- is equivalent to a GPA of 1.67 and therefore does not satisfy this graduation requirement. For more information on grades and grading policies, please consult the catalog.

Final grades will be rounded to the nearest whole percentage point. Grades will not be "bumped up", and no additional credit will be offered at the end of the term – so **do not ask**! Any request for a final grade increase, via "bumping" or "extra credit" **will result in a deduction of 1% of the student's final grade**.

Code Submissions

Functionality is key to success in software development and computer science, so it is **extremely important** that the guidelines are followed. Failure to follow these instructions will result in penalties.

1) Code must compile / run in debug and release mode. Debug information should never be released in the final version of a software project. **Projects that do not compile AND run will be marked zero**.

2) Include only those files specified by the documents in your archive. Projects should have no directory structure except as explicitly mentioned in the documentation (i.e., relevant files and folders should be submitted in the root of the zip file.) It should be possible to open the archive, copy your files directly into the project, compile, and then run the project without further steps. If the project has naming or organization error(s), its grade will be **zero**.

Expectations for the Class

Students are expected adhere to the following guidelines in this course:

Academic Dishonesty will be dealt with strictly. Sharing / copying, "borrowing" of code structure, discussing code structure, looking at code from another student or providing such code, and plagiarism, in addition to other dishonest behaviors, are all considered academic dishonesty. Absolutely no information regarding assignment solutions may be shared by students except at a conceptual level. If students implement algorithms from other sources, they must cite those sources. Students may not copy code from the Internet or other sources under any circumstances. Any student found to have violated these rules, whether a provider or receiver or unauthorized help, will be given a zero and referred to the Honor Court. **When in doubt, ask.**

Grade reviews must be requested within one week of a grade being posted. After two weeks, no grade will be revisited. In the event of a grade review, the entire assignment will be reviewed.

All assignments are due by the time listed on Canvas. Projects and homework with a cascading deduction: one (1) business day late for 10% penalty; two (2) for 30% penalty; or three (3) for 60% penalty. Quizzes and tests may not be submitted late for credit except with instructor approval for extenuating circumstances (see below).

Students are strongly recommended to attend all lectures and laboratory meetings. Quizzes are proctored in and only in labs, and in both labs and lectures important announcements are made that students are expected to follow. Labs may only be submitted by students who attend or who have been excused, and *pair programming is mandatory*. Students who fail to attend lecture and/or lab forfeit their opportunity to attend office hours unless the absence is excused by the instructor of the course.

Exam and quiz make-ups will not be given except in extenuating circumstances. For make-up consideration students will be required to submit written documentation from a reputable source as evidence. For any planned event (such as a wedding), the student is expected to contact the instructor no less than two weeks in advance for consideration. Please note that there is no guarantee that requests will be accommodated. Social, networking, and club events may be taken into consideration strictly at the discretion of the instructor.

Exams and quizzes may be reviewed during office hours but will not be distributed. Making good assessments takes time and testing. Unfortunately, some disreputable organizations and companies attempt to compromise exams to give some students an edge for a fee. To combat this, we will always allow students to review quizzes and exams during office hours but will not release them en masse.

Students should visit office hours for project help and grade questions. Online students should make plans to be chat with a TA during scheduled office hours or try to arrange an appointment with the TA or instructor. Do not send email to, send private messages to, or "@" instructors or TAs about project help or grades. The TAs and instructor will often try to answer questions when possible in chat, but the way to get personalized help is to visit or make arrangements!

Students should not distract others in class. Students are not compelled to attend against their will. Students should refrain from watching videos; playing games; talking; sleeping; howling; biting toe nails; screeching like a banshee; and other distracting behaviors in lecture or lab.

Important correspondence (other than project help) should be engaged via email. In particular, the chat system is helpful for simple questions and allows students to help one another, but students should not expect a response to important questions via chat. Please allow 48 business hours for a response; the instructor and TAs have many responsibilities and respond to messages as efficiently as is practical.

Student Assistance

The following services are available to students requiring assistance:

Accommodations for Students with Disabilities – Students Requesting classroom accommodation must first register with the Dean of Students Office. That office will provide the student with documentation that he/she must provide to the course instructor when requesting accommodation.

UF Counseling Services – Resources are available on-campus for students having personal problems or lacking clear career and academic goals. The resources include:

- Career Resource Center, Reitz Union, 392-1601, Career development assistance and counseling
- University Counseling Center, 301 Peabody Hall, 392-1575, personal and career counseling
- SHCC mental Health, Student Health Care Center, 392-1171, personal counseling
- Center for Sexual Assault/Abuse Recovery and Education (CARE), Student Health Care Center, 392-1161, sexual assault counseling.

Software Use Policy

All faculty, staff and student of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.