Course Syllabus

CS401: Intermediate Programming with Java

Fall 2021

Instructor: Mike Devine

Contact: mjd73@pitt.edu

Office Hours: Sennott Square room 6148. Tue/Thurs 330-5pm

Virtual Office Hours on Zoom: Mon/Weds 4pm-530pm. Send me an email and Ill send you an invite link.

Textbook: CONTROL STRUCTURES THRU DATA STRUCTURES (GADDIS & MUGANDA 4th ED.)

Course Objective:

This is a intermediate programming course. You should have the equivalent of a semester of programming experience preferably Java but this is not absolutely required. If you have no programming experience at all you should not be in this course. If you have experience in another language you should review the pre-requisite concepts listed on the daily outline. Catching up on the pre-requisite Java skills will require some extra work on the part of those with no Java experience. The most important concept for this course is Object Oriented Programming. We will cover writing classes, methods, inheritance, abstract classes and interfaces. Some of our subject matter will have an algorithmic theme. We will also use recursion.

Topic Schedule:

Week 1: Java Basics(JDK, compiling and running a Java program, variables and datatypes, console I/O)

Week 2: Data manipulation of strings and numeric datatypes along with math operations.

Week 3: Java codeblocks and decision structures(If, else if, and switch)

Week 4: Loops and File I/O

Week 5: Arrays and Methods

Week 6: Array loading with loops and files.

Week 7: Midterm Review and Exam

Week 8: Exam Recap and Matrices

Week 9: ArrayLists

Week 10: Arraylists and recursion.

Week 11: Object oriented programming

Week 12: Advanced OOP

Week 13: Linked Lists

Week 14: Review

Final Exam Period

First 2 Week Guidelines:

For our first two week Aug 30 - Sept 10 we will meet remotely to accommodate those who wish to take advantage of the remote opportunity afforded by the university. We will meet at designated class times via zoom for those days. This also applies to your lab recitations.

After those 2 weeks have passed(Week starting Sept 13) we will go to the full in person model(subject to university guidelines at the time of course). Once we resume in person instruction there will not be LIVE Zoom meetings anymore. However, each week a long format version of the lecture for that weeks topic will be posted.

What if I(a student) get isolated or otherwise cannot attend physically?

You can watch the prerecorded lecture for that weeks topic and there will be a similar video for that weeks lab and/or assignment as applicable. You will not simply be cutoff from any and all access to help.

What if the professor gets sick?

Pitt has a two fold plan.

If faculty are infected but able to still work we will simply lecture remotely while the condition applies.

If a faculty member is not able to work(too ill or hospitalized) we each have a "teaching buddy" another faculty member who teaches that same class so we would have coverage.

About our prerecorded videos -

We will also have a weekly prerecorded version of the entire lecture, a video for each lab assignment, and a video for normal assignments as applicable. These are not live but allow you to get a more detailed look at topics or an assignment if you need to.

Do I need to use secure browsers or other special tools for the class? Below you will see the list of programming related tools you will need for Java programming. I do NOT use secure browsers as

they are not well liked or trusted by many students and have caused issues for many.

I recommend the Firefox or Chrome browsers for exams or accessing our Canvas page. Safari has caused many problems on exams so I do not recommend using it for viewing our lectures or taking exams.

Software needed: You will need to download the Java Development Kit(JDK) in order to compile Java programs. The JDK is available for all major platforms(Windows,Mac,and Linux)

You will want to use an enhanced text editor for writing your programs. Notepad++ is the best for Windows users. Atom is the best for mac users.

I do not recommend using an IDE style code editor like Eclipse or Netbeans as its code structure/formatting it employs can make compiling code properly from the command line difficult. Your grader will be compiling from the command line and if they cannot get your program to run there will be a points loss

If you have an unstable internet connection or video playback issues on Panopto I recommend clicking the Download button on the top right of the video to download it in mp4 format. VLC Media player handles these files perfectly and is available for all platforms.

Our recorded videos are also closed captioned when streaming but the captions do not transfer when downloaded.

How your Final Grade is Determined:

6 Programming Assignments @ 100pts each: 600pts

12 Weekly Lab Assignments @ 25pts each: 300pts

Midterm Exam @ 150pts: 150pts

Final Exam @ 150pts: 150pts

There may be extra credit opportunities. The following is our course grading scale:

score >= 97% == A+   score < 97% == A score < 93% == A-

score < 90% == B+ score < 87% == B score < 83% == B-

score < 80% == C+ score < 77% == C score < 73% == C-

score < 70% == D+ score < 67% == D score < 63% == D-

score < 60% == F

Statement on Cheating and Plagiarism

Cheating is not acceptable! If you blatantly copy someone's homework or project, expect a 0 the first time it happens. If it happens again, expect a letter grade drop. The policy for cheating on exams is the same, you will get a 0 for the exam. I won't be asking the impossible of you in this class, so I hope you never feel that desperate.

Special circumstances

If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both your instructor and the Office of Disability Resources and Services, 216 William Pitt Union,

(412-648-7890/TTY:412-383-7355) as early as possible in the term. DRS will verify your disability and determine reasonable accommodations for this course.