CSCI 221 - Computer Programming II (in Java)
Fall 2024

Units:		3
Instructor:		Anurag Tiwari
Location		Harbor Walk East - Rm.
Email		tiwaria@cofc.edu - Include CSCI 221 in subject
Office Hours		TBD
Lecture Location and Time	Harbor Walk East Rm.	Time
Section 1 CRN-11589	334	MWF 11:30-12:20
Section 2 CRN-10141	334	MWF 12:30-13:20
Section 3 CRN-13482	301	TTh 11:20-12:35
Mandatory Recitation Location and Time	Harbor Walk East Rm.	Time
Section 1 CRN-11589	302	T 13:00-1400
Section 2 CRN-10141	305	T 14:15-15:15
Section 3 CRN-13482	302	Th 13:00-14:00

Textbook		• Zybooks code: `COFCCSCI221TiwariFall2024` **Register with your cofc email*
Recommended Reading:		• W3Schools • Geeksforgeeks
Programming Practice:		CodeChef - Java
Course Prerequisites:		• CSCI 220 • CSCI 220L • MATH 270 (Prerequisite/Corequisite)
Tentative Grading:		Zybook Exercises: 10% Mid Term Exam: 15% Final Exam: 20% Prog Assignments: 20% Projects: 25% Attendance/In-class Assignments: 10%
Grade Scale:		≥ 93.00 A 90.00 - 92.99 A- 87.00 - 89.99 B+ 83.00 - 86.99 B 80.00 - 82.99 B- 77.00 - 79.99 C+ 73.00 - 76.99 C 70.00 - 72.99 C- 67.00 - 69.99 D+ 63.00 - 66.99 D 60.00 - 62.99 D- ≤ 59.99 F

Course Description: Programming is a broad term for converting data and problems into computer readable and processable instruction sets that help aid in solving those problems or make data processing faster. In this course we will focus on the basics of programming in JAVA.

We will go through an introduction phase, problem conversion phase and finally application phase. The goal of this course is to enable you, the students, to convert problems into executable programs. This would include (but is not limited to) -

- Understanding JAVA programming syntax
- User Input Handling
- Data types
- Conditional programming
- Iterative programming
- File I/O
- Exceptions
- Memory Management of Data
- Collections
- Search and Sort
- JAVA FX (if the class is exceptional and if time permits). - not part of assignments or exams.

We will take an Object-Oriented Programming (OOP) approach, converting anything from mathematical/engineering formulae to simple real like systems, into programs.

Exams:

Mid-Term: 1st Week of October
Finals: 1st week of December

Exams are cumulative from the 1st day of class.

Note: Both the mid-term and final exams are handwritten exams (pencil and paper). There can be (but is not limited to) pseudo-code writing, code alterations and explanations, multiple-choice questions, fill-in the blanks and true or false questions. Code Syntax and punctuation is important! Completely closed book - no cellphones, laptops, smart watches or cheat sheets. If you pay attention in class and programming labs/assignments, these two exams should be trivial. Time duration for the test will be 10x the time it takes me, your instructor, to do the exams.

Other Dates:

- **Tuesday, August 20**
  - Fall full semester and Express I classes begin.
- **Monday, August 26**
  - Last day of Add/Drop for full semester classes.
  - Last day for student to submit a request to Audit or apply for a Pass/Not Pass grade option for full semester classes
- **Monday, September 30**
  - Last day to submit an Undergraduate Application to Graduate in Fall 2024.
- **Friday, October 25**
  - Last day for students to withdraw with a status indicator of "W" from full semester classes. NOTE: Registration holds prevent students from being able to withdraw from a course in Banner Self-Service. Students should resolve their registration holds prior to this date if they wish to withdraw from a course.
- **Wednesday, November 27 - Sunday, December 1**
  - Thanksgiving Holiday. No Classes.
- **Wednesday, December 4**
  - Full semester final exams begin.
- **Wednesday, December 11**
  - Full semester final grades due at Noon.

Attendance:

Attending the classes will make it significantly easier for you to get a better grade and its 10 free points towards your grade. That being said, attendance is not mandatory.

Exams and in-class labs, discussions and assignments are mandatory. There will be no make-up sessions for these.

If you have a business commitment, family or medical emergency, you must submit a signed letter from your manager or physician along with approval from your advisor.

Homework Policy:

All submissions for this course must be made by the posted deadlines.

1 day grace period (including weekends) can be used for all programming assignments and projects while incurring a 10% penalty. Submissions will be closed after this grace period and will result in a zero grade.

Students are encouraged to discuss homework assignments with each other. However, submitting identical solutions or copying from online sources (including the use of LLM AI like ChatGPT) is considered cheating. This will result in a F for the homework assignment. Repeated offense will result in a F for the course. (see policy on cheating and plagiarism below).

Content Policy:

Posting any course content (homeworks, labs, projects, exam questions) on online forums and repositories like quizlet, coursehero, chegg, github, azuredevops etc., is strictly prohibited! Students are encouraged to maintain a source control repository for their labs and assignments/projects in a private repo after the semester has ended.

Discovery of course content on online platforms, accessible to the public, even after the course completion (even after graduation) will be reported to COFC officials as academic dishonesty for disciplinary action and may be noted on your school graduating records and transcripts.

Class Decorum and Behavior:

Students are requested to maintain a respectful and productive environment in the classroom. Use of electronic devices should be for class related activities only. Be on time and be prepared for the class.

Disruptive behavior will result in expulsion from the lecture at the discretion of the instructor. Repeat offenders will be recommended to COFC officials for disciplinary action.

Note from Instructor: Having been a student myself, I understand that life happens. You may have to take a phone call, might forget to silence your phone or watch, or may get stuck in traffic. If you need to enter the class late or must leave the class before the session expires, you may do so. But please be mindful of being as non-disruptive as possible. Making me or the students lose their train of thought by making unnecessary noise is considered disruptive. This is not highschool - you do not need my permission to enter or leave the class.

For in-class exams, you must manage your time appropriately and arrive early if you must. Outside of unforeseen circumstances wherein a significant portion of the class is late - if you are late, you must abide by the general time limit which started before your arrival. What time you have lost is lost.

If I instruct you to stop writing and finishing your exam or assignment, you are required to stop. Continuing beyond the time limit will result in a zero grade for the assignment/exam.

Disability and Special Assistance:

Students that need special assistance or accommodation as a result of a disability are requested to contact me personally. Schedule an appointment to meet me during office hours or talk to me after class. College of Charleston provides help and guidance on
https://charleston.edu/disability-services/index.php

Emergency/Crisis Situation:

Students will be instructed by COFC leadership, in the event of a declared emergency or crisis situation, on how to continue the course (if required to do so), through OAKS, teleconferencing and other online tools. If travel to the campus becomes infeasible, please follow college and local authorities' protocols first before worrying about submission deadlines. For more information visit:
https://emergency.charleston.edu/wp-content/uploads/2016/08/emergency-preparedness.pdf

Student Honor Code & Academic Integrity:

Please read https://charleston.edu/student-handbook/handbook/honor-code.php for a comprehensive description on things not to do as a student. Students are expected to strictly abide by these rules

Students found responsible for academic dishonesty by the College of Charleston Honor Board will receive a X-F grade - indicating failure in the course due to academic dishonesty. This is recorded and will remain on the student transcripts for 2 years, after which the student may request for the removal of the 'X' from 'X-F' resulting in a 'F' grade in the course. Other consequences include (but are not limited to) academic probation, temporary suspension from school or permanent dismissal from the College by the Honor Board.

Note from Instructor:

DO NOT PLAGIARIZE; DO NOT ENABLE PLAGIARISM!

- I have a ZERO tolerance policy for plagiarism and cheating. I encourage students to talk and discuss problem sets and homeworks but you MUST DOCUMENT it! What you talked about, who you talked to, how much did you collaborate in coming up with the solution, write everything down in the comments of your submissions. You may NOT share or collaborate on the code writing portion of your assignments and projects. All of the submissions must be individual.

- Only reference/citation accepted for programming assignments (pseudocode) are publicly available research papers. While I will try to provide unique problem sets for programming, copy-pasting code from online sources is strictly prohibited, even with citation. Copy pasted code leaves their mark on the code editor in the IDE - this is trivially easy to identify and will be detected. DO NOT copy-paste even 1 line of code.

- **AI Large Language Models** like **Chat GPT** usage for completing homework/assignments/projects **is strictly forbidden**. Here is why -
    - These tools do not write their own code. They gather information from a lot of online sources and then are very good at putting it all together as its own work. This is the very definition of plagiarism!
    - These tools are BAD at programming! They are notorious for making mistakes. These will be detected and result in a zero grade for your assignment along with other consequences listed below.
    - These tools have signatures - having worked with AI & Machine Learning tools for most of my time after my education, it has become evident to me and the rest of the computer science community that most of these tools have a unique signature, naming systems and a pattern of answering questions, unless heavily trained to do otherwise (highly recommend AGAINST trying this - it takes days to train a LLM or Narrow AI; your assignments will take hours at max, to do by yourself). As a result I have a keen eye for detecting these and have co authored tools to detect use of AI generated solutions to programming problem sets.

- First offense will result in:
    - ZERO grade for the assignment
    - Mandatory handwritten 500 word essay on “Plagiarism in Computer Science: Ethical Implications” to be signed by your Advisor and Head of the Department, and submitted to me, to be allowed to continue the course.
- Second offense:
    - Referred for disciplinary action to the Dean’s Office and Honor Board.

I, your instructor, implore you, the student, to refrain from academic dishonesty. A zero in the assignment for being late is better than the consequences for plagiarism and cheating. If caught, your credibility as a student and professional will be ruined, your aspirations for a career in academia(research, publications, study-grants, teaching) will come to an absolute end, and the repercussions may spill over into your professional career which might have legal implications. I have seen too many students and colleagues go down this path and never recover from it - sometimes leading to heavy financial and legal repercussions. Million dollar companies have had to close shop and declare bankruptcy for a few lines of plagiarized code. So please, do not cheat.

Tentative Class Schedule

**Attendance required in these sections to count towards In-class Assignment/Attendance grade.*

Week	Lecture Objective	Tasks/Resources	Assignments/Homeworks/Exercises
1	Course Intro, Installation Guide	• Syllabus • OAKS intro • Zybooks intro	• Follow Installation guide for JAVA and Eclipse IDE - OAKS
	JAVA Intro	• In-Class Assignment 1 - Pseudocode *	• Zybooks: ○ 1.1 - 2.22 (Due before start of Week 3)
2	Variables & User Input		
	Variables & User Input	• In-Class Assignment 2 - Lab*	• Programming Assignment 1 (due after Mid-Term Week)
3	Branches & Loops		
	Branches & Loops	• In-Class Assignment 3 - Lab*	• Zybooks: ○ 3.1-4.13 (Due before start of Week 5)
4	Arrays & I/O		• Project 1 announced (due after Mid-Term Week)
	Arrays & I/O	• In-Class Assignment 4 - Lab*	• Programming Assignment 2 (due after Mid-Term Week) • Zybooks: ○ 5.1-5.12, 9.1-9.5(due before start of Week 6)

5	User Methods & Classes		
	User Methods & Classes	• In-Class Assignment *5* -Lab*	• Zybooks ○ 6.1-7.22(due before start of week 7)
6	Exceptions		• Zybooks ○ 12.1-12.6(due before start of week 8)
	Recursion	• In-Class Assignment 6 - Lab*	• Zybooks ○ 11.1-11.9(due before start of week 8) • Programming Assignment 3 (due after Mid-Term Week)
7	Memory Management		• Zybooks ○ 8.1-8.6(not due. For your own practice)
	Open Lecture	• Prepare for mid-term • Prepare for Project 1 Submission	
8	Mid Term		
	Project Discussion/Class Holiday	• Project 1 • Prog Assignment 1, 2, 3 due at the end of the week.	

9	Class Holiday		• Project 2 Announced (Due December 1st 11:59 PM)
	Generics		• Complete Zybook sections for self practice.
10	Collections	• In-Class Assignment 7 - Lab*	• Prog Assignment 4
	Collections	• In-Class Assignment 8 - Lab*	• Zybook Sections for self practice
11	Collections	• In-Class Assignment 9 - Lab*	• Zybook Sections for self practice
	Search & Sort		• Programming Assignment 5
12	Search & Sort	• In-Class Assignment 10 - Lab*	• Zybook Sections for self practice
	Search & Sort		• Prog Assignment 6
13	Open Lecture	• Programming Examples combining all concepts	
	Open Lecture	• Programming Examples combining all concepts	
14	Fun Lectures	• Writing Simple Deployable Java Software	
	Fun Lectures	• Writing Minecraft mods	
15	Thanksgiving		

16	Review	• In-Class Review* • Project 2 due • Prog Assignment 4, 5, 6 due	
	Final Exams		