**CSE 220-01/50  
Object Oriented Program Design with Java   
Summer 2024**

**Instructor:** Dr. Andrew Karem  
Office: Duthie Center for Engineering Rm 218  
Phone: 502-468-1841  
E-mail: [andrew.karem@louisville.edu](mailto:andrew.karem@louisville.edu)  
Office Hours: T/Th from 12-12:50 or by appointment *(Online Meetings Preferred for the Latter)*   
*(See BB TA/Info Link for TA Information and Office Hours)*

**Text Book:** John Lewis, William Loftus. Java Software Solutions: Foundations of Program Design, 9th Edition. Copyright © 2017 by Pearson. ISBN-13: 9780134462028.  
  
**Course Description:** Introduction to Object Oriented Program design principles, concepts, and program development using the Java programming language. Includes practical exercises on the design and implementation of computer applications in Java.  
  
**Course Prerequisite:** CECS/CSE 130 (Introduction to Programming Languages).

**Course Objectives:** Upon completion of this course, students will be able to

1. Explain the concepts of object-oriented design, including encapsulation, abstraction, inheritance, and polymorphism.

2. Explain the basic constructs of the Java programming language.

3. Understand practical implementation of object-oriented programs and development.  
4. Be capable of using at least two integrated development environment (IDEs) designed for Java coding.  
5. Introduce concepts of programming a graphical user interface.  
6. Understand the role encapsulation plays in keeping applications secure.

7. Perform input validation in programs to prevent fundamental data vulnerabilities.

Please see the calendar at the end of the Syllabus for topics covered and a tentative schedule.

**Class Schedule and Exams:** The class meets twice times weekly on Tuesdays and Thursdays from 10 am – 11:50 am in Sackett Hall 213. Attending sessions is not mandatory, **but you are responsible for any material or instructions provided within them**. Sessions or suitable replacements will be recorded and/or uploaded within a day or two of the in-person session. ***Important Note: barring illness, those taking the in-person offering (CSE 220-01) are expected to take tests in person.* *Those in CSE 220-50 will be required to use Respondus Lockdown Browser and Monitor (which requires a webcam) when taking exams. See early week announcements for more details*.**

**Reading Assignments:** Reading assignments are intended to supplement class session topics, are approximate to the material, and tentatively provided in the calendar at the document’s end.

**Grading Criteria:** There will be two mid-term exams, 4 homework sets, and 1 final exam.  
1. 4 Homework Assignments 9% each  
2. 2 (Mid-term) Exams 20% each (x2)  
3. 1 Final Exam 24%  
-------------------------------------------------------------------------------------------------  
Total 100%

**Assignment and Submission Policies:**

Assignments will consist of a mix of programming and analysis, with the following requirements:

1. All assignments and project are to be uploaded via Blackboard, by 11:59 PM EST on the day of the provided deadline to receive full credit. Assignments may be submitted after this period for up to 6 days at a 5% penalty for every day late (Up to 95% within the first 24 hours, up to 90% within the next 24 hours, etc.) **Those submitted more than 6 days late will receive 0 credit. *Requests for an extension or to submit a missed assignment/assessment (e.g. at the semester’s end) without a doctor’s note or similar will be ignored.***

2. All programs and coding blocks required for assignments must be written in Java. Students are free to use a preferred IDE, text editor, or other tools to construct and test programs, but the code must compile to bytecode and virtually run using [Java 11](https://adoptopenjdk.net/index.html). Class code demonstrations will predominantly utilize BlueJ, but Eclipse and its value as a fully functional IDE will also be featured as a viable option.

3. Assignments should be submitted in up to 2 parts (see specific assignments for details):  
i. a single doc or pdf file named **“LN\_FN\_#”** where LN is your last name, FN is your first name, and # is the assignment number. For example, if the instructor were to submit assignment #0, the file would be uploaded as “Karem\_Andrew\_0.doc” or “Karem\_Andrew\_0.pdf”  
ii. A zip file consisting of all relevant java files and auxiliary files (ex: READMEs) as needed for the programming problems. As with part i. above, you should name the .java or zip file as **“LN\_FN\_#.**”

**4. A sample .doc and .zip file for an assignment submission will be provided on Blackboard prior to the posting of Assignment #1.**

**Collaboration and Cheating Policy:**

Students are encouraged to discuss course content and study together. However, all academic work **must be original and solely produced by the submitting individual.** Cheating or copying of assignments, project, quizzes, or exams may result in pursual in accordance with **Section 6 of the** [**Code of Student Rights and Responsibilities**](https://louisville.edu/dos/students/studentrightsandresponsibilities)**.**

**COVID-19/Pandemic Protocol Considerations**

As a Community of Care, all Cardinals are expected to abide by public health guidelines and regulations as published by the University. For Summer of 2024, this includes:

1. staying home when sick—any UofL community member experiencing fever, consistent dry cough, or other symptoms of contagious disease should remain at home until symptoms subside or advised that it is safe to return by a medical professional. Remember that office hours include an online option.
2. practicing good hygiene and responsibility for one’s own surrounding.
   1. Cover sneezes and coughs
   2. Wash hands frequently with soap and water when possible, use hand sanitizer when soap and water are not available
   3. Wipe down frequently touched surfaces
   4. Maintain 6 feet physical distancing when possible

**Computer Issues and IT Support:** Speed IT staff are available by appointment from 9 am to 4 pm to assist you with your technology needs. You may schedule an appointment by sending a detailed email including any relevant error codes and screen snips at SPDHelp@Louisville.edu (preferred) or 502-852-7620.

**Disruptive and Inappropriate Behavior:**

*Applicable to both in-person sessions, Blackboard Collaborate sessions (if applicable), discussion boards, and other online media*  
  
1. Try to keep background audio (in particular, electronic device noises) to a minimum when attending class or virtual BB Collaborate sessions (ex: office hours).  
2. Collaboration and cheating policies apply to online communication formats as well – while you may discuss basic approaches to homework problems, you may not provide solutions.  
3. Online harassment or bullying (e.g. on the discussion boards) will be dealt with swiftly and harshly (see also Title IX statement below).

Any violation of these rules will be considered disruptive behavior, and the student will face potential disciplinary action from the university.

**Grading Scale and A Note on Grades:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 98-100 A+ | 93-97.99 A | 90-92.99 A- | 87-89.99 B+ | 83-86.99 B | 80-82.99 B- | 77-79.99 C+ |
| 73-76.99 C | 70-72.99 C- | 67.69.99 D+ | 63-66.99 D | 60-62.99 D- | <59.99 F |  |

***Note: You may ask questions at any time about your earned grade, but do not request your grade to be “bumped up” from one rank to another at the end of the semester. Such requests will be ignored.***

**Title IX/Clery Act Notification:**

Sexual misconduct (including sexual harassment, sexual assault, and any other nonconsensual behavior of a sexual nature) and sex discrimination violate University policies. Students experiencing such behavior may obtain **confidential** support from the PEACC Program (852-2663), Counseling Center (852-6585), and Campus Health Services (852-6479). To report sexual misconduct or sex discrimination, contact the Dean of Students (852-5787) or University of Louisville Police (852-6111).

**Disclosure to University faculty or instructors** of sexual misconduct, domestic violence, dating violence, or sex discrimination occurring on campus, in a University-sponsored program, or involving a campus visitor or University student or employee (whether current or former) is **not confidential** under Title IX. Faculty and instructors must forward such reports, including names and circumstances, to the University’s Title IX officer.

For more information, see the [Sexual Misconduct Resource Guide](http://louisville.edu/hr/employeerelations/sexual-misconduct-brochure).

**Illness Contingency Plans:  
1. If the university transitions to all courses being provided online for whatever reason, synchronous sessions will be given remotely at the same time-frame (T/Th 10-11:50) via MS Teams.  
2. The same applies if the professor must quarantine during the semester (a TA or other faculty will proctor tests in such cases as needed.)  
3. If you fall ill and are going to be late in submitting an assessment or taking an exam, please contact me when feasible and provide me with a doctor’s note or similar.**

***Remember: the schedule below is tentative, and may change. Consult the course Blackboard page at all times for specific details and due dates.***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Week** | **Dates** | **Topics Covered** | **Reading Assignment** | **Assignments, etc. (Tentative only!)** |
| 1 | Mon, May 13 -  Fri, May 17 | Course Overview/Intro, BlueJ Overview, Java Basics, Strings and Variables | Chapters 1,2 | Assignment 1 Posted |
| 2 | Mon, May 20 -  Fri, May 24 | Data Types and Expressions, If Statement and While Loop | Chapters 2,5 |  |
| 3 | **Mon, May 27** | **Memorial Day Holiday** |  |  |
| Tues, May 28 –  Fri, May 31 | Class and Object Basics, Abstraction and Encapsulation, Methods & Constructors, Intro to JavaFX | Chapters 3,4 | Assignment 1 Due |
| 4 | **Tues, Jun 4** | **Exam I Review** |  | Assignment 2 Posted |
| **Thurs, Jun 6** | **Exam I** |  |  |
| 5 | Mon, Jun 10 –  Fri, Jun 14 | More Conditions and Loops, Object-oriented Design, Class Relationships | Chapters 5,6 |  |
| 6 | Tues, Jun 18 | Wrapping up OOP Design | Chapter 7 | Assignment 2 Due |
| **Wed, Jun 19** | **Juneteenth Holiday** |  |  |
| Thurs, Jun 20 | Arrays in Java | Chapter 8 |  |
| 7 | Tues, Jun 25 | Inheritance in Java | Chapter 9 | Assignment 3 Posted |
| **Thurs, Jun 27** | **Exam II Review** |  |  |
| 8 | **Tues, Jul 2** | **Exam II** |  |  |
| **Thurs, Jul 4** | **Independence Holiday** |  |  |
| **Fri, Jul 5** | **Provost-Approved Holiday** |  |  |
| 9 | Mon, Jul 8 – Fri, Jul 12 | Polymorphism and Recursive Definitions | Chapters 10, 12 | Assignment 3 Due Assignment 4 Posted |
| 10 | Mon, Jul 15 –  Fri, Jul 19 | Recursive Programming, Exceptions & Errors, Collections and Generics in Java | Chapters 11 - 13 |  |
| 11 | **Tues, Jul 23** | **Final Exam Review** |  | Assignment 4 Due |
| **Fri. Jul 26** | **Final Exam (11:30AM‐1:30PM)** |  |  |