



Course Information

Course Number and Title: CPSC 1220 Introduction to Computer Science II

Credits: 3

Description

This course introduces the fundamentals of computing as well as certain aspects of software engineering which will enable you to construct logical, readable, and correct programs. An object-oriented approach to problem solving and program design will be emphasized in the class and reinforced in the activities and projects.

Course Objectives:

Upon completion of the course, you should be able to:

- Design, implement, and test programs based on sound object-oriented design
- Design, implement, and test class inheritance hierarchies based on informal specifications
- Implement, and test class methods using polymorphism based on informal specifications
- Implement and test programs that require and use exception handling

Program Information

Program Educational Outcomes

The overall objective of the computer science program is to prepare graduates who will be successful in their chosen career paths. Within a few years of graduation, alumni of the computer science program will attain:

- PEO 1: Success in their chosen profession as evidenced by career satisfaction, promotions/raises, and leadership at levels appropriate to their experience.
- and/or
- PEO 2: Success in post-undergraduate studies as evidenced by satisfaction with the decision to further their education, advanced degrees earned, and professional visibility (e.g., publications, presentations, awards, etc.).

Student Outcomes

- The computer science program prepares students to attain the educational objectives by ensuring that students demonstrate achievement of the following student outcomes.
- SO 1: An ability to identify, formulate, analyze, and solve problems, as well as identify the computing requirements appropriate to their solutions.

- SO 2: An ability to design, implement, and evaluate software-based systems, components, or programs of varying complexity that meet desired needs, satisfy realistic constraints, and demonstrate accepted design and development principles.
- SO 3: An ability to apply knowledge of computing, mathematics, science, and engineering appropriate to the discipline, particularly in the modeling and design of software systems and in the analysis of tradeoffs inherent in design decisions.
- SO 4: An ability to use current techniques, skills, and tools necessary for professional practice.
- SO 5: An ability to design and conduct experiments appropriate to the discipline, as well as to analyze and interpret data.
- SO 6: An ability to function effectively on multidisciplinary teams to accomplish a common goal.
- SO 7: An ability to communicate effectively with a range of audiences.
- SO 8: An understanding of professional, ethical, legal, security, and societal issues and responsibilities appropriate to the discipline.
- SO 9: An ability to analyze the impact of computing and software solutions in an individual, organizational, societal, global, and economic context.
- SO 10: A knowledge of contemporary issues appropriate to the discipline.
- SO 11: A recognition of the need for and an ability to engage in life-long learning and continuing professional development.

Course Details

Textbook and Resource List

Required Textbook

- Lewis, J., & Loftus, W., (2018). Java software solutions: Foundations of program design (9th ed.). Boston, MA: Pearson
Print ISBN: 9780134462028, 0134462025; eText ISBN: 9780134544021, 0134544021

Additional Readings

- Any additional reading assignments will be listed on the “Instructional Resources” page within each module.

Course Structure

The course will follow this general pattern:

- At the start of each module, students will read the assigned textbook chapters
- Students will watch a series of lectures on the topics covered in the module
- Students will be encouraged to participate in a discussion forum for help in solving the practice problems



- At the end of the module, students will complete and submit their homework assignment for a grade
- There will be a cumulative final in the final module of the course.

Outline of Course

This course will be broken up into seven modules. The following outline presents the topics to be covered in each module.

Module 1: Object-Oriented Design and JUnit Testing

Module 2: Object-Oriented Design II

Module 3: Arrays

Module 4: Inheritance

Module 5: Polymorphism

Module 6: Exceptions

Module 7: Final Exam

Grading Methodology

Achievement in this course will be assessed through completion of the following activities:

| Assignment Type | Points | Grade % |
|--------------------------|--------|---------|
| Activities | 60 | 6% |
| Quizzes | 180 | 18% |
| Projects | 360 | 36% |
| Comprehensive Final Exam | 400 | 40% |
| Total | 1000 | 100% |

Activities

Activities are intended to guide you through the composition of one or more Java classes that use the concepts introduced in the module.



Quizzes

Short quizzes will be given to ensure that you are understanding the material from the presentations and the readings.

Projects

Projects are intended to reinforce and extend the concepts by requiring you to write one or more Java classes based on a specification of requirements and design. Successful completion of the project will involve problem solving and require an understanding and application of the concepts covered in the module.

Comprehensive Final Exam

The final exam will cover the material in the presentations, readings, activities, quizzes and projects in each of the six modules. Your instructor may choose to use a proctoring service for the exams; if so, more information will be provided in the course.

Restriction and Proctoring (webcam/microphone required) for Quizzes and Exams

Quizzes will be taken using **LockDown Browser**, and the final exam will be taken using **ProctorU** or other virtual proctoring service. LockDown Browser and the virtual proctoring service will be used to ensure integrity during the process. Note that the proctoring service requires a working webcam and microphone. A major advantage of a virtual proctoring system is that it allows you to take the quiz/exam from the comfort of your home or other location, anytime during the period the quiz/exam is available in Canvas. **During this term there will be no fee for taking the final exam with ProctorU.**

Students are expected to follow the exam administration and proctoring method described in this syllabus. Students must express any concerns regarding the proctoring method in writing to both the instructor and the department administration during the first week of class but no later than one week prior to the first exam. The department administration will forward any unresolved student concerns to the University officials who selected the proctoring options for their consideration, but the student is still expected to take the exam as required.



Grading Scale

Grades are determined on straight percentages as follows:

| Letter | Points | Range |
|--------|-----------|-------------|
| A | 900-1,000 | 90%+ |
| B | 800-899 | 80-89% |
| C | 700-799 | 70-79% |
| D | 600-699 | 60-69% |
| F | 0-599 | 59% or less |

Auburn uses a 4.0 grade scale. An A equals 4.0; B, 3.0; C, 2.0; D, 1.0; and F equals 0.0. Students must maintain a 2.0 average GPA in all courses in order to progress in this program. In addition, students must earn at least a D in each individual course in order to earn credit and progress to the next course. For more detailed information about university grading standards, please refer to information on the following link:

- [Auburn University Undergraduate Academic Policies on Grades](#)

Course Policies

Late Assignment Policy

It is very important that students submit work on time, or they will find it very difficult to catch up. All work in the course (e.g., projects, papers, exams, quizzes, etc.) will be due by 11:59 pm CT on the date noted on the class calendar. Assignments may be submitted up to six days late with a 10% late penalty per day up to a max of 30%. After the six-day late period, you will receive no credit. Students should reach out to their instructor immediately to discuss any concerns or to submit documentation of university-excused lateness.

Makeup Policy for Excused Absences

Students who miss assignments (activities, quizzes, projects) will need to contact the instructor and turn in the valid excuse within 48 hours from the time that the assignments were due. The makeup schedule is determined by the instructor and will need to be done within ONE week (5 work days) from the time that the assignments were originally due. Students will need to check the class email for the makeup details. Students who miss the makeup without valid excuses will receive zero on the assignments.

The format, questions and difficulty-level of make-up exams are not guaranteed to be same as the normal exam. Students are not allowed to choose the makeup dates, formats on their own.

Valid excuses include: 1). illness documented by a physician. 2) evidence of personal or family emergency. 3) official university excuses.

Faculty Communication and Feedback

The preferred way to communicate is via the Discussion Board Q&A in Canvas or via AU Email (not gmail and not Canvas Inbox). However, Canvas may send messages about missing grades, etc. to Inbox; therefore, I recommend that you turn on Notifications in Canvas for Messages and Discussions so that you'll be notified about these via your AU Email account. When you communicate via AU Email, be sure to include the course number (e.g., "CPSC 1220") and the topic (e.g., "Project 2") as the Subject. For questions about assignments, posting the Q&A Discussion Board for the module has the advantage of allowing other students to view and respond to the questions. Before posting a question, it's a good idea to skim the questions and answers that have already been posted – you may find that the answer to your question. This is especially true for questions about the project assignments.

General Info - At the beginning of each course, make sure that you understand the instructor's preferred mode of communication and any specific communication protocol. One of the best ways to be effective as a student is to understand the instructor's expectations and operate within those boundaries. Students should give the instructor 48 hours to get back to them on any communication, and one week for grading turnaround time on major assignments. If students have concerns about communication or feedback, they should always go to the professor first. Students should explain their concern as clearly as possible without judgment or emotion. Effective communication is an important skill, and every interaction in their program is an opportunity to develop this skill.

Group Work

You are encouraged to participate in the Q&A Discussion Board for each module, and students may assist one another via the discussion board with answers to specific questions. However, you should refrain from posting code since the assignments in this course will be individual assignments, where students are expected to work on their own and hand in original work to receive individual feedback. Under no circumstances should you share your code with another student or receive code from another student.

Online Student Learning Expectations

All students in this course are expected to have completed the student orientation course. Through this orientation course, you will learn how to navigate the course and use the various tools that you will need in order to participate effectively and submit assignments. You are also expected to have all the equipment and software needed to be successful in the course. Note that a working webcam and microphone are required for proctored exams.

All students are expected to contribute to their own learning as active and well-prepared participants. Weekly modules will provide various opportunities for reading, reflection, applied experiences, collaboration, and writing. Since these activities are woven through the entire week and generally do not require your “electronic presence” at any particular time or day, there should be no need to “miss” class. You should plan on spending the same amount of preparation and “in class” time on this course as you would if you were taking the course face-to-face.

Be Patient and Stay Calm

Problems with technology will inevitably arise. Don’t worry and just keep smiling. Please be patient with your instructor and your instructor will be patient with you. Your instructor will always take technical problems into account if the situation warrants it.

Logging On

The learning activities for each week are carefully sequenced and offered in small chunks so you can accomplish reasonable amounts throughout the week. You should log on to the course website regularly to work through course materials and participate in course discussions.

Posting Responses

Interaction between students is an important part of this course and requires prompt postings and responses. In an attempt to be efficient with our time and considerate of everyone’s schedules—beyond the requirements of this course—we will operate under a consistent time structure for posting assignments and responses to online discussions.

Submitting Assignments

You will submit all other types of individually written assignments to the appropriate assignment dropbox. Unless otherwise noted, assignments will be due by 11:59 pm CT on the date noted on the class calendar.

Academic Integrity

Auburn University has adopted an Honor System proposed by its students and faculty to promote academic integrity and has enacted the following code:

“We, the faculty, instructors, and students of the (University course here) pledge to fulfill our mutual responsibilities to each other and the academic community at large with honor and integrity in order to build and maintain a climate of respect and trust that will enhance our research, teaching, and learning. We will support the Honor System of the School, and will not tolerate activities that undermine academic integrity.”

Academic dishonesty is an offense that will be reported to the Academic Honesty Committee. Please refer to the following document for further information regarding academic honesty:

- [Auburn University Student Academic Honesty Code](#)

Academic Honesty with Respect to Software Assignments

Students are expected to turn in their own individual work for activities and projects. Any copying of another person's work or misrepresentation of other work as your own will be grounds for getting zero points for that particular assignment and may be taken before the Academic Honesty Committee. This applies to all parties involved. **DO NOT SHARE YOUR CODE OR OTHER WORK WITH ANOTHER STUDENT.** You may help other students by answering their questions and by showing them how to do tasks that are similar to the assigned work (i.e., you may facilitate their learning) or you may receive help in this way. However, you have crossed the line when you make any part your work on an assignment available to another student or when you receive work from another student. This applies to both hardcopies and electronic copies. All submitted source files are subject to analysis by software that checks for plagiarism. Penalties apply to all parties involved.

Diversity and Inclusion

It is my intent that students from all diverse backgrounds and perspectives be well served by this course, that students' learning needs be addressed both in and out of class, and that the diversity that students bring to this class be viewed as a resource, strength and benefit. It is my intent to present materials and activities that are respectful of diversity: gender, religion, sexuality, disability, age, socioeconomic status, veteran status, ethnicity, race, and culture. All students in this course are expected to respect their fellow classmates and actively participate in fostering an inclusive learning environment. If you experience anything in this class that makes you feel uncomfortable, please bring it to my attention and we will formulate a response. If you would prefer to remain anonymous you may complete a Bias Incident Report which will maintain your confidentiality at: <http://studentaffairs.auburn.edu/bert/submit-a-report-of-bias/>

Your suggestions are encouraged and appreciated. Please let me know ways to improve the effectiveness of the course for you personally or for other students or student groups.

Accessibility

Students who need accommodations are asked to electronically submit their approved accommodations through AU Access and to arrange a meeting during office hours the first week of classes, or as soon as possible if accommodations are immediately needed. If you need accommodations but have not established them, make an appointment with the Office of Accessibility, 1228 Haley Center, 334-844-2096.