Course Syllabus

CPSC 2710 -- Software Construction Fundamentals (3 credits)

Catalog description

Development of graphical user interface-based, event-driven desktop/laptop computer application using a modern object-oriented language.  Systematic testing, debugging, documentation, and maintenance programming.

Texts

*The Definitive Guide to Modern Java Clients with JavaFX 17*, Second Edition, APress 2022, Stephen Chin, Johan Vos, James Weaver.  ISBN: 978-1-4842-7268-8

Contents

In this course we will cover desktop application development using JavaFX.  Topics include:

* JavaFX controls
* JavaFX layouts
* Styling applications using CSS
* Properties and Bindings
* Application development, testing and debugging
* Object-oriented design using UML
* Object-oriented design concepts including abstraction, encapsulation, coupling, and cohesion and their application to software design

Grading

Please review the [University Grade PoliciesLinks to an external site.](https://www.auburn.edu/cosam/departments/student-services/academic-policies.htm) which apply to this course.

Letter grades are assigned based on the percentage, rounded to the nearest integer, of the available points that you receive. The grading scale is fixed.  **I do not curve.**  The grading scale is as follows:

|  |  |
| --- | --- |
| Letter | Percentage |
| A | 90-100 |
| B | 80-89 |
| C | 70-79 |
| D | 60-69 |
| F | 0-59 |

Exams

There are no exams in this course.  It is entirely project based.

Homework assignments/projects

Programming homework and projects will be given periodically. Typically one per module. The point value of an assignment depends on its scope.  You are encouraged to ask questions in the public Canvas Discussions forum for this class but the work on these items (homework/projects) must be your own.

Expect to spend a substantial amount of time on homework/projects.

All homework assignments have a due date associated with them.  Late submissions will receive a 10% penalty for each 24 hours late, beginning the first minute after the due date/time.

All assignments must be submitted according to the instructions on the assignment.  E-mail or other forms of submission will not be accepted.

Please see contents below regarding academic integrity and the use of AI systems on homework.

Online student learning expectations

All students in this course are expected to have all the equipment and software needed to be successful in the course.  The equipment requirements are described on this course's Canvas pages.

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.

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.

Communicating with your instructor/TA

We have provided a course forum where you may post questions for classmates or the instructor.  You can send messages directly to your instructor via e-mail or direct-messaging within the forum tool.  Your instructor will indicate what communication method they prefer.

It can take practice to learn to properly communicate a question to your instructor.  For example, asking about incorrect behavior of a program requires a different approach than asking about a syntax error.  If you find that you are not getting helpful responses, it might be because you haven't communicated the question clearly.  Be patient and try to re-phrase it or include more complete information (such as full source code).  Put yourself in the seat of the instructor.  For example, I don't know of any way to debug a screenshot so if that's all you provide with regards to a bug you're experiencing, you are not likely to get a useful response.  Full source code might be useful (use zip!).  On the contrary, if you're having trouble installing something, sending screenshots or even a short video illustrating the problem might be all that is needed for your instructor to help you.

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. **The instructor reserves the right to alter these feedback parameters due to contingencies such as holidays, course progress, campus emergencies, weather, holidays, professional activities, etc. with notice provided.** 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.

**Your Auburn University email address is the university-approved form of communication between instructors and students.** Follow the steps [in the video linked here (links to an external site)](https://community.canvaslms.com/videos/1072)to set your notifications preferences and specify that all course alerts are routed to your Auburn University email address (userid@auburn.edu). You can contact [Auburn University's OIT Help Desk (links to an external site)](http://www.auburn.edu/oit/helpdesk/)for assistance forwarding mail sent to your Auburn email address to a different email address that you regularly check. Additionally, it is your responsibility to read course announcements sent by your instructor. These are posted in Canvas, and you can configure your notification preferences to receive an email each time a new announcement is posted.

**This course will be supported by Auburn University’s Canvas platform.** The syllabus, class assignments, occasional lectures, test grades, final grades, and important announcements will be posted to the Canvas site for this course. Check the Canvas site for this course frequently.

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 CodeLinks to an external site.](https://sites.auburn.edu/admin/universitypolicies/policies/academichonestycode.pdf)

Use of AI on assignments

Generally the use of AI systems (large language models such as ChatGPT and GitHub CoPilot, in particular) is not permitted unless explicitly indicated on the assignment.  You will find several cases where I recommend their use and I encourage you to learn to leverage these tools but only in those contexts.

Contingency policies

If normal class and/or lab activities are disrupted due to illness, emergency, or crisis situation, the syllabus and other course plans and assignments may be modified to allow completion of the course. If this occurs, an addendum to your syllabus and/or course assignments will replace the original materials.

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.

Use of content

All materials provided as part of this course, whether online or in person, are copyright protected and intended to be used solely for this course.  Further use or distribution to persons not involved in this course is an infringement of university policy.

Course Summary:

| **Date** | **Details** | **Due** |
| --- | --- | --- |
| Sun Aug 20, 2023 | Assignment [Module 1: Assignment part 1](https://auburn.instructure.com/courses/1520876/assignments/14339215) | due by 11:59pm |
| Tue Aug 22, 2023 | Assignment [Module 1: Assignment part 2](https://auburn.instructure.com/courses/1520876/assignments/14339216) | due by 11:59pm |
| Mon Aug 28, 2023 | Assignment [Module 2: Assignment](https://auburn.instructure.com/courses/1520876/assignments/14339217) | due by 11:59pm |
| Tue Sep 5, 2023 | Assignment [Module 3: Assignment](https://auburn.instructure.com/courses/1520876/assignments/14339218) | due by 11:59pm |
| Sun Sep 10, 2023 | Assignment [Module 4: Assignment](https://auburn.instructure.com/courses/1520876/assignments/14339219) | due by 11:59pm |
| Sun Sep 17, 2023 | Assignment [Module 5: Assignment](https://auburn.instructure.com/courses/1520876/assignments/14339220) | due by 11:59pm |
| Sun Sep 24, 2023 | Assignment [Module 6: Assignment](https://auburn.instructure.com/courses/1520876/assignments/14339221) | due by 11:59pm |
| Fri Oct 6, 2023 | Assignment [Module 7: Assignment](https://auburn.instructure.com/courses/1520876/assignments/14339222) | due by 11:59pm |