

Computer Science 260: Object-Oriented Programming

Spring 2019

Syllabus

Instructor: Bob Matthews

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Office Hours: See `matthews.sites.truman.edu`. I have an open door policy. Students are always welcome to stop by my office to ask for help, to discuss the class or their course work, or to talk about any other concerns.

Course Description: This course covers intermediate-level object-oriented programming techniques in Java, along with generic OO program design. We will cover the following topics this semester:

- A review of Java coding best practices
- Object-oriented software design: Project analysis, project design, UML, turning a design into an implementation
- Encapsulation, polymorphism, the design and use of interfaces
- Design patterns
- Design and use of inheritance hierarchies, super, sub and abstract classes, the exception hierarchy
- Graphics programming in Swing
- The Java object model, `clone()` and the `Cloneable` interface, shallow and deep copy
- An introduction to multi-threaded programming in Java

Text: Object-Oriented Design and Patterns, 4th ed., Cay Horstmann

Prerequisites: A C or better in CS 181.

Grading: Grades in the course are calculated using a point-based system. Students will have the opportunity to earn 1000 points during the semester, distributed as follows

- Two exams at 150 points each: 300 points
- Ten homework assignments at 30 points each: 300 points
- Five programs at 80 points each: 400 points

At the end of the semester, grades will be assigned according to the total number of points earned, using the following scale¹:

¹The instructor reserves the right to deviate from this scale on an individual basis and solely at his own discretion. If such deviations occur, they will never result in a grade lower than the announced scale. They may, however, result in grades higher than indicated by the scale. For example, if you earn 800 points, you are guaranteed a B. If you earn 799 points, however, you may receive a B if the instructor feels a higher grade is merited.

| | |
|----------------------|---|
| 900 or more points: | A |
| 800 - 899 points: | B |
| 700 - 799 points: | C |
| 600 - 699 points: | D |
| 599 or fewer points: | F |

Homework Collaboration Policy: Sets of homework problems will be given from time to time. You are encouraged to collaborate with other members of the class when working homework problems. However, *you must write up all homework solutions that you submit yourself.* No group submissions or submissions that are identical to another person's solutions are allowed, and doing so is considered to be a violation of the academic honesty policy of the course.

Plagiarism: While you are encouraged to discuss the lecture and homework with other members of the class or the academic community, ***any programs or exams that you submit must be solely your own work. Please note that I take this policy very seriously.*** Either giving help to or receiving help from anyone else on a programming project or exam (whether that person is a member of our class or not) is a violation of this policy. Violations will result in a zero on the offending submission, and may lead to other penalties, including failure of the course, or suspension or expulsion from the university.

Development Policy: Linux is one of the most important operating systems for a computer scientist to know. One important goal of this course is for you to improve your skillset by learning to develop code in the Linux environment. All programming work for this class must be done on the departmental Linux server ice, using the eclipse IDE and Java version 8.

In the real software development world, fixing bugs after software has been deployed is an expensive operation. If you submit multiple versions of your projects for evaluation, you will be penalized 10% of the total possible points for each version you submit, after the first.

Project and Homework Submission Policy: Late submissions of homework and projects are penalized 10% of the total possible points if they are turned in after the beginning of class on the due date. Each additional class day accrues another 10% penalty. The late clock does not run on days when the university does not hold classes.

In no case will homework or programming project be accepted after the fourth day after the submission deadline.

Course Web Page: Copies of class handouts and assignments will be posted on the course webpage sometime after they are distributed in class.

Attendance: The university expects students to attend all classes. If you cannot attend a class meeting, you are still responsible for all material covered during lectures, including handouts and announcements.

The university categorizes absences as either sanctioned or unsanctioned. Sanctioned absences are those where the instructor was informed of the absence before class time, **and** the absence is

due to attendance at an official university event, or due to illness or a personal emergency. All other absences are considered to be unsanctioned.

The matrix below explains the course policies and penalties that will be applied for absences on days when homework or projects are due, or exams are scheduled.

| | Sanctioned Absence | Unsanctioned Absence |
|-------------------------------------|---|--|
| Homework is due | The student may submit the homework at a pre-arranged time after the due date with no penalty. After the pre-arranged time, the late submission policy will apply. | The late submission policy applies. |
| A programming project is due | The student may submit the programming project at a pre-arranged time after the due date with no penalty. After the pre-arranged time, the late submission policy will apply. | The late submission policy applies. |
| An exam is given | The student may take a makeup exam at a pre-arranged time with no penalty. | No makeup exam will be offered. The student will be given a 0. |

Email Correspondence: Often times the easiest way for you to communicate with me is by email. Please understand, however, that even though I teach Computer Science, I do not have a computer permanently attached to my body. Email sent to me outside of normal business hours is unlikely to receive a prompt reply.

Final Exam: Fri. May 10, 11:30 – 1:20. *The final exam will be given only during the official final exam time.* Keep this in mind when making plans to depart from campus at the end of the semester.

Persons with Disabilities: 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 Disability Services office at 660-785-4478 as soon as possible.

Emergency Procedures: In each classroom on campus, there is a poster of emergency procedures explaining best practices in the event of an active shooter, hostile intruder, fire, severe weather, bomb threat, power outage, or medical emergency. This poster is also available as a PDF at this link:
<http://police.truman.edu/files/2015/12/Emergency-Procedures.pdf>.



Students should be aware of the classroom environment and note the exits for the room and building. For more detailed information about emergency procedures, please consult the Emergency Guide for Academic Buildings: <http://police.truman.edu/emergency-procedures/academic-buildings/>

This six-minute video provides some basic information on how to react in the event there is an active shooter in your location: <http://police.truman.edu/emergency-procedures/active-shooter/active-shooter-preparedness-video/>

Truman students, faculty, and staff can sign up for the TruAlert emergency text messaging service via TruView. TruAlert sends a text message to all enrolled cell phones in the event of an emergency at the University. To register, sign in to TruView and click on the “Truman” tab. Click on the registration link in the lower right of the page under the “Update and View My Personal Information” channel on the “Emergency Text Messaging” or “Update Emergency Text Messaging Information” link. During a campus emergency, information will also be posted on the TruAlert website <http://trualert.truman.edu/>.