

CS 270 Object Oriented Development and Design, Fall 2016

Lecture:

- A&S: 2:30-3:45pm, Bush 212
- Holt: 5:25-6:40pm, Bush 310

Web: <http://valerie.summet.com/cms270/fall16/index.html>

Instructors: Dr. Valerie Summet (vsummet [at] rollins.edu)
Office Hours (in Bush 218D):

- M, W: 4-5pm
- T 3-4:30pm
- by appointment (email to schedule)

Overview

Overview: This course studies the use of classes and objects. Upon completion of this course, it is expected that students will have a thorough understanding of the principles of object-oriented programming including abstraction, composition, inheritance, and polymorphism. Students will also be exposed to basic design patterns and advanced fundamentals of the Java programming language including Collections and generics.

Course Topics:

- Data Structures of various types (linear, non-linear, indexing, non-indexing, position oriented, value oriented) and advanced Java implementations (eg Collections)
- Object Modeling - UML; use cases; class, activity, and interaction diagrams
- Agile Development Process - incremental design, test-driven development, refactoring
- Design by contract, interfaces, and patterns (strategy, iterator, factory, etc.)
- Industry Standard Tools - Eclipse, JUnit, Git/GitHub

Textbooks

- OOP Demystified: A Self-Teaching Guide, Jim Keogh and Mario Giannini, ISBN: 078-0072253634. \$25.00
- Clean Code: A Handbook of Agile Software Craftsmanship, Robert C. Martin. ISBN: 978-0132350884. \$30.17.
- Head First Design Patterns, Eric and Elisabeth Freeman. ISBN: 000-0596007124. \$59.99.
- [Object Oriented Programming Using Java](#), Simon Kendal. ISBN: 978-87-7681-501-1. Free.

Prerequisites

CMS 167/170. We will review some crucial concepts, but you are expected to have had significant programming experience in Java.

Attendance policy

Attendance to lectures is not required and I do not take attendance. However, it is highly recommended and encouraged. When you miss a lecture, you are responsible for catching up with the material. Most in-class activities cannot be made up if you are absent.

Credit Hours:

4 Rollins College offers four-credit-hour courses that provide three (50-minute) hours of direct or indirect instructional contact. The value of four credit hours reflects the substantial individual attention each student receives from instructors as well as additional out-of-class activities. Faculty require that students undertake at least 7.5 (60-minute) hours of outside work per week, averaged over the course's duration and equaling two and one-half (2.5) 60-minute hours of outside work for every one (50 minute) hour of scheduled class time. In this course, the additional outside-of class expectations are substantial team-based programming projects and case study analysis. You may also be expected to complete "mini-courses" from online learning platforms such as lynda.com or Udacity.

Software:

You do not need to purchase any software for this course. In this course we will use free software including Java, Eclipse, and GitHub. You will receive further information about installing this software during the first week of classes.

Assignments:

Programming assignments will involve designing, coding, testing and debugging non-trivial programs based on a written assignment specification. Programs involve a conceptual understanding of language features as well as skills with various software tools. Homework must be completed individually although you are welcome to discuss general principles and concepts about the assignments with other students and the instructor. (See the below section titled "Notes on (Un)Authorized Collaboration" for appropriate collaboration policies.) Assignments must be turned in before the date and time indicated to be considered "on-time". Assignments will be accepted up to 48 hours

late (including holidays and weekends) but late assignments will have their score reduced by 20%. Assignments later than 48 hours will receive no credit. I am happy to work with you if you have an extenuating circumstance (religious holiday, University activity, etc.) and you **let me know in advance**.

Exams

We will have two closed-book exams (Mon. Sept 26, Wed. Nov. 2) and a final that will test your conceptual understanding of the material and will require some attention to programming details. Questions will be a mix of filling in the blanks, multiple choices, and short answers. They will sometimes require you to write or analyze short bits of code. Old exams and/or study guides will be made available prior to the midterm and a solution key will be provided after the exam.

This class WILL have a final exam. The scheduled date this semester is Fri, Dec. 9, 8:00-10:00am (A&S) or Wed Dec 7, 5:30-7:30pm (Holt). DO NOT make plans to leave campus before the final exam. The final exam will not be rescheduled except in emergency cases with documentation provided.

Grading

Your grade will be determined by a weighted average of all the graded items.

<u>Component</u>	<u>Weight</u>	<u>Score</u>	<u>Grade</u>
In-class activities	10	93.3-100	A
HW/Small programming assignments	15	90-93.3	A-
Project	20	86.6-90	B+
Exams	30	83.3-86.6	B
Final (cumulative)	25	80-83.3	B-
		76.6-80	C+
		73.3-76.6	C
		70-73.3	C-
		66.6-70	D+
		63.3-66.6	D
		60-63.3	D-
		0-60	F

Timely handling of grade disputes: Disputes of grading on assignments, exams, etc must be discussed within one week of their return or posting. While I will quickly correct small, bookkeeping errors, you may be asked to submit a written argument justifying why your work deserves a higher score.

I will maintain your grades on Blackboard so that you may track your progress. Should you find a grade recorded incorrectly, please bring it to my attention immediately.

Electronic devices

Do not let your use of electronic devices such as laptops or iPads disturb other students. Use of cellphones is not allowed during my classes. You will be asked to leave class if you are disturbing me or other students in any way.

Communications policies

Please use your official Rollins email for all communications. I do not discuss grades or other academic records via non-official email accounts such as gmail, Yahoo, etc.

I try to answer all emails within 24 hours during the work week. If you have not received a response within that timeframe, feel free to resend your email or ask me about it.

Honor code

Membership in the student body of Rollins College carries with it an obligation, and requires a commitment, to act with honor in all things. The student commitment to uphold the values of honor - honesty, trust, respect, fairness, and responsibility - particularly manifests itself in two public aspects of student life. First, as part of the admission process to the College, students agree to commit themselves to the Honor Code. Then, as part of the matriculation process during Orientation, students sign a more detailed pledge to uphold the Honor Code and to conduct themselves honorably in all their activities, both academic and social, as a Rollins student. A student signature on the following pledge is a binding commitment by the student that lasts for his or her entire tenure at Rollins College. The development of the virtues of Honor and Integrity are integral to a Rollins College education and to membership in the Rollins College community. Therefore, I, a student of Rollins College, pledge to show my commitment to these virtues by abstaining from any lying, cheating, or plagiarism in my academic endeavors and by behaving responsibly, respectfully and honorably in my social life and in my relationships with others. This pledge is reinforced every time a student submits work for academic credit as his/her own. Students shall add to the paper, quiz, test, lab report, etc., the handwritten signed statement: "On my honor, I have not given, nor received, nor witnessed any unauthorized assistance on this work." Material submitted electronically should contain the pledge; submission implies signing the pledge All material in this course is covered by the Rollins College Academic Honor Code. All students are expected to be familiar with and follow [the Honor Code](#).

If you have any questions about what does or does not constitute academic misconduct for this course, you should contact me for an explanation. Ignorance is not an excuse. Academic misconduct is not tolerated, will be prosecuted vigorously, and will be referred to the

Honor Council.

Notes on (Un)authorized Collaboration

Collaboration with other students in this CMS 270 class is an important learning method. However, collaboration should not extend to cheating (unauthorized assistance from others) or plagiarism (copying someone's work without attribution). The following guidelines will help you understand the difference between collaboration and plagiarism or cheating.

- Students may only collaborate with fellow students currently taking CMS 270 and the instructor. Collaboration means talking through problems, assisting with debugging, explaining a concept, etc.
- **You should never exchange code or write code for others.** A good rule of thumb is to always begin your assignments with a blank window.
- **You should never copy code verbatim from another source, including the course texts.** This is plagiarism.
- Each student must turn in a unique program.
- Your submission must not be substantially similar to another student's submission. Collaboration at a reasonable level will not result in substantially similar code.
- In the absence of written instructions, you should assume all assignments are individual assignments and should be completed alone, utilizing only *appropriate* collaboration.
- For all programming assignments, you must write comments at the top of each file which include the following information:
 - your name
 - your Rollins user ID (e.g. 'vsummet')
 - the Rollins College honor statement (as expressed above)
 - your collaboration statement for the assignment. The wording of this statement should be:
 - "I worked on this assignment alone, using only this semester's course materials." OR
 - "I worked on this homework with [give the names of the other students you worked with] and/or referred to [cite any texts, web sites, or other materials not provided as this semester's course materials for CMS 270]."
 - **I will not grade your work without the above collaboration information.** Should you accidentally omit your collaboration statement, I will ask you to submit it via email. Repeated omissions will result in a 10 point penalty on the assignment, and I will assume you worked alone with no outside assistance (i.e., the first statement above).
- Keep in mind that you are allowed to collaborate with other students currently in CMS 270. There is no penalty for **appropriate** collaboration when you give credit to other students/sources by including a collaboration statement. The instructor and the required textbooks should be treated as course material and need not be listed in the collaboration statement.
- Cheat detection software is used to analyze your submissions.

Accommodations

Rollins College is committed to equal access and inclusion for all students, faculty and staff. The Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 create a foundation of legal obligations to provide an accessible educational environment that does not discriminate against persons with disabilities. It is the spirit of these laws which guides the college toward expanding access in all courses and programs, utilizing innovative instructional design, and identifying and removing barriers whenever possible.

If you are a person with a disability and anticipate needing any type of academic accommodations in order to fully participate in your classes, please contact the Disability Services Office, located in the Mills Memorial Building, Room 217, as soon as possible. You are encouraged to schedule a Welcome Meeting by filling out the "First Time Users" form on the website: <http://www.rollins.edu/disability-services> and/or reach out by phone or email: 407.975.6463 or Access [at] rollins.edu.

All test-taking accommodations requested for this course must first be approved through the Disability Services Office (DSO) and scheduled online through Accommodate **at least 72 hours before the exam**. Official accommodation letters must be received by and discussed with the faculty in advance. There will be no exceptions given unless previously approved by the DSO with documentation of the emergency situation. We highly recommend making all testing accommodations at the beginning of the semester. DSO staff are available to assist with this process.

Title IX Statement

Rollins College is committed to making its campus a safe place for students. If you tell any of your faculty about sexual misconduct involving members of the campus community, your professors are required to report this information to the Title IX Coordinator. Your faculty member can help connect you with the Coordinator, Oriana Jimenez (TitleIX@rollins.edu or 407.691.1773). She will provide you with information, resources and support. If you would prefer to speak to someone on campus confidentially, please call the Wellness Center at 407.628.6340. They are not required to report any information you share with the Office of Title IX. Sexual misconduct includes sexual harassment, stalking, intimate partner violence (such as dating or domestic abuse), sexual assault, and any discrimination based on your sex, gender, gender identity, gender expression or sexual orientation that creates a hostile environment. For information, visit <http://www.rollins.edu/titleix>