

Course Information	Course Title: 95807 Object Oriented Programming for Managers Instructor: Neelam Dwivedi (ndwivedi@andrew.cmu.edu). Office Hours: Mon 1 to 3pm (or by appointment) Teaching Assistant: TBD																																													
Prerequisites	Basic programming knowledge																																													
Description	The course provides an overview of computer programming concepts and object-oriented thinking using the Java programming language. Students will be introduced to general programming concepts such as loops and recursions as well as the specific object-oriented themes of methods, classes, and inheritance. The goal is for the student to cultivate an appreciation and understanding of the impact of these concepts and themes on the management of large-scale software development projects.																																													
Course Materials	Reference Textbook (supplemental): • Core Java Vol 1 - Fundamentals • Heads First Java: Sierra and Bates. Software (required): • Best option: JDK 8: http://www.oracle.com/technetwork/java/javase/downloads/jdk8-downloads-2133151.html. You may install JDK 10 but make sure that everytime you create a new Project in Eclipse, you choose 'Do not create' option for Module. The IDEs and JavaFX are still facing some compatibility issues with Java 11 so I would stay away from it for now. • Eclipse IDE: https://www.eclipse.org/downloads/packages/release/2018-12/r/eclipse-ide-java-developers																																													
Evaluation Method	<table><tr><th>Activities</th><th>Count</th><th>Scoring</th><th>Points</th><th>%</th></tr><tr><td>Self-assessment</td><td>15</td><td>1 point each</td><td>15</td><td>7.5%</td></tr><tr><td>Feedback survey</td><td>15</td><td>0.5 point each</td><td>7.5</td><td>3.75%</td></tr><tr><td>Discussion posts</td><td>15</td><td>0.5 point each</td><td>7.5</td><td>3.75%</td></tr><tr><td>Homework</td><td>3</td><td>30 points each</td><td>90</td><td>45%</td></tr><tr><td>Lab assignments</td><td>9</td><td>Top8 considered for 5 points each</td><td>40</td><td>20%</td></tr><tr><td>Class quizzes</td><td>9</td><td>Top8 considered for 5 points each</td><td>40</td><td>20%</td></tr><tr><td>Total</td><td></td><td></td><td>200</td><td>100%</td></tr></table>						Activities	Count	Scoring	Points	%	Self-assessment	15	1 point each	15	7.5%	Feedback survey	15	0.5 point each	7.5	3.75%	Discussion posts	15	0.5 point each	7.5	3.75%	Homework	3	30 points each	90	45%	Lab assignments	9	Top8 considered for 5 points each	40	20%	Class quizzes	9	Top8 considered for 5 points each	40	20%	Total			200	100%
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Learning / Course Objectives	1. Use a Java IDE as well command line to test code snippets and author professional programs. 2. Learn Java language basics, including types, operators and program control. 3. Develop problem solving skills through practice and understanding of the divide-and-conquer and top-down approaches. 4. Form and manipulate collections of data (such as lists, dictionaries, tuples). 5. Learn the principles of object oriented programming in Java with usage of classes, inheritance, polymorphism, interfaces - with the goal of understanding code reuse and building scalable programs. 6. Be exposed to the SDLC (software development lifecycle) to understand how software applications are authored in industry. This includes basic UML usage and design concepts.																																													
Grading Scale	A+ 100% B+ 87 - 89% C+ 77 - 79% A 93 - 99% B 83 - 86% C 73 - 76% A- 90 - 92% B- 80 - 82% C- 70 - 72%																																													
Grading policies	1. Grade disputes, if any, must be reported to the TA or the instructor within one week from the day of grade-distribution. 2. Late submissions will NOT be accepted for grading 3. Please understand that if you plan to submit an assignment too close to the due date / time, it is your decision. You must keep sufficient buffer for any last minute surpsires, such as laptop / wireless technology issues.																																													

Course Activities	A typical week in this course will have several activities: Videos & Self-assessments: There is a significant part of course-content provided in the form of videos that you must watch <u>before the beginning of each week</u>. You are expected to perform three graded activities after watching each week's videos before <u>Sunday midnight</u>. <u>Complete weekly self-assessment</u> based on the video-content for which you will get two attempts. The higher of the two scores will be considered for grading. <u>Give feedback</u> in weekly Feedback Survey (FS). Your input will be visible only to the Instructor and the TA. <u>Participate</u> in class discussion through Discussion Posts (DP) to share your thoughts with the class. Lab: There are nine lab-assignments through the semester. Each lab is a programming problem related to the topic you covered in videos and self-assessments in the previous week. You will submit a Java program before the end of the week. <u>Top 8 lab scores will be considered</u> for your final grade. You can consult with me or the TA(s) if you need help in labwork. First two labs (Lab0A and Lab0B) will not be graded. Class Quiz (CQ): There are nine 10-minutes timed-quizzes that test your understanding about the material covered in the videos and the labs. <u>Top 8 quiz scores will be considered</u> for your final grade. Homework: There are 3 homework assignments and <u>all three will be considered</u> for your final grade. You will be given approx. two weeks to complete each HW submission.
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Course Schedule / Topical Outline: (Subject to change as needed)

Wk	Starting	Topic	Due previous Sunday	Due Sunday
Wk1	Feb 1	Intro	SA1*, FS1*, DP1*	Lab0A ⁺
Wk2	Feb 8	Data types	SA2*, FS2*, DP2*	Lab0B ⁺
Wk3	Feb 15	Data types, program flow	SA3, FS3, DP3	CQ1 + Lab1
Wk4	Feb 22	Classes and objects	SA4, FS4, DP4	CQ2 + Lab2
Wk5	Mar 1	Inheritance	SA5, FS5, DP5	CQ3 + Lab3
Wk6	Mar 8	Encapsulation	SA6, FS6, DP6	Homework1
Wk7	Mar 15	Polymorphism	SA7, FS7, DP7	CQ4 + Lab4
Wk8	Mar 22	Java FX	SA8, FS8, DP8	CQ5 + Lab5
Wk9	Mar 29	Java FX	SA9, FS9, DP9	CQ6 + Lab6
Wk10	Apr 5	Collections	SA10, FS10, DP10	Homework2
Wk11	Apr 12	Collections	SA11, FS11, DP11	CQ7 + Lab7
Wk12	Apr 19	Exceptions	SA12, FS12, DP12	CQ8 + Lab8
Wk13	Apr 26	I/O	SA13, FS13, DP13	Homework3
Wk14	May 3	Multithreading	SA14 & 15, FS14 & 15, DP14 & 15	CQ9 + Lab9

SA: Self assessments. **FS:** Feedback survey. **DP:** Discussion posts.

*Due at the end of 2nd week *Not graded

Students with Disabilities:

Our community values diversity and seeks to promote meaningful access to educational opportunities for all students. CMU and your instructors are committed to your success and to supporting Section 504 of the Rehabilitation Act of 1973 as amended and the Americans with Disabilities Act (1990). This means that in general no individual who is otherwise qualified shall be excluded from participation in, be denied benefits of, or be subjected to discrimination under any program or activity, solely by reason of having a disability.

If you believe that you need accommodations for a disability, please contact us ASAP, and we will work together to ensure that you have the correct access to resources on campus to assist you through your coursework and time at CMU.

Academic Integrity:

Carnegie Mellon University sets high standards for academic integrity. Those standards are supported and enforced by students, including those who serve as academic integrity hearing panel members and hearing officers. The presumptive sanction for a first offense is course failure, accompanied by the transcript notation "Violation of the Academic Integrity Policy." The standard sanction for a first offense by graduate students is suspension or expulsion. Please see <http://www.cmu.edu/academic-integrity/> for any questions. You are responsible for being familiar with the university standard for academic honesty and plagiarism.

Specifics for this course:

All labs, quizzes, and homework are meant to be your individual work. Copying from any source without citation, sharing your work with other students, or copying from other students will be considered as cheating and will be addressed according to the university policies. In order to deter and detect plagiarism, online tools and other resources are used in this class.

- **Acceptable**
 - You may discuss the requirements of the assignment, but not specifics, such as code
 - You may refer to code samples from the textbook, lectures and class handouts
- **Not Acceptable and Considered Cheating**
 - You may not discuss specific code in labs and homework
 - You may not look at or copy other's assignment code, in whole or in part
 - You may not have someone else write code for you
 - You may not copy code you find on the web
 - You may not submit another's work as your own
 - You may not have in your possession other students' assignments or exams from the current or past semesters
 - You may not share your assignment code with others
 - You may not use an alternate, stand-in, or proxy during an exam
 - You may not receive help from someone else during an exam

If students are found to be sharing code, both the student who shared their code and the student who used the code will be found in violation of the academic integrity policy. All students involved will be penalized equally.

Policy Regarding Students Using English as a Foreign Language:

Assignments in this course are graded with reference to evidence of the acquisition of concepts, presentation format, and accuracy of information. Having done business in countries that use languages other than English, we understand that the use of an unfamiliar language can result in unusual word choices or grammatical errors that are not critical to the overall understanding of the information. Therefore, we will take into account your need to function in a language that may be unfamiliar to you. We will provide feedback as appropriate if we feel that language or grammar you have used in assignments would be best if it were configured in a different way.

Use of Canvas System for this course:

In this course, we will use the Canvas system generally to post lecture notes and related documents and to receive assignments electronically from students. To access Canvas, go to <https://cmu.instructure.com>