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| Winter 2018 | CSI 2300, CSI 5005 Object Orientated Computing |
| | Section CSI 14464, CSI 15029 |
| | Oakland University, School of Engineering and Computer Science |
| | 4 credits |
| | Winter 2018 |

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| Lecture | Class - Mon/Wed, 3:30-5:17 p.m., Pawley Hall 306 |
| | **Mandatory: One Assigned Lab weekly** |
| | • Mon Lab 2:00-2:50 (section 14465), EC 566 |
| | • Wed Lab 2:00-2:50 (section 14466), EC 566 |

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| Lecturer | Laura Dinsmoor |
| | Contact Information - Email: dinsmoor@oakland.edu |
| | Office: 518 Engineering Center |
| | Office Hours: by appointment |

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| Teaching Assistant | Amruta Savekar, amrutasavekar@oakland.edu |
| Required Book | Programming Fundamentals Using Java, A Game Application Approach, McAlliser & Fritz, ISBN 978-1-938549-76-2 |
| Course Websites | Moodle: moodle.oakland.edu |

Course Description:
Introduction to object-oriented computer programming using a high-level programming language such as Java. Classes, member functions, inheritance, polymorphism and operator overloading. Design methodologies and introduction to software engineering principles and practices. Basic data structures, algorithms and event driven programming concepts are introduced.

Prerequisite(s): (EGR 141 or EGR 1400) or (CIT 130 or CSE 130 or CSI 1300) or (CIT 131 or CSI 1310) or (CSE 142 or CSI 1420) or equivalent.

Course Objectives:

- Use the concepts of object-oriented programming to create Java programs that solve a variety of problems [ABET CS: (a, b, c, i), IT (a, b, c, i)]
- Incorporate the use of conditions, loops, and recursions in the design of object-oriented programs [ABET CS: (a, c), IT (a, c, k)]
- Apply fundamental Unified Modeling Language techniques to the design of object-oriented programs [ABET CS: (a, b, c, i), IT (a, b, c, i)]
- Incorporate the concepts of inheritance and polymorphism in the design of Java classes [ABET CS: (c), IT (c, k)]
- Incorporate the use of string and array objects in the design of Java classes [ABET CS: (c), IT (c)]
- Design Graphical User Interfaces (GUIs) using AWT/Swing or JavaFX [ABET CS: (c), IT (c)]

Program Outcomes:
a) An ability to apply knowledge of computing and mathematics appropriate to the discipline;
b) An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution;
c) An ability to design, implement and evaluate a computer-based system, process, component, or program to meet desired needs;
i) An ability to use current techniques, skills, and tools necessary for computing practice;
k) An ability to identify and analyze user needs and take them into account in the selection, creation, evaluation and administration of computer-based systems.

## Course Delivery:
While this is not specifically an online course, some portions of the course utilize online programs. You will need to use the computer lab or (if you have one) your own computer, outside of class time to complete assignments and possibly watch videos. Java IDE's are not available on all the PC's on campus. Therefore, please plan your work accordingly. I will try to post all class videos online. Since this is not an online course, I cannot guarantee the availability of the videos.

Moodle is the tool I use for our class web page. I will be posting important notes to the class, exam dates, labs, and homework on our web page. It is your responsibility to read it throughout the week.

All due dates and times will be based on the time in Rochester, Michigan. Please keep this in mind if you are submitting assignments from another time zone.

Slides are provided on Moodle if you'd like to print them out to take notes on during class.

You will be expected to read each chapter we are covering in this class.

## Weekly Labs:

The purpose of weekly lab assignment it to give students an opportunity to practice material taught the week before. In addition, the work completed on this lab will be the basis for the next homework in terms of concepts, and in some case, the completed code itself will be required for the homework.

Starting with the second lab, when you arrive in the room you should write your name on the board as soon as you are ready to have your lab assigned from the previous week graded. As part of the lab grade, you need to answer questions as to how you wrote your code. Your lab must be zipped and submitted to Moodle prior to the end of you lab session, in order to receive credit. (Late labs are not accepted.)

Either while waiting to be graded, or as soon as you are graded, you should immediately start on the current assigned lab for that week. You may ask questions on the new lab assignment. Lab time is for lab questions only, not for help on homework. You can ask homework questions in class, on the homework forum, or make appointments with the instructor or TA during office hours.

**DO NOT fall into the habit of waiting until the week the lab is to be submitted to work on it during lab. Labs are based on material taught the week before. The longer you wait to work on labs, the higher the probability you will forget the information, and be lost in class.**

## Homework Submissions:

All homework assignments will be submitted using Moodle only. **Homeworks submitted late will have the grade greatly reduced for every 24 hours late. For example if it is due Sunday at 11 PM, if you turn it in before Monday at 11 PM you will lose 35% of the grade. If you turn it in my Tuesday 11 PM, you will lose 70% of the grade. If you turn it in after that you will get zero points.** There are no excuses accepted for late homework. Do not wait to the last minute to do your homework, because PC and network problems are not excuses for late homework. After the first homework, if the homework is zipped incorrectly, you will receive a zero for the homework.

Please read the following carefully to learn how on how to name your homework folder. Homework #-FirstName-LastName Example: Homework1-John-Smith.

Homework Questions:

Questions regarding the homework assignments should be posted to the homework forums, addressed with the TA during homework hours, or addressed during office hours. Homework questions received via email will not be answered. Questions will be answered within 24-48 hours of posting on the forum, therefore do not wait until the day the homework is due to post questions. In addition, please review other postings first to see if your question has already been answered. You may answer other studen'ts questions, but posting of the answer (code) is not allowed. You may answer other student's questions, but posting of the answer (code) is not allowed and will result in the person posting getting a zero on the assignment.

## Exams:

There will be three exams this semester. (The final exam counts as one of the three.) Exams will be multiple choice. You must bring in a picture ID and a pencil. I will provide the Scantron. You may bring in a double sided 8" x 11.5" sheet of paper, or two single sided paper of the same size.

Make up exams are not given for unexcused absences. Excused absences require documentation from a hospital, doctor, police report, or similar. This documentation must be submitted within one class periods of the exam, unless your reason for being out prevents you from coming into school in which case someone needs to notify me within three days.

## Attendance:

Attendance is not mandatory, but it is assumed you will attend all classes unless you have an emergency.

## Grading:

The following scale will be used for determining final grades.
Grade = Score/16 - 2

| Grade Weighting | Weighting |
|---|---|
| Labs | 5% |
| Homework | 10% |
| Exam 1 | 25% |
| Exam 2 | 30% |
| Exam 3 | 30% |

## Required Technology and Computer Knowledge

You also are expected to have a moderate level of computer proficiency in order to take this course. You should already be comfortable doing all of the following:

- Using your chosen computer operating system and a web browser that works with Moodle
- Following online directions for using a new program
- Ability to install software on your computer
- Troubleshooting basic computer problems
- Working through problems you can't resolve on your own with remote support technicians

## Technical Assistance:

For Moodle technical issues that you cannot resolve on your own, please contact the e-Learning and Instructional Support office:

- Phone : (248) 370-4566

For general PC issues call the OU Helpdesk

- Phone:  (248) 370-HELP

For questions regarding programming software install please contact the SECS Technology Helpdesk

- Phone:  (248) 370-2216

## Software Requirements:

We will be using Netbeans in our classroom and lab, but you are not required to use it.  If you would like to use Netbeans, you can use the pc's in the EC building, or install it on your own PC.

## EC labs and computers:

If you would like to use the PC's in the Engineering Center, you need to have an account to have an access to those computers; your Sail ID will not work to log on to those computers. To request a student account in order to use the EC lab computers, use this link:
https://www.oakland.edu/secs/student-resources/technology-offices/

To get into the EC building on weekends, or the labs in the EC any day you must know the last 4 digits of your Grizz ID, and have your student ID card. Card scanners next to the doors have instructions posted on them. Please test your card by the second week of class to verify it works. If it doesn't, it is your responsibility to demonstrate it before or after class to Professor Dinsmoor immediately.

## Academic Conduct:

Cheating is a serious academic crime. Oakland University policy requires that all suspected instances of cheating be reported to the Academic Conduct Committee for adjudication. It is assumed that ALL WORK THROUGHOUT THE TERM IS YOUR OWN! Discussion of homework and lab assignments is permitted but copying of assignments or parts of assignments is not! We will be reviewing homework submissions for similar code. Handing in a homework assignment that was essentially copied (fully or in part) from someone else does constitute cheating. All cases of suspected cheating will be turned into the Academic Conduct Committee for review.
**Submitted homework and labs must make use of syntax we discuss in class, or student must be prepared to explain how they wrote their code.**
It is your responsibility to keep your files safe so others cannot copy them and turn them in.

Students posting code for homeworks,  or labs on our forum, or other web pages on the Internet will be turned in for cheating. In the case a student is found responsible for academic misconduct, the student may receive a zero for the course or the assignment.

## Participant and Facilitator Expectations

Participants are enrolled into this course as a student participant role. There are quizzes and assignments throughout the course with specific due dates.

## Course participants are expected to:

- Ensure that their computer is compatible with Moodle.
- Attend all lectures
- Read material from book in advance of lecture. (Refer to schedule below and updated provided in class.)
- Attend all labs and complete assigned labs for credit
- Submit all homework on time
- Login into Moodle weekly to review and submit homework by their deadline
- Read and respond to emails within 3 days
- Participate in a thoughtful manner
- Respect rules of netiquette on forums
- Respect your peers and their privacy
- Use constructive criticism
- Refrain from engaging in inflammatory comments.

## The course instructor will:

- Meet with students within 3 days of requesting an appointment
- Grade exams within one week of the exam.
- Will attend all class sessions or provide a person or video back-up if not present

## The course teaching assistant will:

- Login to the course every day, or at least 5 days per week
- Moderate conversations in forums
- Respond to forum replies within 1-2 days
- Grade homework by the time the next homework is due

Inform your instructor of any accommodations needed:

Please email or see the instructor by September 18$^{th}$ if you have a documented disability and verification document from the Student Disability Services.

www.oakland.edu/dss

## Class Schedule:

Please refer to the following for official add/drop dates, holidays, etc:
https://oakland.edu/registrar/important-dates/

- Adjustments to the schedule will be made as needed and updates will be discussed in class and via Moodle.
- OU will be closed Monday January 15th, and February 19-23rd.

| Week of | Tentative Topics |
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| 3-Jan | Course Introduction, Chapter 1 Introduction |
| 8-Jan | Chapter 2 Variables, I/O and Calculations |
| 15-Jan | OU closed on Monday, Chapter 3 Methods, Classes, and Objects: A First Look |
| 22-Jan | Chapter 3 Methods, Classes, and Objects: A First Look |
| 29-Jan | Chapter 4 Boolean Expressions, Making Decisions, and Disk I/O |
| 5-Feb | Chapter 5 Loops (Repetition) Statements, Exam 1 |
| 12-Feb | Chapter 6 Arrays |
| 19-Feb | OU CLOSED WINTER RECESS |
| 26-Feb | Chapter 7 Method, Classes, and Objects: A Second Look |
| 5-Mar | Chapter 8 Inheritance |
| 12-Mar | Chapter 8 Polymorphism |
| 19-Mar | Exam 2, Chapter 9 Recursion |
| 26-Mar | Chapter 10 Exceptions, Chapter 11 Graphical User Interfaces |
| 2-Apr | Chapter 11 Graphical User Interfaces |
| 9-Apr | Chapter 11 Graphical User Interfaces, |
| 16-Apr | review for final |
| 25-Apr | Final exam, 3:30-5:30 in our classroom |

There is no lab on Wednesday January 3rd.