CS *260: Object Oriented Programming*
Spring 2019- Syllabus and Information

General Information

Contact Your Instructor

Name: *Mr. Tevis Boulware*
Email: *tevis.boulware@indstate.edu*
Phone: *812.237.8521*
Office: Gillum, G103A

Lecture, Exam, Office Hours

Lecture: *Tuesday, Thursdays, 11 AM – 12:15 PM,*
Classroom*:* Science 0138

Final Exam: May 9, 10 AM, Science 0138

Instructor Office Hours: M, T, W, TH after 3:00 to 4:30 By Appointment

Website: Blackboard Course Link

Prerequisites:

This course is designed as the student's first exposure to the object-oriented methodology and is the second in a series that provides students with a foundation for structured and object-oriented programming. This course builds on the structured programming concepts of the previous course CS 151 and CS256.

Reading

Required Text

Object Oriented Thought Process, 4th Edition, Author: Matt Wiesfeld. Publisher: Addison-Wesley
ISBN-13: 978-0-0321-86127-6

Optional Reading

In addition to the required reading, there are optional video tutorials (mostly YouTube videos) that provide alternative, dynamic explanations of the key concepts and programming techniques. While these videos are not required, and you will not be tested on the content of these video, it will be well worth your while to view the videos. As with the required reading, these videos are fairly short, and they add a little variety to the content.

Course Announcements
Announcements regarding the course will be made both during class and through the Blackboard Course site.

Classroom conduct
You may not use cell phones, iPods/music players, etc. during class. You should be civil and respectful to both the instructor and your classmates, and you should arrive to class a few minutes before the scheduled lecture so you are ready for lecture to begin on time. You may use your computer during class if you are using it to follow along with the examples that are being discussed. You may not check email, Facebook, work on other courses, etc. during class.

Course Description
Object oriented programming concepts and methods. Includes encapsulation, data abstraction, class development, instantiation, constructors, destructors, inheritance, overloading, polymorphism, libraries, and packages.

Object-Oriented Programming (OOP) has become a widely accepted methodology and most new software developments use Object Oriented methods and tools, especially cloud based applications. Object-oriented methods bring important benefits to the workplace, including reuse, localization of errors, protection of data, division of labor, etc. Employers are recognizing the benefits of object-oriented methods and are seeking these skills in their employees. You rarely see a job posting for software engineers or programmers that do not require object-oriented programming expertise.

This course is designed as the student's first exposure to the object-oriented methodology and is the second in a series that provides students with a foundation for structured and object-oriented programming. This course builds on the structured programming concepts of the previous course CS 151 and CS256.

You will learn to apply object-oriented concepts to programming problems in an active learning environment where you will be able to practice and perfect your design and programming skills. You will learn how to design an object-oriented program and how to implement that design. In addition to understanding object-oriented concepts, you will learn to select appropriate program techniques to implement the design concepts. The reading provides excellent description of the concepts, while the lectures will cover the programming techniques.

Throughout this course, emphasis is placed on understanding and correct usage of specific object-oriented concepts and techniques. Approaching the course content in this way ensures you will understand the underlying principles of object-oriented programming that are common to all object-oriented programming languages, not just Java. Understanding the basic concepts will make the programming much easier and you will find that you will be able to apply the concepts to any object-oriented language.

Course Outline

Week(s)	Topic
1	Introduction to Object Oriented Concepts and Principles
2 - 3	Introduction to Objects/Classes, Programming, and Unit Testing
4-5	Object Oriented Analysis, Design, and Programming
6 -7	Implementing programs with Composition
8	Review and Midterm
9-10	Implementing programs with Inheritance
11	Refining the design with Abstract Classes
12	Refining the design with Interfaces
13-14	Persistent Data Storage
15	Review Week
16	Final Exam

Learning Outcomes

Students who successfully complete this course will meet the following objectives:

CO 1. Articulate key characteristics of an object-oriented program.

CO 2. Describe the structure of a class and the purpose of the members of a class.

CO 3. Given program requirements that require at least two classes, construct a program that implements the requirements.

CO 4. Given the requirements for a program that requires two or more classes, create a program that implements class/object composition.

CO 5. Given the requirements for a program that requires two or more classes, create a working program that implements class/object inheritance.

CO 6. Given a program description where the solution will benefit from Abstract classes, create a working program that implements Abstract classes.

CO 7. Given a program description where the solution will benefit from an Interface create a working program that implements Interfaces.

CO 8. Given a program, that requires external, persistent data storage design implement a program provides input and output from a file system.

CO 9. Given a program that requires multiple classes/objects partition the program into logically, separated partitions.

Expected Amount of Work

If you take this class seriously and get what you should out of it, some weeks you will likely be spending around ***8-10 hours*** or more on the class. The students who get A's in their CS courses and have an easy time finding jobs do spend this much time on this course. Not everyone would need to spend this much time and not all weeks will be the same, but you should plan on putting in whatever time it takes.

Note - your classes should be more important than your part-time job.

Grading and Assignments

The students of this course have the following responsibilities: read assigned readings before lecture, attend lecture, complete homework assignments, take in-class quizzes, take exams, and complete a project.

The following specifies the point breakdown and grade scale for the course and provides a description of the assignments.

- **Attendance** will be recorded each class period for weeks 1 through 14, and will be worth 10 points per week, up to a maximum of 100 points for the course (this allows you to miss at most 4 classes without being penalized.)
- **Exercises** will be conducted each week, these exercises will be done partially in class and then completed outside of class. For the exercises, you can work with others,
- **Programming Assignments** are individual assignments where you will analyze, design, and implement the program.
- **Quizzes** will address the required reading and will be given before the material is lecture on and will be the first activity of each new module.
- **Midterm** will be a comprehensive test covering all the reading and lecture topics. There will not be any programming on the midterm.
- **Course Project** will be a month-long analysis, design, and implementation of an object-oriented program that implements all the concepts and techniques discussed in the course.
- **Final Exam** will be a comprehensive test covering all the reading and lecture topics. There will not be any programming on the final exam.

Grade Point Breakdown

Assignment	%	Points
Attendance	10.0%	100
Exercises	24.0%	240
Programming Assignments	24.0%	240
Quizzes	10.5%	105
Midterm	7.5%	75
Course Project	14.0%	140
Final Exam	10.0%	100
Total	**100.0%**	**1000**

CS Course Policies

Note that this course follows all standard CS course policies. In particular check the CS course policies related to - cheating/plagiarism, attendance, missing exams. See http://cs.indstate.edu/info/policies.html for details.

Attendance

Absences affect class participation and attendance is graded. For each student, ISU allocates four absences for the course, **regardless of excuse. However, you will receive a 0 for the attendance score of the day, unless prior arrangements are made**.

For every additional full absence after four, students will lose 1/3 of a letter grade from their final course average. For this reason, I'd advise you to save your absences for emergencies such as

illnesses, funerals, court dates, and child care needs; none of these will be considered valid reasons for additional absences beyond the given four.

If you are absent from more than nine class periods for any reason, you will automatically receive an F in the course, regardless of your mathematical course grade.

Additionally, please be on time to all class meetings. If you are late to class by my cell phone clock, you will receive a tardy. Three tardies will count as one absence, so be careful. If you are more than **fifteen minutes** late to class, you will simply be marked absent for the day and you will not be able to take the quiz. If you arrive late, it's your responsibility to check with me after class to ensure that you are marked as tardy rather than absent. Once class ends, the recorded attendance cannot be changed.

Late Work

There will be no late assignments accepted one week after the due date, unless you have a documented emergency AND make arrangements with me at least one day prior to the due date.

I will accept one "free" late assignment from each student for the term, this "free" late assignment must be submitted within one week (7 days) of the assigned due date If the assignment is submitted later than 7 days after the due date the assignment cannot be accepted. No late points will be deducted for this one "free" late assignments.

For late work after the "free" late assignment, you will receive a 4% deduction for each day the assignment is late, but no credit if the assignment is submitted more than 7 days after the due date.

Quizzes cannot be made up without prior arrangements.

Start Homeworks Early

We suggest attempting a homework assignment the day it is given, or the day after, so that if you have a problem you can ask early. If you continue to have problems in trying to complete the assignment, you will have time to ask again. Many of the homework assignments require thought and problem solving, which takes "time on the calendar" not just "time on the clock". By that we mean that spending two hours on 3 consecutive days may be more productive than trying to spend 6 hours at once on the assignment.

Grade Cutoffs

We try to design homework assignments and exams so that a standard cutoff for grades will be close to what you deserve. After the first exam a grade will be created in Blackboard called "Letter Grade" that is what your letter grade would be if the semester ended today.

Our goal is that the different grades have the following rough meaning.

Percent Range	Grade	Meaning
>= 95	A	You can do *all* the assignments ***on your own.***
90 – 94	A-	You understand nearly everything and should be all set to use this knowledge in other courses or in a job.
87 – 89	B+	
84 – 86	B	Most things you understand very well and a few you might not (more towards the former for a B and more towards the latter for a C).
80 – 83	B-	
77 – 79	C+	Learned enough and have the minimum skills to move on in the subject.
74 – 76	C	
70 – 73	C-	You did put some effort in, and understand many things at a high level, but you haven't mastered the details well enough to be able to use this knowledge in the future.
67 – 69	D+	
64 – 66	D	Students will normally *not* get an F if - you attend 80% of the lectures, complete some of the assignments up through the end of the course, and get nearly half of the problems on the final exam correct.
60 – 63	D-	
0 – 59	F	Normally, students that get an F simply stopped doing the required work at some point.

Blackboard

The course has a blackboard site. Click here to go to blackboard. You should see this course listed under your courses for the current term. The blackboard site is only used for giving you your grades (go to the course in blackboard, then click "My Tools", and then "My Grades"). All course content, schedule, etc. is kept in this google doc (which you are currently viewing).

Academic Integrity

Follow the standard CS course policies in terms of what is and is not allowed on assignments: http://cs.indstate.edu/info/policies.html

Plagiarism has serious consequences Indiana State University students. I personally do not hesitate to take disciplinary action if a student has plagiarized. Please review the university's Academic Dishonesty Policy, which can be found in the Student Code of Conduct: (www.indstate.edu/student-conduct).

It is perfectly acceptable to seek help from tutors, friends, and Internet research; however, it remains your responsibility to ensure that any work you submit is your own work. If a friend tutor, or Internet search, supplies you with the code or showed you how to code it, you cannot

claim the work as your own. I will work with you to help you understand the concepts and the programming techniques and ***I would rather see you submit the assignment late, or not at all, than submit work that isn't your own.***

When you find code on the Internet you cannot just copy the code and change a few variable names and slightly modify the algorithm. You can take the ideas from the any source and then create your complete original work based off the idea but copying and only minimally modifying the algorithm violates the Academic Integrity policy and rules.

Laptop Policy

For the purposes of this course, it will be assumed that you are in compliance with the mandatory laptop policy of the University. You will be expected to bring your laptop and be ready to use it for those class periods noted on the syllabus. Usage of the laptop must conform to the provisions of this course as laid out in this syllabus as well as the Code of Student Conduct.

On days when we look at materials on websites or the course Blackboard page, including assigned readings, you should bring your laptop. Failure to do so will affect your participation grade. Surfing the web, checking social media, playing games, etc. will result in a loss of participation points for the week.

Please ask the instructor if you have doubts about what is considered cheating in this course.

Special Needs / Student Disabilities

Indiana State University recognizes that students with disabilities may have special needs that must be met to give them equal access to college programs and facilities. If you need course adaptations or accommodations because of a disability, please contact us as soon as possible in a confidential setting either after class or in my office. All conversations regarding your disability will be kept in strict confidence. Indiana State University's Student Support Services (SSS) office coordinates services for students with disabilities: documentation of a disability needs to be on file in that office before any accommodations can be provided. Student Support Services is located on the lower level of Normal Hall in the Center for Student Success and can be contacted at 812-237-2700, or you can visit the ISU website under A-Z, Disability Student Services and submit a Contact Form. Appointments to discuss accommodations with SSS staff members are encouraged.

Once a faculty member is notified by Student Support Services that a student is qualified to receive academic accommodations, a faculty member is obligated to provide or allow a reasonable classroom accommodation under ADA.

Disclosures Regarding Sexual Misconduct

Indiana State University fosters a campus free of sexual misconduct including sexual harassment, sexual violence, intimate partner violence, and stalking and/or any form of sex or gender discrimination. If you disclose a potential violation of the sexual misconduct policy I will need to notify the Title IX Coordinator. Students who have experienced sexual misconduct are encouraged to contact confidential resources listed below. To make a report or the Title IX Coordinator, visit the Equal Opportunity and Title IX website: http://www.indstate.edu/equalopportunity-titleix/titleix.

The ISU Student Counseling Center – HMSU 7th Floor | 812-237-3939 | www.indstate.edu/cns

The ISU Victim Advocate – Trista Gibbons, trista.gibbons@indstate.edu

HMSU 7th Floor | 812-237-3939 (office) | 812-230-3803 (cell)

Campus Ministries - United Campus Ministries | 812-232-0186

http://www2.indstate.edu/sao/campusinistries.htm

www.unitedcampusministries.org | ucmminister2@gmail.com

321 N 7th St., Terre Haute, IN 47807

For more information on your rights and available resources

http://www.indstate.edu/equalopportunity-titleix/titleix