MCS/COMPSCI 220 Concept of Programming
Section 1: MW 9:30 AM - 10:45 AM. Hyer 210
Course Syllabus

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Welcome

Welcome to MCS220, Concept of Programming. In this course, we will focus on *object oriented design* and *implementation* in professional software development. Having a solid background and experience in object-oriented design will help us tremendously in our careers as application developers, system analysts, programmers, or software architecture. I hope by the end of this course, we all will have a thorough understanding and experience to design, implement, and test medium-size projects.

Required Texts

Java How to Program (10th Edition). 2014. H. M. Deitel and P.J. Deitel. Prentice Hall.

Course Description

In this course, we will study the process of professional software development using object-oriented program design through the use of the Java programming language. We will cover correct business programming style and documentation, program debugging and testing, database and file. In particular, we will design and implement a real-world application in which we focus on inheritance, programming with interfaces, and polymorphism that promote code reuse and coding at a high level of abstraction. This course is designed for students with at least basic Java programming experience.

Prerequisite: COMPSCI 172/COMPSCI 174. (Note that a student may not register for any course which is a pre-requisite for another course in which credit has been earned unless prior departmental approval is obtained)

Course Objectives

1	Given a description of a medium-scale, real-world problem, design algorithms and classes following object-oriented design concepts to solve this problem.
2	Given a description of a medium-scale, real-world problem, implement the solution in Java, write professional-level documentation and test the final deliverables.
3	Skillfully employ features of object-oriented programming such as encapsulation, inheritance, programming with interfaces, and polymorphism (optional) that promote code reuse and coding at a high level of abstraction in the development of a software system to solve a real-world problem

Course Schedule

Tentative Course Schedule

WEEK	READINGS Assignment	Description	Project/Exams
1	Chapter 1,2	Introduction to OOD, UML	
2	Chapter 3,4,5	Review Fundamental of Java (class/object, primitive data types, String, StringBuffer, if/then	Project 1

		switch/for/while/do-while)	
3	Chapter 7	Documentation, Array,	
4	Chapter 16	Testing, String	Project 2
5	Chapter 11	Exception Handling	
6	Chapter 17	File and Streams	Project 3
7	Chapter 6	Methods	
8	Chapters 8	Classes and objects	
9	**Mid term exam**	**Review for Midterm exam**	
10	Chapter 9	Inheritance	Project 4
11	Chapter 10	Polymorphism	
12	Chapter 14	Connecting to database - JDBC	Project 5
13	Chapter 15	Connecting to database – JDBC	
14	Chapter 20	Generic Collections	
15		Introduction to MVC framework and JUnit tests	
16	**Exam week**	Final exam	TBA

Grading Policies

Grading Policy

GRADABLE	POINTS
Labs	100
Mid term Exam	150
Projects	400
Final Exam	200
Homework	80
Quiz	70
Total	**1000**

Letter Grade	Percentage	Letter Grade	Percentage
A	**94 to 100%**	**A-**	**90 to 93%**
B+	**87 to 89%**	**B**	**84 to 86%**
B-	**80 to 83%**	**C+**	**77 to 79%**
C	**74 to 76%**	**C-**	**70 to 73%**
D+	**67 to 69%**	**D**	**64 to 66%**
D-	**60 to 63%**	**F**	**Less than 60%**

Course *Policies* and Procedures

Evaluation Criteria of projects

- **Timeliness:** The assignment is completed on time. Please see policy for late assignments below. Deadlines are given for all assignments.
- **Completeness:** All parts of a given assignment are to be submitted at the same time. However, if you have not completed an assignment by the time it is due, you are better off submitting what you have rather than nothing.
- **Accuracy:** The assignment has been completed according to the directions given. The deliverable delivered is what was asked for. Program needs to be run-able.
- **Content:** the format of the content will be given for each assignment and exam. These guidelines need to be followed closely.

Homework/Quiz:

Homework and Quiz is worth 18% of your grade. Quiz will be conducted **in class** only. **There is no made up quiz except for absence with documented excuse**. This serves to measure two factors (i) student attendance; and (ii) student's preparation for class. Students are expected to attend classes regularly. The instructor reserves the right to excuse an absence or deny an excused absence at his discretion. All requests for an excused absence should be made in writing and should be supported by appropriate documentation explaining reason for absence. Students are responsible for the portion of the material covered in class and any homework given during the semester. **Classroom etiquette requires you come to class on time, remain until class ends, and not maintain a conversation, not using IM, Facebook or emails while the instructor or another student is speaking.** Read assigned chapters from the textbook and supplementary material as assigned

Labs/Projects

Labs are designed in a way to show you steps by steps how to perform a certain task while project gives more rooms for you to be creative. All the labs/projects are due by the deadline given in each assignment. Students will be submitted each lab by dropping it at the dropbox in D2L before or by the due date. Specific guidelines for submitting labs/projects will be delivered by the time they are issued**. Project is individual work and there should be no team work for project development in this class. Codes that are detected to be identical or more than 80% similar with each other will be given zero credits for all parties involved.**

Late /Project

Each late project (except the last project) is penalized 5% for each day it is late. Because one of the goals of the class is to train students to be familiar with professional software development environment, **deadline is strictly followed** in this course. **The instructor will NOT accept any late submission for the last project because of the time required to grade a project in this class and the time constraints reinforced by the school to submit the final grade.**

Exam policy/Make-ups:

I will check student ID before midterm and final exams. A missed exam will count as zero unless the reason for missing the exam is approved by me as a valid excuse. This approval should be gained in advance except in cases of emergency. An exam missed for an approved reason will simply not figure into computing the grade for the course.

LANschool statement

LanSchool Classroom management software has been installed in the Hyland Hall computer labs and may be utilized by the instructor to limit applications and web access, monitor student computer activity, remote to student workstations and assist students with classroom and lab materials.Because of the functionality of the software, history of computer use including web browsing history is available to the instructors. Please assume that the software is active at all

class times.

Religious Beliefs Accommodation

Board of Regents policy states that students' sincerely held religious beliefs shall be reasonably accommodated with respect to scheduling all examinations and other academic requirements. Students must notify the instructor, within the first three weeks of the beginning of classes, of the specific days or dates on which they will request accommodation from an examination or academic requirement. For additional information, please refer to the section in the University Bulletin and the Timetable titled "Accommodation of Religious Beliefs."

Academic Misconduct

The University believes that academic honesty and integrity are fundamental to the mission of higher education and of the University of Wisconsin System. The University has a responsibility to promote academic honesty and integrity and to develop procedures to deal effectively with instances of academic dishonesty. Students are responsible for the honest completion and representation of their work, for the appropriate citation of sources, and for respect of others' academic endeavors. Students who violate these standards are subject to disciplinary action. UWS Chapter 14 identifies procedures to be followed when a student is accused of academic misconduct. For additional information, please refer to the section in the Student Handbook titled "Student Academic Disciplinary Procedures."

Absence for University-Sponsored Events:

University policy adopted by Faculty Senate and the Whitewater Student Government states that students will not be academically penalized for missing class in order to participate in university-sanctioned events. They will be provided an opportunity to make up any work that is missed; and if class attendance is a requirement, missing a class in order to participate in a university-sanctioned event will not be counted as an absence. A university-sanctioned event is defined to be any intercollegiate athletic contest or other such event as determined by the Provost. Activity sponsors are responsible for obtaining the Provost's prior approval of an event as being university-sanctioned and for providing an official list of participants. Students are responsible for notifying their instructors in advance of their participation in such events.

University Statement

The University of Wisconsin—Whitewater is dedicated to a safe, supportive and non-discriminatory learning environment. It is the responsibility of all undergraduate and graduate students to familiarize themselves with University policies regarding Special Accommodations, Misconduct, Religious Beliefs Accommodation, Discrimination and Absence for University sponsored events. (For details, please refer to the Undergraduate and Graduate Timetables; the "Rights and Responsibilities" section of the Undergraduate Bulletin; the Academic Requirements and Policies and the Facilities and Services sections of the Graduate Bulletin; and the "Student Academic Disciplinary Procedures" [UWS Chapter 14]; and the "Student Nonacademic Disciplinary Procedures" [UWS Chapter 17]).

Technology requirement

There are two applications that are used in this class.

Java Development Kit (JDK): http://www.oracle.com/technetwork/java/javase/downloads/index.html

(If you already have JDK 5 or later, you don't need to re-install the software development kit environment. All the machines at school have been updated with latest software development).

Eclipse: http://www.eclipse.org/downloads/ (choose Eclipse IDE for Java Developers)

MySql: http://www.mysql.com/

My preferences	I have tried to detail all course requirements in the syllabus, and I urge you to read the syllabus thoroughly and keep a copy of it handy for your review. You can always reach me through e-mail (nguyenh@uww.edu). When I am not traveling, I usually check my e-mail several times a day, so there is a great chance that I would reply to your message promptly.