ECE25100 – Object Oriented Programming **Spring 2018**

(Class: 2, Lab: 3, Credit: 3)

Instructor: Xiaoli Yang
Office: POTT-331 **Phone**: (219) 989-2763 **Fax:** (219) 989-2898 **Email:** yangx@pnw.edu
Class time: 9:00AM – 10:50AM M (POTT334)
Lab time: 8:00AM – 10:50AM W (POTT 308) & 9:30AM – 12:20PM F (POTT316)
Office hours: 9:00AM – 12:00AM T, and by appointment.
Course Website: http://www.pnw.edu/learning-technologies/mycourses/
Teaching Assistant: Yanjun Wu, wu959@pnw.edu
Lab Assistant: Ahmed Fayed, afayed@pnw.edu

Prerequisite: ENGR 15200 or equivalent

Course Description:
Introduction to object-oriented design and Java computer programming; examples and applications will be used to illustrate programming concepts.

Topics:
The course addresses the following topics:
- Introduction to Software Engineering
- Programming Concepts and Programming Basics in Java (what is programming, what is Java, how to compile/run a program, data types, variables, Java classes)
- Control Structures (loop and selection)
- Class and Object Definition (state and behavior)
- Arrays
- ArrayLists and Iterators
- Stream and Files
- Inheritance and Polymorphism
- Graphical User Interfaces

Course Objectives:
At the completion of this course, the students should
- understand the software development life cycle, and fundamental object-oriented programming concepts.
- be able to develop**,** code, and test well object-oriented programs by:
  - designing class and objects
  - using Java classes
  - defining inheritance
  - applying GUI

Textbook:
- Core Java Volume I--Fundamentals (10th Edition) by Cay Horstmann, Gary Cornell, Publisher: Prentice Hall PTR; 2016, ISBN: 0134177304
- Core Java(TM) 2, Volume II--Advanced Features (10th Edition) by Cay Horstmann and Gary Cornell, Publisher: Prentice Hall PTR; 2016, ISBN: 0134177290

References:
- Java How to Program (10th Edition), Publisher: Pearson, 2015, ISBN: 0133807800.

Assessment:

- Final Examination (30%)
- Midterm Examination (20%)
- Laboratory (20%)
- Assignment (20%)
- Project (10%)

Grading Scale:

- A : 90% − 99%
- B : 80% − 89%
- C : 70% − 79%
- D : 60% − 69%
- F : below 60%

Students are encouraged to collaborate on assignment problems and laboratories with your classmates. However, cheating of any kind, including copying of others' work of any kind is prohibited, and will not be tolerated. All university, school, and department rules will be enforced.

Each of assignments and labs will have a due date. To receive full credit, it must be turned in by the due date. Late submission is accepted within **three days** after the deadline, and receives **50%** of the points.

If for any reason a student cannot take an exam, contact the instructor **before** the scheduled time. Otherwise there may be no make-up exam arranged. Make-up exams are normally given **only for medical or other emergencies**.

Please note that the midterm/final examination is for evaluation purposes only and will not be returned to the students.

Attendance

Students are expected to attend each lecture. If a student has more than five absences, he/she will be withdrawn from the course.

Relationship to Program Outcomes

- Outcome A: Graduates will have the ability to apply knowledge of mathematics, science, and engineering.
- Outcome C: Graduates will have the ability to design a system, component, or process to meet desired needs within realistic constraints.
- Outcome J: Graduates will have knowledge of contemporary issues.
- Outcome K: Graduates will have an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.
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Assessment of Outcomes:

Course objectives and outcomes are assessed by assignments, labs, and exams.

Honor Code[1]

Academic Dishonesty Policy[2]

Classroom Civility Policies [3]

[1] www.pnw.edu/dean-of-students/honor-code

[2] www.pnw.edu/dean-of-students/purdue-university-northwest-academic-integrity-policy/

[3] www.pnw.edu/dean-of-students/toward-a-model-of-community-civility-student-guide-12006/

Students with Disabilities:
Students who may need accommodations to address barriers caused by documented disabilities under the Americans with Disabilities Act or Section 504 of the Rehabilitation Act need to register with the Disability Access Center (DAC) to receive accommodations. To request and receive accommodations, students schedule an appointment with the DAC to initiate review and approval of supporting documentation showing their disability, the barriers it causes, and the recommended accommodations. If documentation is approved, the DAC will email a letter to the student's current semester faculty members outlining the accommodations needed to ensure accessibility. Accommodations will be provided from the date the letter originates from the DAC. It is important to register as soon as possible as accommodations are not retroactive. The DAC is located at the Hammond campus in the Student Union & Library Building (SUL) 341 and Westville in the Technology Building (TECH) 101. The DAC can be reached at (219) 989-2455 or emailing: dac@pnw.edu. DAC website[4].

Student Mental Health and Wellbeing:
Purdue University Northwest is committed to supporting and advancing the mental health and well-being of our PNW students. During the course of their academic careers, students often experience personal challenges that contribute to barriers in learning, such as drug/alcohol problems, strained relationships, chronic worrying, persistent sadness or loss of interest in enjoyable activities, family conflict, grief and loss, domestic violence, difficulty concentrating, problems with organization, procrastination and/or lack of motivation. Students also sometimes come to college with a history of learning difficulties (e.g., any form of special education), experience difficulties succeeding in a particular subject (e.g., math, reading), or have experienced some form of trauma be it emotional or physical (e.g., head injury). These mental health concerns can lead to diminished academic performance and can interfere with daily life activities. If you or someone you know has a history of mental health concerns or if you are unsure and would like a consultation, a variety of confidential services are available. The Counseling Center is located in Gyte 05 in Hammond and TECH 157 in Westville. You can also reach us at (219) 989-2366 or on the Counseling website.[5] National Suicide Prevention Hotline[6] at (800) 273-TALK or on the web.

[4] www.pnw.edu/dac
[5] www.pnw.edu/counseling/
[6] suicidepreventionlifeline.org