PURDUE UNIVERSITY FORT WAYNE

Department of Computer Science
COLLEGE OF ENGINEERING, TECHNOLOGY, AND COMPUTER SCIENCE

Course Number and Name:
CRN = 21558 CS 16000-04 Introduction to Computer Science I (4 cr.)

Credits and contact hours: 4 cr. 4 contact hours (Two 75 mins weekly lectures and one 75 mins weekly lab work)

Spring 2024 [January 8th, 2024 – May 5th, 2024]
Tuesday, Thursday 10:30 am – 11:45 am, **ET 115**

Labs: (Students must register and attend one of the following lab sections.)
CRN = 21320 CS 16000-05 Tuesday 12:00 noon – 1:15 pm, ET 111
CRN = 21318 CS 16000-06 Thursday 9:00 am – 10:15 am, ET 111 [closed]
CRN = 21319 CS 16000-07 Thursday 12:00 noon – 1:15 pm, ET 111

Instructor or Course Coordinator:
Peter A. Ng, Ph.D.
Office: ETCS 125L
Phone: 260-481-6237 (office), 260-481-6803 (dept.)
E-mail: ngp@pfw.edu
Office hours: MW 10:30 am – 12:30 pm and by appointment **via email or Microsoft Teams**.
(Please call me before you come to ensure I will be in my office).

Graduate Teaching Assistants: Aman Bajpayee E-mail address: bajpa01@pfw.edu
Office hours on Monday from 3-4:15 in Neff Hall 366(?)

Catalog Description:
An introduction to the fundamental concepts and techniques of Computer Science. Students will learn to program using an object-oriented language. They will learn how to translate a real problem into a program description and how to write and test a program to implement their description. The emphasis will be on developing a professional style at an elementary level. CS 16000 will carry syntax as far as interacting classes, arrays of one dimension, and simple file i/o. Students with no programming background should instead consider CS 11200.

Prerequisites: MA 15300 College Algebra.

Type of Course: Required

Textbook and Reading Materials:

Required Textbook:

Starting Out with Java, From Control Structures through Objects, 7th or latest Edition, Tony Gaddis, 2019

Supplemental Materials:

Needed Software (Recommended)

Java

Eclipse IDE for Java Developers

*www.eclipse.org/**downloads***

jdk10 preferred.

Microsoft Teams:

You are invited as my guests in Microsoft Teams. If you download Microsoft Teams on your computer, you can access my lectures live via Microsoft Teams.

Course Objectives & Learning Outcomes:

The goal of this course is to introduce the object-oriented programming technique provided by the Java language. (Specific learning outcomes are listed below. The numeric numbers in parentheses refer to ABET CS Program Criteria 3 Student Outcomes.) A student who successfully fulfills the course requirements will be able to:

1. Recognize the software and hardware components of a computer system (6)
2. Recognize and apply the software development phases (6)
3. Utilize Java syntax in fundamental programming algorithms (1)
4. Recognize and apply the various input and output devices in programming (2)
5. Recognize and apply the various control structures (1)
6. Design and implement elementary multi-class solutions to programming problems (2) (6)
7. Recognize the need for arrays in the solutions of programming problems and manipulate data in one-dimensional arrays (1) (6)
8. Recognize and apply the basic debugging strategies in programming (2)

Course Learning Outcomes to Student Outcomes Mapping

Course Learning Outcome	ABET Criterion 3. Student Outcomes					
	1	2	3	4	5	6
1						●
2						●
3	●					
4		●				
5	●					
6		●				●
7	●					●
8		●				

Tentative schedule and topics [of CS 16000-04 with instructor Peter Ng]

Week Of	**Topic**		**Labs** (T or Th) Sections 5, 6, 7		**Projects**
	Tuesday	**Thursday**	**Tuesday (5)**	**Thursday (6, 7)**	
January 08	Ch 1 Introduction	Ch 2 Java Fundamentals	Lab 0: Intro Eclipse Due on 01/14 at	Lab 0: Intro Eclipse 11:59 pm (Sunday midnight)	All labs and projects are due on Sunday at 11:59 pm; assign on Monday at 0:30 am.
January 15 (MLKing Jr. No classes)	Ch 2	Ch 2	Lab 1 Due on 01/21	Lab 1 11:59 pm (Sunday midnight)	Project 1 is assigned on 01/15 at 0:30 am
January 22	Ch 2	Ch 3 Decision Structures	Lab 2 Due on 01/28	Lab 2 11:59 pm (Sunday midnight)	
January 29	Ch 3	Ch 3	Lab 3 Due on 02/04	Lab 3 11:59 pm (Sunday midnight)	
February 5	**Exam01**	Ch 4 Loops and Files I/O	Project Help Session	Project Help Session	Project 1 is due on 02/11 at 11:59 pm.
February 12	Ch 4	Ch 4	Lab 4 Due on 02/18	Lab 4 11:59 pm (Sunday midnight)	Project 2 is assigned on 02/12 0:30 am
February 19	Ch 5 Methods	Ch 5	Lab 5 Due on 02/25	Lab 5 11:59 pm (Sunday m.)	
February 26	Ch 5	**Exam02**	Project Help Session	Project Help Session	March 1, First Half Term Ended
March 4 Spring Break	Spring Break (Mar. 6-12)	Spring Break	Spring Break	Spring Break	
March 11	Ch 6 Classes and Objects I	Ch 6	Lab 6 Due on 03/17	Lab 6 11:59 pm (Sunday midnight)	Project 2 is due on 03/17 at 11:59 pm.
March 18	Ch 6	Ch 7 Arrays and class	Lab 7 Due on 03/24	Lab 7 11:59 pm (Sunday m.)	Project 3 is assigned on 03/18 at 0:30 am
March 25	Ch 7	Ch 7	Lab 8 Due on 03/31	Lab 8 11:59 pm (Sunday midnight)	
April 1	Ch 7	**Exam03**	Project Help Session	Project Help Session	
April 8	Ch 7	Ch 8 Classes and Objects II	Lab 9 Due on 04/14	Lab 9 11:59 pm (Sunday midnight)	Project 3 is due on 04/14 at 11:59 pm
April 15	Ch 8	Ch 8	Lab 10 Due on 04/21	Lab 10 11:59 pm (Sunday m.)	Project 4 (Optional) assigned on 04/15 at 0:30 am
April 22	Ch 8	Ch 8	Project Help Session	Project Help Session	Project 4 is due on 04/28 midnight
April 29 (FINAL EXAM WEEK)	**Final Exams Week/Last Week of Classes (April 29 – May 5)** **On April 30, Exam04** (on final exams week) **May 6: Final Grades Due at Noon**				

Lab-Assignments, Projects (50% of overall grade)

To receive credit for a programming assignment, submit the Java project folders containing the source code of your program in a zipped file format at the designated **Brightspace** location. Ensure that your name is clearly written on your assignments.

(Here's a step-by-step guide on how to submit your lab/project folder:

- Left-click on your lab/project folder (the one to be submitted) located on the right-hand side of Eclipse's text editor.
- Move the cursor to "Show In" and select "System Explorer" from the options.
- Right-click "System Explorer" to open a window displaying your lab/project folder from the workspace for submission.
- Left-click on the lab/project folder, then move the cursor to "Send to" and choose "Compressed (zipped) folder."
- Right-click on the "Compressed (zipped) folder" to create a zipped folder containing your program. This zipped folder includes settings (file folder), bin (file folder), src (file folder), .classpath (CLASSPATH file), and .project (PROJECT file) to be submitted.
- Upload this zipped folder to the designated location on Brightspace.

Follow these steps to ensure a successful submission of your programming assignment.)

Absolutely NO LATE assignments and projects will be accepted. **In the event of a late submission, a strict 10-point penalty (up to 50 points) will be imposed for each day that the assignment or project is overdue. However, no late submission will be accepted after 10 days without a valid reason. In such cases, you must provide your reasons for approval, and failure to do so will result in a grade of zero.**

Attendance:

Class attendance is a University requirement. Generally, you are expected to attend class. Attendance will be taken and may be graded, as explained under participation. Students who attend regularly typically have better academic performance. In the event of any missed classes, you are responsible for obtaining any course-related information or materials from your peers you may have missed.

Academic Honesty:

Do your own work. I expect students to help each other troubleshoot and solve problems together in this course. However, assignments should be done individually, so you should not copy or provide your work to other students. Copying materials from websites, open sources, or similar sources and pasting them into your work is strictly prohibited. Any cheating or plagiarism will result in a zero for the assignment, and a second occurrence will lead to automatic failure in the course.

Plagiarism/academic misconduct:

http://catalog.pfw.edu/content.php?catoid=49&navoid=1457#misconduct

This includes definitions of academic misconduct and the procedures faculty must follow if such student behavior is identified.