PURDUE
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FORT WAYNE

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

Course Number and Name:
CRN = 11648 CS 16000-01 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)

Fall 2024 [August 26th, 2024 – December 22, 2024]
Monday, Wednesday 1:30 pm – 2:45 pm, **ET 115**

Labs: (Students must register and attend one of the following lab sections.)
CRN = 11674 CS 16000-02 Monday 3:00pm – 4:15pm, ET 109
CRN = 11675 CS 16000-03 Wednesday 3:00pm – 4:15pm, ET 109

Instructor or Course Coordinator:
Peter A. Ng, Ph.D.
Office: ETCS 125L
Phone: 260-481-6237 (office), 260-481-6803
E-mail: ngp@pfw.edu
Office hours: MW 11:00 am – 012:30 pm and by appointment.
TTh 1:00 pm – 02:30 pm and by appointment.
(Please call me before you come to ensure I will be in my office).

Graduate   Austin Robinson, E-mail address: robiam06@pfw.edu
Teaching   Office hours: Monday and Wednesday from 4:30 pm -5:45 pm in Neff Hall, room 366
Assistants:

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, 8th, Tony Gaddis, 2022 ISBN-13: 978-0-13-735794-9. Pearson.

Supplemental Materials:
Needed Software (Recommended)
Java
Eclipse IDE for Java Developers
www.eclipse.org/downloads
jdk10 preferred.

Microsoft Teams:
You are invited to be my guest on 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		●				

Major Topics Covered:

- Computers and Java
- Java Fundamentals
- Decision Structures
- Loops and Files I/O
- Methods
- Classes
- Arrays and Class
- Classes and Objects

Requirements for the Grade of the Course:
The grade will be based on

1) Attendance, Class Participation, and Quizzes (200 points)
2) Ten Labs (200 points; 20 points each) + Lab 0 (Bonus 10 points to the Labs)
3) Three Projects (300 points; 100 points each) + Project 4 (Optional, Bonus 20 points to the Projects)
4) Three Examinations (300 points)

Each Exam is worth 100 points, each Lab is worth 20 points, and each Project is assigned a weight of 100 points. However, Lab 0 has a bonus of 10 points, and Project 4, which is optional, has a bonus of 20 points.

Grading Scale for the Course
The following scales will be used: A [100-90]; B (90-80]; C (80-65]; D (65-50] and F (50-0].
Note that Plus-minus grading is not used.

The final grade is determined by your course average score and the policies below.

To pass this class, *you must*:
- Complete all the "Labs" assignments
- Submit at least three projects receiving a C or better
- Complete all three examinations.
- The final grade for the course can be no more than one letter grade higher than the average grade for the three examinations (exam average).
  - For example, an exam average of a C means the highest letter grade for the course the student can receive is a B.
  - An exam average of an F means the highest letter grade for the course the student can receive is a D.

As for all CS courses, CS majors must receive a C in this course for the credit to count.

Attendance and Participation (20% of overall grade)

Attendance policy

Class (including lab) attendance is mandatory unless there is a good reason to miss a class. Students must attend all lectures and lab meetings. Please use email to inform the instructor, Peter Ng, before the meeting in case a class meeting needs to be missed and the instructor, Austin Robinson, in case a lab meeting needs to be missed.

Poor attendance can result in the loss of a letter grade, as Attendance, Class Participation, and Quizzes account for 20% of the final grade for the course. Missing 30% or more of the classes for unexcused reasons will result in the participation points being docked from your final grade.

What constitutes participation?

Participation in this class will consist of three components:

- Weekly endcap quizzes - Quizzes may be given in class and are graded based on participation.
- Attendance – Attendance is mandatory, and missing classes can adversely impact your participation score and, consequently, your final grade for the course.
- In-class participation – Engaging in activities such as answering and asking questions will be beneficial. Attending class regularly and staying attentive will contribute to your success in passing the course.

Additionally:
- Bring your laptop if you have one.
- Computer games - Playing computer games during classes is strictly disallowed in the classroom.

Exams (30% of overall grade)

Four exams are scheduled throughout the semester (refer to the Tentative schedule and topics below). Each exam covers material since the last exam. **No make-ups will be granted for any exam unless pre-approved or in the event of a valid emergency.** In case of an emergency, please promptly contact the instructor.

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 each day 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.**

The instructor reserves the right to adjust the number of assignments/exams and their respective weights during the semester.

Throughout the semester, unannounced quizzes may be given at any time. The material for these quizzes will be drawn from lab assignments and lectures. No make-up quizzes will be given. A grade of zero will be assigned for any missed quiz.

Incomplete grade (for information only)

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

A grade of I may be granted to students (1) who are unable to complete specific course requirements for clearly unavoidable, nonacademic reasons (such as extended illness or relocation) and (2) whose work has been of passing quality up to that time. A student must have a majority of the required coursework completed (as determined by the instructor) before the instructor is permitted to assign a grade of incomplete. A grade of I will not be considered an alternative to an anticipated low grade in a course.

Tentative schedule and topics [of CS 16000-01 with instructor Peter Ng]

Week Of	Topic		Labs (M, Section 2, or W Section 3)		Projects
	Monday	**Wednesday**	**Monday (2)**	**Wednesday (2)**	
August 26 Monday	Ch 1 Introduction	Ch 2 Java Fundamentals	Lab 0: IntroEclipse Due on 9/1 at	Lab 0: Intro Eclipse: 11:59 pm (Sunday Midnight)	All labs and projects are due on Sunday at 11:59 pm; and assigned on Monday at 0:30 am
September 2 Monday (Labor Day)	Labor Day Recess(begin 8/30 4:30pm)	Ch 2	Labor Day Recess Due on 09/15 at	Lab 1 11:59 pm (Sunday Midnight)	Project 1 is assigned on 9/2 at 0:30 am
September 9 Monday	Ch 2	Ch 3 Decision Structures	Lab 1 Due on 09/15 at 11:59 pm (Sun Mid)	Project Help Session	
September 16 Monday	Ch 3	Ch 3	Lab 2 Due on 09/22 at	Lab 2 11:59 pm (Sun. Mid)	
September 23 Monday	Ch 3	Ch 4 Loops and Files I/O	Lab 3 Due on 09/29 at	Lab 3 11:59 pm (Sunday Midnight)	
September 30 Monday	**Exam01** (Covers Ch 1 thru Ch 3)	Ch 4	Project Help Session	Project Help Session	Project 1 is due on 9/29. Project 2 is assigned on 09/30 at 0:30 am
October 7 Monday	Ch 4	Ch 5 Methods	Lab 4 Due on 10/13 at	Lab 4 11:59 pm (Sun. Mid)	
October 14 Monday	Ch 5	Ch 5	Lab 5 Due on 10/20 at	Lab 5 11:59 pm (Sun. Mid)	
October 21 Fall Recess October 21-22	Fall Recess (October 21-22)	Ch 6 Classes and Objects I	Fall Recess	Project Help Session	
October 28 Monday	Ch 6 Classes and Objects I	Ch 6	Lab 6 Due on 11/3 at	Lab 6 11:59 pm (Sunday Midnight)	Project 2 is due on 10/27. Project 3 is assigned on 10/28 at 0:30 am
November 4 Monday	Ch 6	**Exam02** (Ch 4 - Ch 6)	Project Help Session	Project Help Session	
November 11 Monday	Ch 7 Arrays and class	Ch 7	Lab 7 Due on 11/17 at	Lab 7 11:59 pm (Sunday Midnight)	
November 18 Monday	Ch 7	Ch 7	Lab 8 Due on 11/24 at	Lab 8 11:59 pm (Sun. Mid)	
November 25 Monday (Nov 27-Dec 1 Thanksgiving)	Ch 7	Thanksgiving Recess (Nov 27 – Dec 1)	Project Help Session	Thanksgiving Recess begins after last class on Tuesday (Nov. 27 – Dec 1)	Project 3 is due on 11/24. Project 4 (optional) is assigned on 11/25 at 0:30 am
December 2 Monday	Ch 8	Ch 8	Lab 9 Due on 12/8 at	Lab 9 11:59 pm (Sun. Mid)	
December 9 Monday	Ch 8 Classes and Objects II	Ch 8	Lab 10 Due on 12/15 at	Lab 10 11:59 pm (Sunday Midnight)	Project 4 is due on 12/8 at 0:30 am
December 16 (FINAL EXAMS WEEK)	**Final Exams and Last Week of Classes (December 16 - 22)** **Exam03 (On final exams week Dec 16, 2024)?** **December 23: Final Grades Due at Noon**				

Other Course Policies

End-of-semester exam policies:
http://catalog.pfw.edu/content.php?catoid=49&navoid=1457#finalexaminations

Next-to-last week.
No instructor may schedule an examination-comprehensive or non-comprehensive-except for laboratory and practicum courses, during the week preceding the last week of a fall or spring semester.

Final week.
With the exception of courses classified as individual instruction, clinic, studio, practice teaching, or research and those offered for 0 credits, each class is expected to meet for a two-hour session during the last week of each fall or spring semester. The two-hour session is to be used for (1) a final examination; (2) a last, non-comprehensive examination; (3) submission of an out-of-class examination or assignments; or (4) a regular class meeting.

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.

Communication:
Active participation in the classroom, which includes asking questions, making suggestions, and seeking help when needed, is encouraged. Outside the classroom, I am committed to responding to emails and available during office hours. **Please do not wait until the end of the semester to inform me of your difficulties/problems or make suggestions to improve the course.** Your timely feedback is valuable and can contribute to shaping the course contents and enhancing its overall equality.

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 as well as the procedures faculty **need** to follow if such student behavior is identified.

Research and Reading Course-related Materials:
I expect students to learn to research course-related materials and read them.

Lap-Top Computer in Classes:
Students are welcome to use laptop computers to take class notes. However, if laptops are used for activities unrelated to the course, the privilege of using them in class may be revoked, and the laptop computers may be forfeited. Please ensure your laptop use focuses on course-related activities during class sessions.

Tutors:
Seek help from your instructor, teaching assistant, or tutors early in the process. Remember, their role is to assist and guide you, not to provide solutions. Seeking their help when needed, especially in the early stages, will enhance your understanding and ability to tackle challenges independently.

Note to Students with Disabilities:
 "If you have a disability and need assistance, special arrangements can be made to accommodate most needs. Contact the Director of Services for Students with Disabilities (Walb Union, Room 113, telephone number 481-6658) as soon as possible to work out the details. The SSD office will provide you with a Disability Accommodation Verification Card attesting to your needs for modification that you need to bring to me. For more information, please visit the website for https://www.pfw.edu/disabilities/.

Note for Free Personal Counseling Services:
PFW and the Department of Computer Science recognize that personal problems can sometimes interfere with a student's ability to progress in his/her academic program. To help students address such problems, PFW makes free personal counseling services available at Walb 210. To schedule an appointment with a PFW/PARKVIEW Student Assistance Program (SAP) counselor call 373-8060.

Stay Connection:
Use PFW's Brightspace to access the lecture notes, assignments, exams, or any information regarding the course throughout this semester.

I can be reached through my email account: ngp@pfw.edu. If you correspond with me via email (such as using your PFW email account, your Yahoo, Hotmail, or Gmail account), you must specify the Subject line as Subject: CS 16000-01.

PFW Dates to Know

August 26-September 1	Late Registration and Drop/Add
August 30	Regular Credit-to-Audit Deadline
September 1	Last Day for Full Refund
September 23	Pass/Not Pass Deadline
September 27	Last Day to Request Withdrawal (First Half-Term Classes)
October 4	Audit-to-Credit Deadline
October 25	Last Day to Request Withdrawal (Full-Term Classes)
December 16-22	Final Exams Week/Last Week of Classes

Course Evaluation
Course evaluation is an important component of the Computer Science Department's assessment plan. Data gathered from assessment surveys helps us to evaluate and improve course content and delivery. To ensure that these data reflect the experiences of all students, your participation is required in both the Student Evaluation of Instruction and the Course Learning Outcomes Assessment surveys. These surveys are distributed online via the Purdue Qualtrics system, each taking 2-5 minutes to complete. Approximately two weeks before the end of the semester, you will receive a link to each survey via your PFW email account. These surveys are anonymous, and no results will be released to the instructor until after the end of the semester. The CS Department expects you to complete both surveys before the final exam date. If you have difficulty accessing a survey, you should immediately notify the instructor or the CS Department Administrative Assistance (~~Mrs. Kaye Pitcher, pitcherk@pfw.edu~~, 260-481-6803).

ABET CS Program Student Outcomes
The following learning outcomes are defined by ABET, our accrediting agency, for computer science programs. According to **ABET's Criterion 3. Student Outcomes,** graduates of the program will have the ability to:

> 1. Analyze a complex computing problem and apply principles of computing and other relevant disciplines to identify solutions.
>
> 2. Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
>
> 3. Communicate effectively in a variety of professional contexts.
>
> 4. Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
>
> 5. Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.
>
> 6. Apply computer science theory and software development fundamentals to produce computing-based solutions. [CS]

Final Note:
How Can We Help You?

One of the hallmarks of a professional in any field is to know when she/he does not know some fact, procedure, or principle and realizes that answers must be sought from another source. This is certainly standard practice in the computing field, where assistance is sought daily from personal relationships such as your cubicle-mate, your boss, your employee, a friend across the room or the world (via the Internet), or numerous non-person sources. In this course, we want you to begin to exercise such professional practices. You do not have to feel "alone" when struggling with problems. Here are some of the resources that are available to you:

- lab assistant(s) for this course as well as the other sections professor(s)
- classmates in this course

- students who have taken a similar course before
- tutors at the Center for Academic Support and Advancement (CASA, www.pfw.edu/casa) have been exceedingly helpful to students in this course in the past
- websites with relevant information on similar courses
- website for Sun Microsystems (Java language developer) http://www.sun.com
- website for Borland (JBuilder application developer) http://www.borland.co

Resources for to tell students about

Math and Science Tutoring – help with math and science courses or math/science-related assignments in any course. Call 260-481-5740 or stop by Kettler Hall G19 if you do not find an available tutor on **TutorTrac.**

PFW Writing Center - is to help writers learn to use language more effectively, produce clear writing appropriate to their purposes and audiences, and develop positive attitudes about writing and themselves as writers. Located on the Second Floor of the Library.

Tutoring Center – also located on the second floor of the library offers tutoring in other subjects.

Foreign Language Lab – located in LA 258 to help students in any foreign language course.

Dean of Students (https://www.pfw.edu/offices/dean/faculty-and-staff-resources/**)**
Responsible for implementing the PFW Code of Student Rights, Responsibilities, and Conduct (http://catalog.pfw.edu/content.php?catoid=49&navoid=1457#code). The staff advises students about the student complaint process, grade appeals, and other concerns they may have about the university. The Dean of Students office oversees many resources for our students as part of our student wellness program: https://www.pfw.edu/offices/dean/student-wellness/

Walter E. Helmke Library
Helmke Library   https://library.pfw.edu

Ask-a-Librarian   https://guides.library.pfw.edu/askalibrarian
Topic Guides to get you started on your research   https://guides.library.pfw.edu/home

Major Factor Link: **https://www.pfw.edu/departments/coas/news/major-factor/list.html**
Which major might be right for you than to hear from some amazing PFW College of Arts and Sciences students and recent alumni in their own words?

Important Information for Students

Balancing life and school is not always easy. At Purdue University Fort Wayne every student matters. We are your Mastodon family and we CARE. If you are feeling sad or depressed, are having trouble sleeping, concentrating, finishing tasks, feeling anxious or fearful, or have any concerns, academic or otherwise, it can be helpful to talk with someone. Asking for help can be hard, but it is an important first step.

There are several campus and community resources created to help you navigate a wide variety of challenges.

First is the CARE team. They help students create a plan to confront difficulties while providing support and the resources needed to keep them safe and successful. Any faculty or staff can help you get to the CARE Team. They can be found at https://www.pfw.edu/offices/dean-of-students/about/care-team or call the Dean of Students office at 260-481-6601 or dos@pfw.edu

The Student Assistance Program for counseling is staffed by The Bowen Center and is located on the second floor of Walb in the Health Center. The 24-hour Counseling Hotline is 800-342-5653. For more information go to https://pfw.edu/get-support

The PFW Police Department is trained to respond to mental health/psychological emergencies; the Fort Wayne Police Department also has crisis intervention officers available 24/7. In case of emergency, call 911 (from a campus phone 9-911).

For more information or other resources, contact Project COMPASS (COMmunity Partners Against Student Suicide) at compass@pfw.edu

And for COVID-19 student-specific information:
https://www.pfw.edu/microsites/coronavirus/students/resources

Please read the following message from Ryan McCombs, Director of Disability Access Center:

The Disability Access Center (formerly SSD) hopes you had a wonderful and safe winter break. We have implemented a few changes in the Disability Access Center to strengthen resources for faculty and services for students. To see more information on these changes, please check out the DAC website. A few highlighted changes are:

1) **Syllabus Statement(s):** We have developed two syllabus statements that instructors are encouraged to use in their syllabi each semester so students are aware of accommodations.
2) **Course Accessibility Letters (CAL):** We are utilizing a new accommodation letter, called a Course Accessibility Letter (CAL), that notifies instructors of a student's accommodations for their course. CALs will be sent to students via PDF and students are encouraged to share their CAL with instructors, notifying them that an accommodation is needed for the course to have equal access. We encourage instructors that have questions or need assistance with implementing accommodations in their course(s), to reach out to us at ssd@pfw.edu.
3) **DAC Testing Center:** We have updated the process for instructors and students using the DAC Testing Center, along with new Delivery/Return methods of exams, request window for exams in the DAC, and practices for ensuring academic integrity. Please read this section on our website in its entirety as the information is very important when preparing for accommodated testing. We ask that you do not send an exam to the DAC Testing Center until we have notified that a student requested accommodated testing in the DAC.

4) **DAC Modified Attendance and Deadline Accommodations:** We have updated our Modified Attendance Policy and have provided a Modified Attendance Agreement form that instructors and students are encouraged to fill out if needed. These are resources for instructors and can be found on the DAC website under the Faculty Resource tab.

Have a great semester and please reach out to us in the Disability Access Center if you have questions.

Sincerely,

Ryan McCombs
Director
Disability Access Center
mccombsr@pfw.edu

//CS 160-01 Course Syllabus Fall 2024_08122024