CS 161 Introduction to Computer Science I

Winter, 2017

Contact Information

Instructor:	Becka Morgan
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Office:	**ITC 302C**

Class Meeting Times:	**MTWR 10 – 10:50 or 1 – 1:50**
Office Hours:	**See www.wou.edu/~morganb for updated office hours**
Textbook:	**Barnes, David J. and Kolling, Michael, Objects First with Java, Fifth Edition, Prentice Hall, 2011. ISBN 9780132492669**

Course Description & Prerequisites

This course is an introduction to computer science using Java language. The emphasis will be on object-oriented design. Important concepts such as object interaction, testing, and documentation will also be addressed. This class is the first class of a two class sequence, with the same book being used for both classes. The goal for this quarter is to complete part I of the textbook (chapters 1 through 7). Attendance at the weekly labs is quite important as the book is best used as a lab manual. Note that the software used in this class—the BlueJ environment and the Java SDK—are both free for downloading.
Prerequisite: CS160

Course Outcomes/Objectives

Upon successful completion of the class, students should be able to:

- Decompose complex problems into manageable sub-problems, and write algorithms to solve these sub-problems.
- Read and explain algorithms written by others; apply and adapt algorithms; reason about basic algorithmic correctness and complexity.
- Read and explain the effects of basic language operations and control structures (sequential, conditional, iterative, and sub-program calls); appropriately use control structures in the design of algorithms and correctly implement those structures in the syntax of the language under study.
- Apply common techniques to debug logic errors and correct syntax errors.
- Read and explain the changing state of program memory objects; implement and modify programs that use primitive and structured memory objects (arrays, structures/records, objects, collections).
- Explain scope and lifetime as applied to memory objects; explain the difference between static and dynamic memory and types.
- Use existing components in programs; design, implement, and document components; implement communication between multiple components within a program.
- Describe the language translation process; demonstrates the use of editors, compilers and debuggers to successfully translate high level language source code into executable programs.

Course Outline

Week	Topics and Notes	Pre-Lab	Labs	Exams
1	Class Introduction & Overview Chapter 1: Objects and Classes		L1	
2	Chapter 2: Class Definitions, 2.0-2.10	PL2	L2	Q1
3	Chapter 2: Class Definitions, 2.11-2.18	PL3	L3	
4	Chapter 3: Object Interaction	PL4	L4	Q2
5	Chapter 3: (finish) & Chapter 4: Grouping Objects	PL5	L5	
6	Chapter 4: (finish)	PL6	L6	Q3
7	Chapter 5 More sophisticated behavior	PL7	L7	
8	Chapter 6: Designing Classes	PL8	L8	Q4
9	Chapters 7: Well-behaved objects		Project	
10	Chapters 7: (finish), Term Review		Project	Q5
11	Finals Week See week #11 outline for exam details			Final Exam

Course Requirements

- Quizzes and Exams must be taken at the times and dates scheduled. Quizzes and Exams may not be taken outside of the lab. There will be no makeup quizzes or exams. If you must miss an exam due to a REAL emergency, contact your instructor (phone or email) PRIOR to the exam time.
- The Final Project is required for a passing grade of greater than C-
- A minimal mastery of the content is necessary to be successful in the next class in the CS program; so a minimal mastery grade is required on the final in order to receive a passing grade in the course.

Course Notes

- READ THE CLASS POLICIES & STUDENT TIPS FILE on the class website (http://csclasses.wou.edu) for detailed class policies and tips.
- It is important finish the reading/tutorials PRIOR to doing the labs. The topics covered in this course are difficult and may be hard to understand otherwise.
- An incomplete grade will be given only in unusual circumstances. You must be passing the class at the time of the request for an incomplete, and there must be a serious event that prevents you from completing the class.
- Please review Western's Students Rights and Responsibilities, and the campus policy on plagiarism.
- See the "academic calendar" at: http://wou.edu/provost/registrar/calendar.php for all important academic dates for the term and holidays.
- Remember that the syllabus is a guideline to this course, it is not a legal contract. Situations may arise that could require modifications to this guide. Any changes will be announced in class or posted on the class web site.

Grading Scale

Components				
Labs/Exercies:25%	**A**	92-100%	**C**	72-77%
Quizzes: 25%	**A-**	91-92%	**C-**	70-71%
Project: 10%	**B+**	88-89%	**D+**	68-69%
	B	82-87%	**D**	62-67%
Final Exam: 40%	**B-**	80-81%	**D-**	60-61%
	C+	78-79%	**F**	0-59%
Notes:	See the "Student Tips" page for more details on labs/exercises, quizzes, grading and points.			

Academic Honesty Policy

Code of Student Responsibility 574-031-0030 Specific Standards and Policies

The following list of prohibited forms of conduct is not all inclusive since it is not possible to list all potential violations. The University requires that all students behave in a manner congruent with established community standards and in a manner conductive to the development of the individual. Actions detrimental to the mission of the University and the legitimate activities of the academic community which constitute the University are in violation of this Code and may be subject to judicial procedures.

*Academic dishonesty, which includes but is not limited to:

Cheating: intentional use or attempted use of artifice, deception, fraud, and/or misrepresentations of one's academic work;

Fabrication: unauthorized falsification and/or invention of any information of citation in any academic exercise;

Facilitating dishonesty: helping or attempting to help another person commit an act of academic dishonesty. This includes students who substitute for other persons in examinations or represent as their own papers, reports, or any other academic work of others;

Plagiarism: representing without giving credit the words, data, or ideas of another person as one's own work in any academic exercise. This includes submitting, in whole or in part, prewritten term papers of another of research of another, including but not limited product of commercial vendor who sell or distribute such materials. And the appropriation of and/or use of electronic data of another person or persons as one's own, or using such data without giving proper credit for it; or

Any use or attempted use of electronic devices in gaining an illegal advantage in academic work in which use of these devices is prohibited, and such devices include but are not limited to cell phones, PDAs, laptops, programmable calculators, etc.

Programming language source code is no different where academic honesty is considered. The code you write in a Computer Science course is not essentially different from the paper you write for a Literature or History class. They are both your own work and ideas.

Disability Statement

If you have a documented disability that requires academic accommodations at Western Oregon University, you are required to have your accommodations coordinated through the Office of Disability Services (ODS). ODS is located in APSC, Rm. 405. Phone: 503-838-8250 VTTY. Email: ODS@wou.edu

Veterans and active duty military personnel with special circumstances are welcome and encouraged to communicate these, in advance if possible, to the instructor.

Wolf Connection System Referral Program

Students in this class may be referred to the WOU Student Success Specialist (SSS) if the instructor determines their performance in the class is placing them at academic risk. The SSS will offer to work with referred students to address issues and develop a student success strategy. Irrespective of whether a referral has or has not been made, you are ultimately responsible for tracking your own progress in this course.