2014

CSCI 180-01 Computer Science II

Liz Johnson

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**CSCI 180 Computer Science II**

**Class:** MWF 2-2:50 pm, Location: Cintas 204

**Instructor:** Liz Johnson  
**Office:** Hinkle 109  
**Phone:** 745-3667 (has voice mail also)  
**Email:** johnsone@xavier.edu  
**Office Hours:** MWF 10 am – noon, T 1-3:30 and by appt  
**Textbook:** Objects First with Java - Barnes and Kolling - Fifth edition  
**Home Page:** On Canvas (access via canvas.xavier.edu)

### Course Objectives

The goal of CSCI II is to help students develop problem-solving skills and express those skills in reasonably efficient, well-structured computer programs automating the solutions to problems. At the conclusion of the course it is our objective that you will be able to:

- read and analyze text, including: explaining code; using documentation to determine what code does; analyzing problem descriptions to determine the tasks necessary for solution.
- design solutions to problems, implement them in Java, document the solution at a level that allows beginning programmers to understand your solution, and develop test cases to provide evidence your solution is correct.
- conduct independent explorations into the course material, including development of plans for exploring possible solutions and acting independently on that plan.
- identify possible extensions to problems you work on, exploratory questions about the topics in the course, and multiple methods for solutions.

### Grading

Grades on all assigned work and exams will be based on correctness, clarity and style; presentation counts. Your grade will be based on 4 components:

- 40% Exams (Exam 1=10%, Exam 2=10%, Cumulative Final Exam=20%)
- 40% Projects
- 15% Homework
- 5% Quizzes
In addition to the above components, you will be required to participate in a service opportunity working with elementary schoolchildren. This will either take the form of 1 Saturday morning at Breakthrough Cincinnati on campus or 2 sessions at the Academy of World Languages (AWL). We will have a sign-up sheet soon so that you can choose your date(s). If you cannot make these sessions due to your schedule, talk to the instructor so that we can come up with an alternative service opportunity for you.

The Department of Mathematics and Computer Science follows the following grading standard:

- A: Exceptional - The student's attainments are out of the normal course, unusual and special.
- B: Good - The student's performance is done rightfully or skillfully and is commendable.
- C: Satisfactory - The student's accomplishments are sufficient for the needs of the course.
- D: Minimal passing
- F: Failure

Plus/minus modifiers on the grades will be used to distinguish efforts within a particular category as deemed appropriate by the instructor. Note that there is no A+ or D- grade. See http://www.xavier.edu/mathematics/Grading-Policy.cfm for further clarification of the departmental grading policy.

Letter grades are based on your average and will, in general, will be determined by the following scale:

- A: > 93
- A-: >= 90 and < 93
- B+: >= 87 and < 90
- B: >= 83 and < 87
- B-: >= 80 and < 83
- Etc. (C+, C, C-, D+, D, F according to the above pattern)

Grades on individual assignments will be posted to Canvas as they are available and a running calculation of your current grade will be included. Keep in mind that the current grade may sometimes exaggerate or downplay certain components. For example, if no exams have occurred, the effect of the homework is magnified in your grade.

Learning Assessment Components

Over the course of the semester, you will be assigned homework at least weekly and given several days to complete the assignment. You are permitted to discuss the homework openly with others in your class. This does not mean that you may copy each other’s work, however. Students
should write homework independently after these discussions. On your completed assignment, you must note the names of students with whom you discussed the homework. Late homework will be penalized 10% for every day it is late. Once homework has been discussed in class (usually the class session immediately after it is due), it can no longer be turned in for credit. Note that late hours are rounded up. So, for example, if you turn in a homework 1 hour late, it is as if you turned it in 1 day late.

**Quizzes** will be individual work. The purpose of quizzes are to help you reflect on class material and to assess your understanding. You may take each quiz twice before the due date but you may not discuss the quiz with other students or compare answers. You may use class notes or assigned reading material when completed a quiz. Quizzes will be posted on Canvas immediately after each class session and will be closed 15 minutes before the next class session starts. The lowest two quiz grades will be dropped.

**Projects** will be individual work. You are permitted to discuss general concepts with other students but cannot share code or algorithmic solutions. There will be approximately 4-5 projects over the course of the semester. Projects are due on the date specified but may be turned in late with a 10 point penalty for each late day. Note that late hours are rounded up. So, for example, if you turn in a project 1 hour late, it is as if you turned it in 1 day late. For some projects, you may be required to turn in preliminary work halfway through the period allotted to the project.

**Exams** will be individual work. Approximate Exam 1 and Exam 2 dates are listed in the calendar at the end of this syllabus. Exact exam dates will be announced at least 10 days before the exam. The final exam will be Wednesday, May 7 from 2-3:50 pm. Exams must be taken at the date and time specified except in the case of emergencies. In general, the instructor must be notified about an emergency before the time of the exam so that permission for accommodation can be given. Students who have a documented disability that requires exams to be taken in the Learning Assistance Center will be accommodated.

**Student Responsibilities**

You should set up Canvas so that you are alerted when messages are sent and assignments or announcements are posted. You are responsible for knowing due dates. Missing a due date because you did not check Canvas will not be excused.

You are expected to prepare for class, attend class, participate in class discussions, work on in-class activities as assigned, treat others in the class with respect and generally promote a positive, learning community. Activities which detract from this in the classroom include tardiness, use of cell phones, use of computers other than for the class activities or
notetaking, sleeping, doing work not related to class during class time, inattention during class discussions, etc. These activities are disrespectful to your instructor and your fellow students and are a waste of your tuition dollars. Making class valuable for students is a shared responsibility between students and the instructor. Do your part.

Any student who feels she or he may need an accommodation based on the impact of a documented disability should contact the Learning Assistance Center at 513-745-3280 on the Fifth Floor of the Conaton Learning Commons, Room 514, to coordinate reasonable accommodations.

**Academic Honesty**

The work you submit **must** be your own. In this class, this means that even if you are permitted to work with someone else (as on homework), you understand everything that you turn in. On quizzes, the work is your own but you may use your class notes and reading material as reference. On projects, the code is your own and on exams, all work is only yours. You also have a responsibility to ensure that another student does not violate this policy with your work. For example, you must not allow another student to copy your code.

I take the preceding paragraph seriously and expect students to take it seriously. See section 2.3.9.1 of the Xavier Student Handbook for a fuller discussion of the Academic Honesty policy at Xavier. Failure to exhibit academic honesty may result in a 0 on an assignment, exam, or quiz or could result in an F in the course.

**Schedule**

This is an approximate schedule for major topics and will be adjusted as needed during the semester.

Week 1: Chapters 1 and 2 (object orientation and Java)
Weeks 2 and 3: Chapter 3 (multiple objects)
Weeks 4 and 5: Chapter 4 (collections)
Week 6: Exam 1 (approx. 2/17) and Chapter 5 (Java libraries)
Week 7: Chapter 6 (class design)
Week 8: Chapter 7 (testing)
Weeks 9 and 10: Chapter 8 and 9 (inheritance)
Week 11: Chapter 10 (abstract classes and interfaces)
Week 12: Exam 2 (approx. 4/7) and Chapter 11 (GUIs)
Week 13: Recursion
Week 14: Trees
Week 15: Chapter 12 (error handling)