CSC 216 | Section 051 – Course Syllabus
Programming Concepts – Java
2010 Summer Semester

Section 051:	TWH from 11:40am-12:55:pm in EBII 1226
Instructor:	Dr. Sarah Heckman
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Office Hours:	T & W 1:00p-2:00p in EBII And by Appointment
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Course Website & Contacting Teaching Staff

This semester we will be using the Moodle Course Management System. When you log into the Moodle system, your course section will be listed. The message boards and submission lockers will be within the Moodle system. We will be using the Wolfware Classic Gradebook and assignment feedback will be retrievable through Wolfware Classic. To access all course information, use the following URL:

http://courses.ncsu.edu/csc216

When you have a question, we recommend that you email the class support list, csc216-051-sup@wolfware.ncsu.edu. By emailing the support list, both the instructor and TA will receive your question. If you have a question that everyone would benefit from knowing the answer to, please post to the course Moodle Forum found under the top level topic.

Course Objectives

Upon successful completion of this course, a student will be able to...

1. Describe the utility of inheritance, abstract classes, interfaces, and polymorphism in object-oriented systems, and design and implement programs which use these language features;
2. Identify the phases of a simple model of the software life cycle, and employ these phases in developing software;
3. Describe basic design modeling techniques, including UML class diagrams and simple design patterns (e.g. model/view/controller), and indicate how and when to use them;
4. Identify and compare the basic kinds of software testing, describe when to use each method, and design and implement test code;
5. Navigate and extract information from the Java API, and employ the Javadoc tool to construct internal documentation of source code;
6. Design and implement a finite state machine;

7. Identify when recursion is useful, and design and implement recursive algorithms and simple recursive data structures;
8. Construct and use a stack, queue, array-based list, and linked list.

Prerequisites and Co-requisites

Prerequisite: C- or higher in CSC116

Required Materials

- S. Reges and M. Stepp, Building Java Programs: A Back to Basics Approach.
  - ISBN for 1st Edition: 0321382838.
  - ISBN for 2nd Edition: 0136091814
- S. Reges and M. Stepp supplemental chapters to Building Java Programs. These will be provided on course website for those with the 1st edition text.
- NCSU CSC Department: Style Guidelines (http://courses.ncsu.edu/csc116/common/style_guidelines.pdf)

Grading

Assignment	**Percentage**
Project 1	15%
Project 2	15%
Exercises	15%
Attendance	5%
Exam 1	15%
Exam 2	15%
Final Exam	20%

Grading will be on the following scale where X is your overall weighted average using the above percentages:

Range	**Grade**
98 <= X <= 100	A+
92 <= X < 98	A
90 <= X < 92	A-
88 <= X < 90	B+
82 <= X < 88	B
80 <= X < 82	B-
78 <= X < 80	C+
72 <= X < 78	C
70 <= X < 72	C-
68 <= X < 70	D+
62 <= X < 68	D
60 <= X < 62	D-
X < 60	F

Credit Only and Audit Students

The grade of "CR" will be awarded to students who earn a 70% or higher in the course and have attempted all programs and exams.

The grade of "AU" will be awarded to students who take all exams and earn a 60% or higher on two of the exams. Auditors are required to meet with the instructor during the first two weeks of the course.

Exams

There will be three exams in this course counting a total of 50% of your final grade. These exams will cover all materials (readings, lectures, projects, guest speakers, etc.) covered by the exam. The final exam will be cumulative.

Exercises

For almost every class period there will be an associated exercise. Exercises may be due before, during, or after class. These exercises will be used to check pre-class readings, and to see how well you understand the material that was presented in lecture the day of the class. The exercises will be scored out of 10 points. If you attempt the exercise you will receive at least a 5 (out of 10) on the assignment. The lowest two exercise scores will be dropped, and the remaining scores will be averaged. Late exercise submissions will not be accepted.

If you are absent from class, with an excused university absence, you will not be penalized for missing the exercise *associated* with the class (i.e. the exercise listed under the same topic as the class period).

Programming Projects

There are 2 programming projects this semester. These projects will be submitted electronically with all documentation by the due date. The programming assignments will consist of writing mobile applications for the Android mobile operating system. All programs are to be completed using Android SDK 1.6, Release 2 at API Level 4. The Android SDK is available from http://developer.android.com.

The teaching staff encourages you to use the Eclipse Integrated Development Environment with the Android development plug-in. A tutorial for setting up Eclipse and the Android development plug-in on your home computer will be provided on the course website. Additionally, a VCL image with the appropriate environment is available for use through http://vcl.ncsu.edu. The image name is AndroidDevelopment.

All projects will be developed in teams of 3-5 students.

Androids

Each team will be provided a Motorola Droid with version 2.1 of the Android operating system. The phone will be signed out to one person on the team who will be responsible for the phone over the course of the semester. There will be periodic Android checks in class that will count for a team's exercise credit for the day. These in class checks will ensure the phones are functional. The phone will be used for acceptance testing of the projects developed by the team. All phones must be turned in to the instructor by the end of class on Friday, August 5th. If the phone is not turned in by that deadline, the responsible person will lose 20% off their Project 3 in addition to legal proceedings for not returning the phone.

The SD card of all phones must be reformatted before turning in the phone at the end of the semester. Additionally, all phones should be reset to factory settings. Instructions of how to do this will be given during phone turn in. Teams that do not complete this process will lose 5 points on their final project.

If a phone is lost, stolen, or damaged, notify the teaching staff IMMEDIATELY!!! A lost or stolen phone will require issuance of a police report, and this must be done with Dr. Heckman and Mr. Marhn Fullmer.

Teaming

For each project, a peer evaluation will be required at the project's midpoint and after the project's submission. Results of peer evaluations will be used to adjust team grades if necessary. A team member's grade may be adjusted based on the amount of work they did on the assignment.

Team assignments are for the entire semester, but there may be some adjustments based on enrollment and extreme teaming difficulties. Teams will be assigned by the teaching staff; however, students will have the opportunity to select up to three people they DO NOT wish to work with. Every effort will be made to accommodate these requests.

Grade Appeals

If at any time you feel an assignment was graded improperly, write a request for a regrade and explain why you believe the assignment was graded improperly. First discuss the grade with the TA who graded the assignment. If you are still unsatisfied with the answer submit the assignment to the instructor for a regrade. **All regrade requests must be submitted to the instructor no later than 2 weeks after the assignment was returned to you! Please talk with the TA who graded the assignment FIRST and have the written regrade explanation!**

Time

You are expected to spend 6 to 12 hours per week outside of class preparing and working on assignments.

Attendance

Attendance to lecture is mandatory! If you miss a lecture, you must present documentation in order for the absence to be excused. Exam makeups will only be given with a documented excused absence. Excused absences will be handled as per NC State Academic Policy on Attendance Regulations (http://www.ncsu.edu/policies/academic_affairs/courses_undergrad/REG02.20.3.php). All anticipated absences must be presented to the instructor no later than one week before the absence. All emergency absences must be turned in no later than one week after the student's return date. All other absences will be unexcused. A maximum of 3 class periods per semester may be missed due to excused absences. Any number of excused absences beyond this number will only be allowed with special permission of the instructor.

An unexcused absence will result in a 1 point deduction from your final grade, up to the 5% of the grade covered by attendance. If you miss more than five days of class due to unexcused absences, you will receive a grade no higher than a B+.

Late Work

Exercises will not be accepted late.

All project milestones are required to be handed in by **11:45p** on the specified due date(s).

Academic Integrity

All work that you turn in for grading must be you (in the case of an individual assignment) or your team's own work! This means that all work must be an independent and individual creation by you and/or your team. Any attempt to gain an unfair advantage in grading, whether for yourself or another, is a violation of academic integrity. See the Academic Integrity website: http://www.ncsu.edu/student_affairs/osc/AIpage/acaintegrity.html.

Teams or individual students who cheat on a program will receive a -100 for the assignment. Cheating is worse than not turning in the assignment, and may lead to suspension from the university!

The Computer Science department has software that detects cheating violations for programming projects. Do not use other student's code, do not share your code, and do not copy code from someone who took the class X semesters ago.

Examples of Cheating:

- It is cheating to give any student access to any of your work or your team's work which you have completed for class assignments. Your campus account if for your use alone.
- It is cheating to use another person's or team's work and claim it as your own. You are expected to complete all assignments within your team or individually as specified by the assignment.
- It is cheating to interfere with another student's or team's use of computing resources or to circumvent system security.
- It is cheating to email, ftp, or post on the Internet, bulletin boards, etc. your work or your team's work for others to obtain.
- It is cheating to give another student access to your account or your team's account, or to give them your account or your team's account password.
- It is cheating for you and another student to work on the same file to turn in for an assignment, unless otherwise specified by the assignment. This applies to both the EOS system at home computing systems where the files will be submitted for a grade.
- It is cheating to reverse engineer a closed source application or violate a license agreement to obtain code for your class assignments.

Examples of NOT Cheating:

- Using code from the class locker (with citations).

- Using code from other programs YOU or your teammates wrote.
- Help from the TA or Instructor (with citations).
- Using code from the TA or Instructor (with citations).
- Using openly available Android code. The code may be found on the developers.android.com website, Android development message boards, or personal blog. However, you MUST cite your sources for the code. The use of using Android code is restricted to the specific Android functionality for completing the project (e.g. code to change the wallpaper). Code pertaining to the core learning objectives to the assignment (e.g. properly implemented inheritance) should be you and your team's own work.

Protecting Yourself:

- Do not leave papers lying around your workstation
- Do not dispose of important papers in the lab recycling bins and trashcans until after the assignment is graded.
- Do not give out your password.
- Do not leave your workstation unattended or forget to log yourself out.
- Do not give other students access to any of your workspace or email them any code.
- Keep all copies of final and intermediate work until after assignment is graded.
- Keep graded assignments until after you receive the final grade for the course.
- If you have any questions about interpreting the policy, ask the teaching staff!

Message Board Use:

The message board is available to ask questions about assignments and tests. **Do not post any code to the message board!**

Students with Disabilities

Reasonable accommodations will be made for students with verifiable disabilities. In order to take advantage of available accommodations, students must register with Disability Services for Students at 1900 Student Health Center, Campus Box 7509, 515-7653. For more information on NC State's policy on working with students with disabilities, please see the Academic Accommodations for Students with Disabilities Regulation (REG02.20.1). Also, visit the Disability Services Office website at: http://www.ncsu.edu/dso/.

Students registered with Disability Services should present their letters of accommodations to the instructor prior to the end of the first week of classes.