**ENGR 1411: Freshman Engineering Experience**  
Section 13, Fall 2010

**General Information**  
**Class Time:** 3:30-5:20 Thursday  
**Class Location:** Devon Energy Hall 130  
This class is run in parallel with a large section, with a single grade being awarded for the combination.  
**Instructor:** Professor Dean Hougen  
**Office Phone:** 325-3150  
**Class home page:** [http://learn.ou.edu](http://learn.ou.edu)  
**Email:** hougen@ou.edu  
**Office Hours:** Monday 9:00-10:00 & Wednesday 10:00-11:00

The best way for students to communicate with the instructor is to come to scheduled office hours. If you cannot attend office hours in person, phone calls can be accepted during office hours but students present in the office will get priority. Email can also be used but a quick or detailed personal response is unlikely as I get a lot of email and responding to email can be very time consuming. Students present in the office or on the phone will get priority over emailed questions.

**DLC Mentors:** We have some helpers who will support this class.

<table>
<thead>
<tr>
<th>Name</th>
<th>Email</th>
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<tbody>
<tr>
<td>Amlan Chatterjee</td>
<td><a href="mailto:amlan@ou.edu">amlan@ou.edu</a></td>
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<tr>
<td>Greg Gustafson</td>
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<tr>
<td>Susie Lambert</td>
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<tr>
<td>Ashley Nanni</td>
<td><a href="mailto:Ashley.G.Nanni-1@ou.edu">Ashley.G.Nanni-1@ou.edu</a></td>
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**Required Materials:** A working laptop computer with wireless network access. We will use computers daily during class time. You are expected to bring your laptop to class every single day.

Most recent available Java JDK (version depends upon your operating system), and the associated documentation from [http://java.sun.com](http://java.sun.com).

Greenfoot toolkit and the associated documentation from [http://greenfoot.org](http://greenfoot.org).
Learning Objectives
Prior programming experience will determine which learning objectives are expected to apply to each student.

All Students
1. Implement an interactive two dimensional computer game using the Greenfoot toolkit and Java.
2. Use the Java and Greenfoot API in Java programs.
4. Meet representatives from CS technical societies like the Association for Computing Machinery and the Robotics Club.
5. Discover the culture of the discipline of Computer Science.
6. Discover the culture of the School of Computer Science.
7. Practice legal and ethical use of intellectual property.

Students With No Prior Programming Experience
1. Build objects using constructors.
2. Distinguish constants and variables.
3. Call methods with and without parameters.
4. Pass object and primitive data parameters to methods.
5. Implement programs using simple control structures, e.g., conditional statements and loops.

Students With Limited Object-Oriented Programming Experience
1. Build objects using constructors.
2. Distinguish object and class data and methods.
3. Create well organized classes using procedural abstraction.

Students with Object-Oriented Programming Experience
1. Design a two dimensional computer game using the Greenfoot toolkit.
2. Perform incremental design and implementation of a computer program.
3. Distinguish object and class data and methods.
4. Create well organized classes using procedural abstraction.
Course Policies

Class Home Page: This class will use Desire2Learn software for our home page. The URL for the home page is http://learn.ou.edu. Login with your 4+4 (first four letters of your last name followed by the last four digits of your student number), using your standard OU password. If you have difficulty logging in, call 325-HELP. This software provides a number of useful features, including a list of assignments and announcements, an electronic mailing list, discussion forums, and a grade book. When I update the site, I will post news telling you what has been added and where it is located. You are responsible for things posted on the site with a 24 hour delay.

Class Email Alias: Urgent announcements will be sent through email. It is your responsibility to:

- Have your university supplied email account forwarded to the location where you read email.
- Make sure that your email address on the course home page is correct, and forwards email to the place where you read it. I’ll send out a test message during the first week of class. If you do not receive this message, it is your responsibility to get the problem resolved.
- Have your email program set up so that replying to your email will work correctly. You can send email to yourself and reply to yourself to test this.

If you need assistance in accomplishing any of these tasks, contact 325-HELP. You are responsible for reading emails within 24 hours.

Discussion Forums and Email: The discussion forums on the course home page should be the primary method of communication outside of class. This allows everyone in the class to benefit from the answer to your question, and provides students with more timely answers. Matters of personal interest should be directed to email instead of to the newsgroup, e.g., informing me of an extended personal illness. Posting guidelines for the discussion forum are linked on the home page.

Laptop Computers: It is the responsibility of each student in this class to have a working laptop computer with ample battery and wireless internet connectivity available for every class session. If your computer requires repair during the semester, it is your responsibility to make arrangements to have another computer available, and to install the necessary software before class. A student without a fully usable laptop computer will not be able to complete the learning objectives of this class.

Incompletes: The grade of I is intended for the rare circumstance when a student who has been successful in a class has an unexpected event occur shortly before
the end of the class. I will not consider giving a student a grade of I unless the following three conditions have been met.

1. It is within two weeks of the end of the semester.
2. The student is passing the class at the time of the absence.
3. The reason that the student cannot complete the class is properly documented and compelling.

**Accommodation of Disabilities:** The University of Oklahoma is committed to providing reasonable accommodation for all students with disabilities. Students with disabilities who require accommodations in this course are requested to speak with the professor as early in the semester as possible. Students with disabilities must be registered with the Office of Disability Services prior to receiving accommodations in this course. The Office of Disability Services is located in Goddard Health Center, Suite 166, phone 325-3852 or TDD only 325-4173.

**Academic Misconduct:** Academic integrity means honesty and responsibility in scholarship. Professors have to obey rules of honest scholarship, and so do students. Here are the basic assumptions about academic work at the University of Oklahoma:

1. Students attend OU in order to learn and grow.
2. Academic assignments exist for the sake of this goal.
3. Grades exist to show how fully the goal is attained.

Thus, all work and all grades should result from the student’s own effort to learn and grow. Academic work completed any other way is pointless, and grades obtained any other way are fraudulent.

Academic integrity means understanding these basic rules, without which no university can exist. Academic misconduct (cheating) is not just against the rules. It destroys the mutual trust and respect that should exist between student and professor. Finally, it is unfair to students who earn their grades honestly. For more information see: http://www.ou.edu/provost/integrity

It may be academic misconduct, specifically plagiarism, to use images or computer programs that are not in the public domain in your project in this class. Just because something can be downloaded from a web site does not mean that you are free to do so with crediting the author, asking permission to use it, and possibly even compensating the author. Please exercise extreme caution in what you download and use. If I believe you have committed plagiarism, I will file academic misconduct charges.

Signing in for students who are not present is also academic misconduct.
Field Trips: During the semester we’ll take at least two field trips. One will be to tour the Engineering Practice Facility before they open. The other will be to Stephenson Research and Technology Center to see the some Computer Science Department laboratories (including robotics, machine learning, embedded systems, and other artificial intelligence technologies). We might also go and see a speaker or two if interesting and relevant people visit campus during the semester. These events will be announced in advance, in class and on http://learn.ou.edu.

Classroom Conduct: Disruptions of class will not be permitted. Examples of disruptive behavior include:

- Allowing a cell phone or pager to repeatedly beep audibly.
- Playing music during class in such a way that they distract other class members.
- Exhibiting erratic or irrational behavior.
- Behavior that distracts the class from the subject matter or discussion.
- Making physical or verbal threats to a faculty member, or class member.
- Refusal to comply with faculty direction.

In the case of disruptive behavior, I may ask that you leave the classroom and may charge you with a violation of the Student Code of Responsibilities and Conduct.

Language: We will be using the Java programming language (Java 1.6.21, if available, depending on operating system).

Backup Copies of Projects: It is the student’s responsibility to backup their files appropriately. There are many ways to do this. You could get a jump drive. You also can use the locker in http://learn.ou.edu, or the drop box as a backup. These later methods are particularly effective because it makes it possible to retrieve the files even when you forget your computer or thumb drive. Make backing up your work a routine part of computer usage. Always back up your files at the end of a class session.

Evaluation

Desire2Learn Grade Summary: http://learn.ou.edu has a grade book that is used to store attendance data for this section (the parallel large section is on a different learn site). It is the responsibility of each student in this class to check their grades both in this section and in the large section periodically. If an error is found in this section, bring it to my attention immediately, and I will correct it. The grade book does not understand how grades are actually calculated in this class. It therefore may show things like percentages and total points that are meaningless.
**Grading:** For this section each class day two points will be assigned. One point is for attendance, the other is for active participation. By active participation I mean that you should be engaged in the activity at hand, whether that is programming a computer game, mentorship, or visiting a laboratory. For example, leaving early, taking cell phone calls, excessive instant messaging or answering email during class are examples of disengagement. If I find that you are not engaged, I’ll inform you that you risk losing your participation point for the day. If you continue to be disengaged following a warning, you will lose the point for that day.

The course grading will sum the attendance and participation points from both the large section and this section, for a total of 41 points (15 points in the large section and $13 \times 2 = 26$ points in this section). The grading scale is below:

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<th>Points</th>
<th>Grade</th>
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<tr>
<td>38-41</td>
<td>A</td>
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<tr>
<td>34-37</td>
<td>B</td>
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<tr>
<td>30-33</td>
<td>C</td>
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<tr>
<td>26-29</td>
<td>D</td>
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<td>25 or less</td>
<td>F</td>
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Students may also get attendance/participation points by participating in computer science events, like Association for Computing Machinery (ACM and ACM-W), attending CS department technical talks, or College of Engineering events like Engineers Club meetings, Institute of Electrical and Electronics Engineers (IEEE) Meetings, or visiting speakers. I’ll announce events with attendance points in class and on the web site. If you’d like to propose credit for an event I haven’t announced, email me in advance and I’ll consider it. The criterion for acceptance is that the event allows students to participate in the culture or discipline of computer science or engineering.

The last day of class we will have demo day, when students present their games to the class. Any student who chooses to do a presentation will receive one extra attendance point.