Intro to Object Oriented Development II, Summer 2006

Textbook

(required) *Java Software Structures*, by John Lewis (Villanova University) and Joseph Chase (Radford University), ISBN: 0-321-24584-9
Publisher: Addison-Wesley, 2005


Course Description

Detailed coverage of data structures, algorithms, and the methods of object-oriented design and software construction. Basic concepts in human-computer interfaces and graphics. Design and construction of medium-sized object-oriented programming projects with an emphasis on teamwork and software engineering.

Learning Objectives: Having successfully completed this course, the student will be able to:

- Design, implement, test, and debug programs using dynamic data structures such as linked lists, stacks, and queues;
- Design, implement, and test medium-sized programs (e.g., 1K-3K lines of code), including network-based and interactive applications.
- Design, implement, and test reusable components as part of a medium-sized object-oriented program;
- Use a range of software tools (e.g. editors, class browsers, bug tracking, debuggers) in development of a medium-sized software product.

Prerequisites

C or better in CS 1705, no exceptions.

First Day Attendance

First day attendance is required. If you miss the first day, you will be dropped from the course. If you cannot attend class the first day, contact the professor before class starts.

Weight Distribution

Your grade will be based on the scores you obtain on your work. There will be no curve applied so your scores, so be sure to study and work hard for every single assigned work.
Your work will be weighted as follows:

**Homeworks (10%)**

You will have several homeworks in the semester. There might be opportunities to participate in experiments outside of class, these count for a replacement homework grade; that is, they replaced a missed homework or get added to the total number of homeworks that you have available. You can participate on a maximum of 2 experiments.

**Laboratories (20%)**

There will be 14 labs in the semester. You can drop the lowest one of these. 20% of each lab is attendance, obtained simply by being present within 10 minutes of the beginning of the lab. Arriving late to the lab (more than 10 minutes) will cost you 20% of the lab session. The remaining 80% for the lab comes from the grade you will earn on each lab.

**Programming projects (30%)**

There will be 5 programming projects of equal weight.

**Exams (20%)**

There will be one exam in the semester.

**Final exam (20%)**

There will be a comprehensive final exam.

**Grade Range**

Final grades will be set according to the usual point scale shown below. We do not plan to use a curve, so do not count on getting 88 and waiting for the curve to pull you through. It won't. Study to get a 100. All the scores are rounded to one decimal place and the final score rounded to integers (i.e. 89.4 is a B+ and 89.5 is an A-).

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<th>Grade Range</th>
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<tr>
<td>100 - 94</td>
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<td>93 - 90</td>
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Attendance and Participation

Attendance to class is necessary for successful completion of the course, but absences will not count against your grade. It is important to be in class, however, as there is information provided in class that is not available anywhere else (e.g. discussion of projects, exams).

Students are expected to read the assigned material prior to class, check the web page for the assigned readings and their dates. Some class time will be used for lectures, but attending lectures will not be sufficient for full understanding of the concepts from the readings.

There might be some participatory exercises done in class. If you are asked to participate in these, it is expected that you will do so.

Attendance to your lab section is required. You will have a deliverable due at the end of each lab; if you miss a lab you will get a zero in that week's lab. Furthermore, you are required to attend the lab that you are for which you are registered. Attendance to another lab section without prior permission counts as an absence.

**NOTE:** It is your responsibility to turn in the required work at the end of the lab session. It is NOT the responsibility of the professor or the GTAs to pick it up or to remind you to turn it in.

Assigned Work

Throughout the semester you will have several assignments of different kinds. Each might require different skills from you, and each will require different amount of effort. In general you can count on the following:

**Online Homeworks** - There is an online homework due weekly, for a total of 13 in the semester. It usually is on the material that will be discussed that week in class. You have to read the material ahead of time and do an online homework before the material is discuss in class. The homeworks are often due on Monday at 9am (there are a few exceptions). All are simple multiple choice, short answer or true/false problems from the assigned readings. You have 45 minutes to answer the homework. These are assigned ahead of time (check the calendar on the web). You get to drop the lowest three, scores in this group.

There will be no make up of online homeowrks, not even with a medical excuse. Online homeworks are not discussed in class. Furthermore, due to limitations of the software being used, if you missed a homework, you cannot see a complete version of the homework after the case. So, if you miss one, as one of your friends to show you his/her copy.
**Programming Projects** - there will be 5 programming projects in the semester. You are expected to work on these individually and submit them using Web-Cat.

Each project part has a firm due date. This is the date by which you have to submit your project or risk losing points. Late programming projects can be submitted, but have some penalty per day late (see the project instructions for specific details). After some number of late days, no project will be accepted. The late penalty deduction will be taken from the score you obtain. For example, if you turn in a project late and your score is 80 points with a 10% for late penalty, then you will lose 8 points, and your score will be 72.

**NOTE:** You must turn in all projects in order to pass the course. Even if you turn in an incomplete project and scores a 0, you need to turn something in.

Before you start begging for extensions to project schedules, consider the following:

- The assigned time to do the projects is given considering the time it would take you to do the project and the timing of when the relevant material is discussed in class.
- If we "delay" a project deliverable, that means that you will probably have less time to do the other projects. It is in your interest to get them done in time.

**Others** - there might be other exercises that will earn you credits towards your final grade. These vary from semester to semester, so attend class everyday so you find out about these "freebies". One such freebie is participation in experiments going on in the department. These often are replacement of other grades, or for dropping a lower grade.

**Exams** - There will be two exams, 1 during the semester plus the final exam. The final exam is cumulative (i.e. covers the whole semester).

**Abscence, Makeups, and other special circumstances**

No makeups are allowed in this course. Homeworks not turned in on time will not be accepted. Lab dates missed get a zero. Projects can be turned in late up to a few days with the appropiate penalty, but will not be accepted after that. Exams missed can be "replaced" under special circumstances as explained below. Consider the following observations.

**Homeworks:**

- No makeups of homeworks is allowed. Period. You get to drop three homeworks, and might have a chance to earn extra points with other "freebies", thus if you miss a homework, you have just used one of the three to drop

**Labs:**

- No makeups of labs is allowed. Period. You get to drop one lab score, so if you miss a lab you have just selected the one to drop.

**Exams:**
- Makeups of exams are given only with the proper medical evidence. *Please read on carefully.* If you have to miss an exam, you have to contact the professor before the exam and provide a valid medical excuse before the makeup is provided.

**Note:** We do not consider a visit to the Health Center a valid excuse.

- If you miss the first exam and have a valid medical excuse (that is, you checked with the instructor ahead of time and your excuse was approved), exam 2 will count as double (exam 2 is harder, so don't miss the first).
- If you take the first but miss the second exam and have a valid excuse, the final exam will count for the 2nd and final exam (the final exam is comprehensive, so don't miss the second exam).
- If you miss both exams (1 and 2, valid excuse or not) you will get an F in the course.
- If you miss the final exam and have a valid medical excuse, then you will receive an incomplete in the course.

**Projects:**

- We might give extensions only for the amount of time that you lost due to sickness. So, if you have a bad case of the flu and you were down for a day, you might get an extra day to complete your work. Note that you still need to give your instructor proper medical evidence that you were not able to do your work for that day.
- A slip from the Health Center only shows that you went to see the doctor (excusing you of maybe 1 hour time).
- Do not leave the projects for the last minute, you are putting yourself at risk of last minute bad luck (Murphy's law).
- If you run into the unfortunate situation that requires an extension, know how much time you need. Don't come to us saying "I need an extension." Because we have not seen your work, we do not know how much longer to give you. We will not extend deadlines for weeks at a time. Most likely we will give you one more day, and of course only if you have the proper evidence.
- In case of the unfortunate situation that you have a trip out of town to go see the President of the United States because you are being honored at the White House (or some other activity of that magnitude), we can give you a makeup exam, but it must be ahead of time. Note, however, that these special time exams are different than the exams that the rest of the class will take. So, just call the President and tell him to give you the award in the Summer.
- Oh, by the way, your machine crashing, getting attacked by a virus, updating your OS and in the process losing some data, and other technology-based excuses are not considered valid. We consider these as the new millenium version of "the dog ate my homework", so plan for these unfortunate situations, they will happen all the time. Make backups frequently, and keep a copy of your backup at a separate location. **Filebox** is a great, easy, and free way to back up your projects. Use it.

**Honor Code**

With the exception of lab work that will be done in pairs, all other assigned work is to be
your own. You might be required to sign an honor code statement on all individual work.

What is plagiarism? Check the website, http://www.plagiarism.org/. we do not tolerate plagiarism, so avoid doing it and do not even try to justify it by giving excuses that begin as "I was not aware that ..."

Special Needs

If you have any special needs or circumstances (disability accommodations, religious holidays, etc.) please see the instructor during office hours. Please do so early in the semester, so we can plan for accomodations for exams and quizzes with plenty of time.