Course Title: Programming Structures and Abstractions

Instructor: Dean Hougen, Devon Energy Hall 242, 405-325-3150, hougen@ou.edu

Teaching Assistants:
- Kendra Clay, Devon Energy Hall 210, Kendra.C.Clay-1@ou.edu
- Khondker Hasan, Devon Energy Hall 210, shajadul@ou.edu

Class Hours:
- Monday, Wednesday, Friday 8:30-9:20, Devon Energy Hall 120

Lab Hours:
- Section 011 (Khondker Hasan): Thursday 10:30-12:20, Sarkeys Energy Center P201
- Section 012 (Kendra Clay): Thursday 12:30-2:20, Adams Hall 101

Proposed Office Hours:
- Dean Hougen
  - Monday 9:30-10:30, Wednesday 3:00-4:00, Friday 10:30-11:30; Devon Energy Hall 242
- Kendra Clay
  - Tuesday 2:00-3:00, Thursday 4:00-5:00; Devon Energy Hall 115
- Khondker Hasan
  - Tuesday 9:30-10:30, Thursday 3:00-4:00; Devon Energy Hall 115

Required Text Books:
- You are required to have your own copy of the following textbooks:
  - Programming Structures and Abstractions:
  - Computer Ethics:

Students should read ahead the chapters that are expected to be covered in the class period (see the class schedule). Students should always bring their textbooks with them to class periods, including lectures, labs, and exams.

Communication:

The primary means of transmitting class information to the students will be through announcements during class time and through web pages. You are responsible for announcements made through either or both of these means.

Occasionally, urgent information may be sent via email. You must ensure that the email address the University has on file for you is valid and is monitored by you. A test of the email addresses provided by the University will be made during the second week of class. You are responsible for notifying the instructor if you do not receive this test email.

The best way for students to communicate with the teaching staff is to come to scheduled office hours. If you cannot attend office hours in person, phone calls can be accepted but
students present in the office will get priority. Email can also be used but a quick or
detailed personal response is unlikely as we get a lot of email and responding to email
can be very time consuming. Moreover, emails will get a lower priority than either phone
calls or in-person visits.

One way for students to communicate with one another is through the discussion forums
of the Desire2Learn web site for the class.

Details of all of the communication methods follow.

WWW:
Information about this class will be found on the class website. The URL is
http://www.cs.ou.edu/~hougen/classes/Spring-2012/cs2334/
This page will contain links to the directory of class materials and announcements and
other important information.

Email:
Students should use the email addresses listed above. Note that we get a lot of email. Do
not expect a reply in minutes; one or two days is more likely in most cases. If you have
not heard back within five days, please resend your message, if it is still relevant.

Expectations and Goals:

The prerequisites for this course are CS 1323 - Introduction to Computer Programming
and Mathematics 1823 - Calculus and Analytic Geometry I. (If you have not taken these
courses, you will need instructor permission to take 2334.) You are expected to have a
working knowledge of Java, including a familiarity with its basic data types and control
structures, and an understanding of basic program abstraction and organization. This
course will introduce students to the use of abstract data types and files as well as GUIs
and event-driven programming. These tools will be used by students to create medium-
scale programs. This course will also introduce students to ethical issues related to
computer science.

For topics covered, see the schedule.

Specific Outcomes of Instruction:

By the end of the semester, the students will increase their:

1. Ability to analyze a problem, and identify and define the computing requirements
   appropriate to its solution.
2. Ability to design, implement, and evaluate a computer-based system, process,
   component, or program to meet desired needs.
3. Understanding of ethical issues and responsibilities.
4. Ability to apply design and development principles in the construction of software
   systems of varying complexity.

Computer Accounts and Software:
All students in this class are allowed to request a Computer Science Network (CSN) account. This may be used for writing programs and sending and receiving materials electronically using the CSN Linux and Mac OS machines in EL 158. All code written for this course MUST run using the compilers or interpreters that will be specified for the assignments. You may do your development work on whatever system you choose but it is your responsibility to ensure that your code runs on the school systems.

Requirements:

The graded assignments and their contribution to a student's grade are given in the table below. (Subject to change.)

<table>
<thead>
<tr>
<th>Item</th>
<th>Topic</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preliminary Designs (1-5)</td>
<td>(See Projects Below)</td>
<td>5%</td>
</tr>
<tr>
<td>Project 1</td>
<td>Classes/Octects and Lists</td>
<td>5%</td>
</tr>
<tr>
<td>Project 2</td>
<td>Sorting and Searching Lists</td>
<td>10%</td>
</tr>
<tr>
<td>Project 3</td>
<td>Serialization and Graphics</td>
<td>10%</td>
</tr>
<tr>
<td>Project 4</td>
<td>Model, View, Controller Paradigm</td>
<td>10%</td>
</tr>
<tr>
<td>Project 5</td>
<td>Recursion, Exceptions, and Assertions</td>
<td>10%</td>
</tr>
<tr>
<td>Exam 1</td>
<td>First 1/3</td>
<td>10%</td>
</tr>
<tr>
<td>Exam 2</td>
<td>Second 1/3</td>
<td>15%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>Last 1/3</td>
<td>15%</td>
</tr>
<tr>
<td>Labs</td>
<td>All Topics</td>
<td>10%</td>
</tr>
</tbody>
</table>

All exams in this course are to be done ALONE; the work submitted by a student MUST be the student's own. Group work is REQUIRED for the projects. Students may work in groups of two or more. The more people in the group, the harsher the grading will be.

You are responsible for the material covered during the lectures sessions, whether or not it is also found in your textbooks or other assigned reading materials. Similarly, you are responsible for the material found in your textbooks and other assigned reading materials, whether or not it is also covered during the lectures sessions. In other words, you are responsible for the UNION of these sources of knowledge, as depicted by the shaded region of the Venn diagram below, not merely their intersection.
All work in projects must properly cite sources. For example, if you quote a source in your project, you must include the quotation in quotation marks and clearly indicate the source of the quotation.

Programming projects will be due at 9:00 pm on the due date. Late assignments will be penalized 20% per day late. (All parts of days will be rounded up.) After five days, you will not be able to turn in that assignment for credit. If you are worried about turning in the assignment late and losing points, turn in the assignment ahead of time. You will be turning in electronic and paper copies of all assignments. It is the electronic copy that must be turned in by 9:00 pm on the day that it is due. The paper copy is due at the beginning of your assigned lab section on the day after the electronic copy is due. The paper copy must be submitted before the lab session is scheduled to begin.

Each group will turn in ONE version of each project (one paper copy and one electronic copy of the same project). The version submitted will be mutually agreed upon by the group members. The scores assigned to the members of the group will reflect their contributions to the version of the project submitted. Note that students are required to contribute equally to each project to the extent possible, so the scores assigned to each group member will typically all be the same. However, if all members of the group do not contribute equally to a project for some reason, the scores assigned to group members may be quite different.

Note that the policy of having each group submit one version of each project for grading is in stark contrast to having each member of each group submit his or her own version of the project for individual grading. As stated above, group work is REQUIRED for the projects. Working as a group does not mean having a chat now and then with another class member then going off to work on your own on the project. It means actively working together with the other members of your group to create a single product (a joint creation).

All exams will be open book/open notes. NO electronic devices will be permitted in the testing area.

Copying another's work, or possession of electronic computing or communication devices in the testing area, is cheating and grounds for penalties in accordance with school policies.

Accommodations:
Any student with a disability should contact the instructor so that reasonable accommodations may be made for that student.

Attendance:
Students who do not attend the first week of class may be dropped from the course to make room for additional students to enroll.

Holidays:
It is the policy of the University to excuse the absences of students that result from religious observances and to provide without penalty for the rescheduling of examinations and additional required class work that may fall on religious holidays.

**Related Documents:**
Students should also read the related documents on Replacement Assignments or Extensions and Discussions of Scores and Grades.