CS 4700
Spring 2011 Course Information

Instructor: Dr. Vicki Allan, Vicki.Allan@usu.edu, 421 Old Main, (435)-797-2022

Office Hours: TH 10:30-1200, TH 1:30-2:30 Other hours by appointment. Send email to set up.

Home Page: http://www.cs.usu.edu/~allanv/cs4700/cs4700.html

Prerequisites: Data Structures CS 2420

Etiquette: When you come to class late, every person in the class is distracted by your entrance (including your professor). You miss important material. You are saying to your professor, "My time and my schedule are more important than what you have to teach me." On the job, if you don't come to work, you will be fired. If you come late, you will be reprimanded. Come to class and come on time! It is good practice for the real world.

Sleeping during class is inappropriate. If you don't want to attend the class physically and cognitively, do us both a favor and stay home.

Reading the newspaper in class is offensive. If you find the newspaper more compelling than what we are doing in class, you need to find another class.

Difficulty: This course is average in terms of difficulty. We will do some programming, but since you are good programmers, that shouldn't be a burden. You will be expected to learn material from a variety of sources, so be prepared to read more than just the textbook.

Text: There are several books/references that will be useful for this course. There are many online sites for books that offer great discounts. I'm seeing new books for half price. You might consider Amazon.com, Borders.com, Buy.com, BN.com, BookPool.com, and VaristyBooks.com.

- Programming Language Pragmatics. 3rd edition, Michael L. Scott, Morgan Kaufmann publishing. This is listed as the official book for the course.
- Programming Languages Principles and Practice, 2nd edition, Kenneth C. Louden, Thompson Brooks/Cole. This is the book that has been used in previous semesters, and its influence will be felt in choice of topics and notes.
- We will be using a variety of on-line tutorials. See the homepage for links to those.

Objectives: The main objectives of this course are to obtain an understanding of programming languages, environments, translation, and implementation. Class discussion, oral explanations, exams, and programming problems are all designed to facilitate the achievement of these goals. Memorization is not learning and will not be encouraged. For example, rather than knowing what kind of exception handling Ruby has, I will want you do know the issues in designing exception handling mechanisms. Class discussion will often utilize discovery learning and will be very different in nature than the step by step cookbook approach of most texts. Since you will experience both the text's presentation and the derivation of the ideas in class, you will have the
benefit of both teaching techniques. You are expected to read the text before coming to class. This will allow us to spend time on the interesting questions.

**Attendance/Participation:** Attendance is mandatory. If necessary, quizzes will be given to ensure your interest in attending. You are expected to come to class, stay focused, and contribute to discussion. Points are awarded for participation.

**Cell Phones, Lap Tops:** Please turn off your cell phones during class. Lap tops in class are a big distraction for most people. While you could be taking notes or looking at the class slides, not everyone is using a laptop that way. Generally student do better to put away distractions and use “free minutes” to think deeply about what is being discussed.

**Preparation:** Preparation is necessary for learning. For this class, preparation includes attending class regularly (90% of the time), coming on time, remaining focused until class is dismissed, asking timely questions, trying problems at your seats when directed to do so, answering questions when called upon, completing homework questions, paying attention during lecture, and reading appropriate material before coming to class.

Because you will learn more if you are involved in class discussion, I often ask for class response to a question. However, do not feel that you need to answer every question. I would like to hear from everyone in the class not the same two or three people every time. To facilitate hearing from everyone, we will have the three strikes you are out rule. After you have verbalized an answer three times in a class period, you are not allowed to answer any more questions that period. If your answer is so wonderful, you will die if it isn't expressed, tell your neighbor and let him/her share it. Along the same line, make sure the questions you ask are appropriate for the entire class. If you had a bizarre occurrence on your home computer, are wondering what you will miss when you travel to Alaska on Thursday, or want to know how to use some advanced feature of the language, ask me after class. I don't want to spend class time on questions that are of interest to only a few or intimidate others by answering questions they are not ready for.

**Success:** My goal for each of you is that you succeed in this class. I would be personally delighted if each of you earned an A. For that reason, I will learn your names, have many office hours, encourage you to come see me when you have problems, and present lectures which prepare you for the world of computer science.

**Programming Assignments:** All programming assignments are posted on the web. All programming assignments for this class are required. Even if the assignment is completed after the due date, it must be turned in or you may be blocked from getting higher than a D+ (regardless of your point total).

**Written Homework:** Written homework provides an excellent framework for achieving the goals of obtaining a working knowledge of data structures, perfecting programming skills, and developing critical thinking strategies to aid the design and evaluation of algorithms. Since programming has a high overhead in terms of program entry and debugging, all important topics in this course cannot be covered via programming projects. Written homework exercises allow students to learn important material without a high time investment. You can perfect your skills
without spending hours at the computer and can get feedback on your thinking skills from your study partners. Students who consistently do quality homework have far superior test scores.

We will have written homework approximately once every two weeks. Written homework will take the following form. Specific questions will be posted on the web. You may work in groups of one, two, or three. Groups may change throughout the semester. Contact me if you don't have a group, but would like to participate in a group. Feel free to visit with me about possible answers to homework exercises.

If more than one person is involved in completing the assignment, list all the names on ONE set of answers. Answers MUST not be compared with others who are not in your group. Thus, it is cheating if you visit with others about answers, but turn in the homework with only your name on it. Sometimes students work with others, but can't agree on all the answers and want to turn in individual homework answers. This is unacceptable. When you decide to work with others, you MUST turn in one copy of the answers with all names on it. The point of working with others is that you do come to an agreement.

You will learn much more by working in a group than you will learn working by yourself. Educationally, it is a superior experience. You have to defend your answers. You get to take turns explaining and being taught. There are more of you to seek help from me, should you need it. When you do seek help, you are more confident that you have an important question as there are three of you with the same question. Thus, you don't feel "It's just me." Instead of just skipping a question you don't understand, you are able to iterate through several choices. You come to class having really worked on every question. For good students, it will increase your understanding. For poor students, it may be the only way that you survive. I realize there are some of you who absolutely have no time to work with others, but these situations should be rare.

**Exams:** There will be two midterm exams given on February 17th and April 5th. The final is on May 3rd at 11:30 a.m.. Exams cover material presented in class, in the book, and on the assignments. I do not give makeup exams. The final is comprehensive, is not optional, and is not given early. Please verify that you are able to take all the exams on the day specified.

**Regrading:** At times, you need to ask for additional points on an assignment or test. When this happens, please write a note on the paper indicating why it needs to be regraded and turn it back in.

**Late work:** If you make it a practice of having everything completed two days early, life is wonderful. If you make it a practice of having everything completed two days late, life is the pits. The work is the same. It is a matter of discipline.

Late work creates difficulties in grading. Unless a very strict policy is enforced, chaos reigns. It is not that I am insensitive to your personal problems, but rather that I must insist that you rise above them. When I grant an extension to one student, it is unfair to the other students who would have benefited from such special treatment.
Late programming assignments will be docked 10% each day late. **No assignments will be accepted for points if they are more than one week late unless there is a compelling reason.** However, I realize that sometimes things happen that are beyond your control. Thus, you are allowed to turn in one programming assignment up to seven days late without penalty and without explanation. Any other late assignments will be docked 10% per day it is late.

We will be using Eagle to turn in programming assignments. See [http://eagle.cs.usu.edu](http://eagle.cs.usu.edu). Create a new account using this web address so that you can get email and grades from me.

**Rough Outline:** Since we are using a new book, having some class lab time, and learning a new language, it is difficult to predict exactly where we will be each day. The sequence is known, but the time schedule is not. I will update the schedule which is posted on the web as we get into the semester. So please check it from time to time.

**Rough Point Allocation:**

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<thead>
<tr>
<th>Category</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignments</td>
<td>160</td>
</tr>
<tr>
<td>Homework</td>
<td>70</td>
</tr>
<tr>
<td>Attendance/Participation</td>
<td>30</td>
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<tr>
<td>Exams</td>
<td>300</td>
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<tr>
<td>Total</td>
<td>560</td>
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You may be given an F if either your overall average is below 50% or your performance in any one of the above categories is below 40%.

I *generally* figure 90-100% is an A, 80-90% is a B, 65-80% is a C, 50-65% is a D, and below 50% is an F. However, grades vary (up or down) somewhat depending on the difficulty of assignments and tests. (At times, I lower the points possible for an exam to make this general assignment of percents to grades more appropriate.)

**Standards:** All work in this class is graded based on the *best* solution rather than merely solving the problem. Sometimes students feel it is unfair for a teacher to expect the best when they are just learning, but it is important for a student to strive for the real goal. On the job, `"just working"` is almost never adequate. How can one expect to improve or even recognize quality if it has never been demanded?

**Cheating:** Although you may collaborate on problem solving, each person must write, debug, and test his/her own work. Some students feel that if they worked with the other person for a long period of time (as opposed to just copying another's work without any personal effort), they haven't cheated. That is *not* true. Note, you don't have to feel guilty for what you have done to have it be cheating. There are degrees of cheating. Copying another person's code (with or without their knowledge) is cheating. However, if another person helps you so much that the result isn't your work, then it is still cheating, regardless of how many hours you spent in the process. Some think that because the course is demanding, it gives them license to cheat. Nope. Cheating is cheating. There is no set of circumstances that justifies it.
If you are aware that cheating is going on, it is your responsibility to tell me of the occurrence. If you aren't part of the solution, you are part of the problem.

Submitting projects which include part or all of code/text that is obtained from sources such as a textbook or a site on the Internet, without properly acknowledging the source(s) of the code/text in your submission, is considered cheating. In most cases, such "borrowing" is not permitted, with or without proper acknowledgement. In case of doubt, talk to me about your intention to include such code before using it.

I do not recommend designing the code with others because it is difficult to pull yourself away from the group and do your own work. For every problem you encounter, you want to know how others in your group solved that problem. Copying code from the text or other sources (including tutors and consultants) is not allowed unless specifically indicated. Do not allow someone else to write the code for you no matter how helpful it would be. Cheating will be dealt with severely. The penalty given will be worse than not having done the assignment, written the program, or taken the exam (i.e., the least penalty possible is negative points). When cheating occurs, a letter to that effect is placed in your file and a copy is sent to the dean's office. Some excuse their cheating by saying "I was under so much pressure and just ran out of time." This is like saying, "I am honest until it is inconvenient." Cheating will not be tolerated.

Flagrant cheating involves turning in another's work as your own. However, there are many other forms of dishonesty which are also considered cheating. Allowing others to copy from your work is considered cheating. Do not put your friends in an awkward position by asking them to let you see their work. If there are any questions, please refer to the departmental cheating policy.

Incompletes: According to university policy, incompletes are not to be given for poor performance. There will be no incompletes given except for conditions beyond the student's control. Such conditions have to have written documentation. The term "conditions beyond the student's control" includes (1) incapacitating illnesses that prevent a student from attending classes for a period of at least two weeks; (2) a death in the immediate family; (3) financial responsibilities requiring a student to alter course schedule to secure employment; (4) change in work schedule as required by employer; or (5) other emergencies of this nature. When an incomplete is given, it is anticipated that the remaining work will be finished within two or three weeks. If the course must be retaken to make up the work, an incomplete is not appropriate. In case of emergency, there are provisions to permit a student to withdraw (grade of W) from a course after the regular drop period.

Disabilities: If a student has a disability that will likely require some accommodation by the instructor, the student must contact the instructor and document the disability through the Disability Resource Center, preferably during the first week of the course. Any requests for special considerations relating to attendance, pedagogy, taking of examinations, etc. must be discussed with and approved by the instructor. In cooperation with the Disability Resource Center, course materials can be provided in alternative formats- large print, audio, disk or Braille.

Class Fee: Associated with this class is a class fee. The monies from this fee are used to maintain lab facilities for the class, purchase software and licenses, and supervise the lab. In some cases,
students may have their own computing equipment, and thus feel that they do not need to use the lab. However, the lab must be maintained regardless of an individual's use of it, and thus the fee is charged to all registered for the class. If you have questions or concerns about this fee, please see the department head.

**Add Date**: The last day to add this class is the 15th day of the semester. Attending this class beyond that date without being officially registered will not be approved by the Dean's Office. No assignments or tests of any kind will be graded for students whose names do not appear on the class list.

There are several reasons for this rule. Students who attend classes without registering have an unfair advantage over those who are registered. The unregistered student invests no money until his performance is proven and there will be no record that the student "withdrew." The registered student must drop the course along with the ramifications of small or no refund in tuition and a possible "W" on his/her transcript.

The university does not receive the headcount credit from the State for students who add any class after the 15th day. We lose a significant amount in support funding for those students not registered prior to day 15. Students who attend classes without registering/paying are utilizing campus resources even though they have not paid tuition and fees. Students who are attending classes but not enrolled in them are not subject to the Student Code of Conduct. Thus, we are asked not to allow students to "sit in" on classes for which they are not enrolled.

**Drop Date**: The last day to drop classes on the QUAD (with the "W" notation on transcript) is April 4th. If you are considering dropping, you should talk to me about the desirability of such a decision. Sometimes students drop when they would actually do well with a different strategy. Other times students who should drop, do not. It is wise to consult your instructor in your decision as she may have a different reading on your situation.