Intro to Interactive Design and Programming Concepts

Course Description:
This course provides an introduction to problem analysis, design of solutions, and graphical applications creation using a 3-D interactive environment. Emphasis will be placed on problem solving skills and basic concepts of computer programming. Topics covered will include program design, sequential, conditional, and iterative control structures, functions, lists, basic concepts of object-oriented programming, basic concepts of networking, and social and ethical issues related to computer science. This course is intended for those students with little or no background in computer programming. This course satisfies the University's computer literacy requirement.

Prerequisites:
None.

Learning Objectives:
Upon successful completion of this course, the student will:

- Be able to design and implement a computer program by:
  - Determining the requirements and specifications of a stated problem.
  - Designing a detailed solution through the use of storyboards and pseudocode.
  - Implementing the source code to solve the problem.
  - Testing the solution and comparing the actual solution to the original requirements and design.
- Understand the terminology of object-oriented programming.
- Understand and effectively use programming constructs including functions, conditional statements, and iterative statements.
- Understand and effectively use the elements of interactive programming including event handling.
- Have a basic understanding of simple data structures.
- Have a basic understanding of computer networking.
- Have a basic understanding of the social and ethical issues involved in computer science.

Assessment of Objectives:
Assessment of objectives will be conducted through exams, laboratory exercises and assignments, and programming projects.
Instructional Methods and Activities:
The methods and activities for instruction will include:
- Presentation of new material and concepts in the classroom through the use of lecture, tutorials, and sample programs.
- Classroom and laboratory discussion using problem solving techniques.
- Exercises and written assignments to review and reinforce topics covered in the classroom.
- Programming projects to reinforce concepts covered in the classroom.
- Optional one-on-one discussion as needed between the student and instructor outside regularly scheduled class time.

Course Grades:
Lab exercises and assignments: 20%
Programming projects (3): 25% (First: 5%, Second and Third: 10% each)
Midterm Exams (2): 30% (15% each)
Final Exam (Comprehensive): 25%

Grade Ranges:
A  90 - 100%
B  80 - 89%
C  70 - 79%
D  60 - 69%
F  <60%

Please note: NO test grades will be given out via email or over the phone. Don’t even bother asking.

Texts:
Learning to Program with Alice, 3rd Edition by Wanda P. Dann, Stephen Cooper, and Randy Pausch. This book includes a CD which contains the Alice compiler and extra galleries. Also, the compiler is free and can be downloaded from www.alice.org. You can install it on your personal computer and use it as long as you wish. If you want to download it, be sure to get Alice 2.2, not Alice 2.0 or Alice 3.

Lab Supplies:
Flash drive to archive your programs (optional - but strongly recommended)

Other Course-related Material:
Lecture notes, sample programs, programming assignments, and data files for assignments will be provided during the semester.
Class Policies:

Computer Security Issues:
It is your responsibility to read, understand, and follow the Student Security Statement (www.sci.tamucc.edu/~ptedford/MiscPages/StudentSecurityStatement.pdf) handed out the first day of class that discusses computer security issues. Infractions will have a direct affect on your grade in this course.

My Expectations of You:
- Come to lecture and lab on time every day the class meets
- Read the chapter to be discussed before coming to class
- Participate in discussions
- Ask questions of material you do not understand
- If I cannot explain the answers to your satisfaction, make an appointment with me to discuss the question
- Seek help, if needed, from the Program Assistants in CI 344.
- DO YOUR OWN WORK!! Do NOT share your work with others.
- Demonstrate integrity, maturity, and ethical behavior

Attendance:
If you want to succeed in this course, your attendance and active participation is crucial. Attendance is taken every day the class meets. If you are not in the room and in your seat before the lecture starts, you will NOT be counted as present that day. This may have serious implications on any financial aid you might be receiving. Although grades will not be directly based on attendance, regular attendance and active participation increases your chances of successfully completing this course. You are expected to know all material presented in class. Turn off all cell phones when you enter the classroom! If you are caught texting, surfing the Web, playing games on your cell phone or laptop, or otherwise participating in distracting behavior, YOU WILL BE TOLD TO LEAVE THE CLASSROOM for the remainder of that class period. Such behavior will NOT be tolerated.

Preparing for Lecture:
Class topics will follow the order of topics in the lecture schedule. You must read the book to succeed in this class! Be prepared to study 2 - 3 hours for every hour you spend in class.

Academic Integrity/Plagiarism:
University students are expected to conduct themselves in accordance with the highest standards of academic honesty. Academic misconduct for which a student is subject to penalty includes all forms of cheating, such as illicit possession of examinations or examination materials, falsification, forgery, complicity or plagiarism. (Plagiarism is the presentation of the work of another as one’s own work.) This includes NOT sharing code or answers for the individual lab assignments! In this class, academic misconduct or complicity in an act of academic misconduct on an assignment or test will result in sanctions ranging from being given a zero for the assignment(s) involved to being given
an F for the course. For additional information, see the “Assignments" section under “Lab Policies”.

Assignments:
Lab work will be assigned on a regular basis. Please refer to the "Lab Policies" section below for specific information and instructions about the lab assignments.

Exams:
You MUST read the text to do well in this class. As much as one third of the material on the tests may be information in the text not discussed in class. Exams may contain multiple choice, true-false, fill-in, short answer, and/or programming questions.

Make-up exams:
Makeup exams will not be given under normal circumstances. If you notify me immediately that serious, unavoidable, documentable (e.g., with a letter from your doctor) circumstances have arisen, I will discuss options for replacing the missing grade. For example, I may allow the grade earned on the comprehensive final to replace the grade for the missed exam. You must take at least one of the midterm exams in this course. In other words, only one midterm exam may be missed due to unforeseen circumstances. Excused absences due to school sponsored activities, religious observations, family rituals, etc. should be discussed with me in advance.

Lab Policies:
Attendance:
This course is set up in such a way that there will be more hands-on "lab" time than lecture time. The two activities (lab and lecture) will be mixed together. Usually, I spend 10-15 minutes covering concepts on the schedule and then give you an opportunity to work on your projects and programming assignments. The time I give you to work on those assignments should be spent actually working on the assignments. If you want to surf the Web, play video games, or watch videos on YouTube, do it on your own time. Don't do it in class. You are expected to remain in class and work on your assignments during the scheduled class time.

Assignments:
A list of assigned lab work and the criteria on which they will be graded will be made available during the semester. While there are due dates (see below), there is no actual "assigned date" for each lab. That is, you may start working on the lab assignments immediately. Here are some guidelines you need to follow in order to do well on the labs:

- The assignments are to be completed individually. You may ask each other for general advice, but do NOT share final answers and/or source code unless you have been told to do so by me. Be sure to protect your programs. Sharing or giving your work to others is grounds for an immediate "F" for the
assignment involved. Submitting another person's work as your own is grounds for an immediate "F" in the course.

- Plan on spending up to 5 hours (or more) working on your lab assignments outside of the scheduled lab time. You cannot learn and understand the material by simply sitting through lectures. And I guarantee you that as the semester progresses, you will not be able to complete an entire lab assignment in the scheduled class time.

- Be sure to keep backup copies of ALL your programs! Storage media have been known to fail. Not having a backup copy of your work is NOT an acceptable excuse for submitting a late lab.

- Do not resubmit a lab until you have received a grade for the previous submission. For example, if you turn in lab 6, but know it was not complete, wait until you get the results back before resubmitting it again.

- Each assignment is to be submitted using the dropbox as outlined on the Dropbox Instructions page. Lab assignments will not be accepted for grading if they are submitted via email, as a "hard copy," or on disk. If you have problems using the dropbox, ASK FOR HELP!

- Assignment Due Dates:
  - Assignments are to be submitted by 11:59 PM on the due date. Due dates are listed with each assignment. If you want an A on any lab, it must be submitted on time. If you are submitting a lab that is less than complete, you must have it checked by me to make sure it is an acceptable submission. If you submit a lab late, your grade for that lab will drop according to the following schedule:

<table>
<thead>
<tr>
<th>Late by</th>
<th>Highest Possible Grade</th>
</tr>
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<tbody>
<tr>
<td>1 - 2 days</td>
<td>89</td>
</tr>
<tr>
<td>3 - 4 days</td>
<td>79</td>
</tr>
<tr>
<td>5 - 6 days</td>
<td>69</td>
</tr>
<tr>
<td>7 or more days</td>
<td>50</td>
</tr>
</tbody>
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- No labs will be accepted after Tuesday, December 6, 2011, and there will be a lab due the final week of lecture. If an unavoidable, documentable emergency arises, please discuss it with me. However, under normal circumstances, if you have not completed your assignment by the due date, you should submit the approved work you have done for partial credit. For the sake of your grade, you should ALWAYS turn in SOMETHING that shows you've attempted to solve the problem. Be sure to keep ALL graded material.

Resubmitting Lab Assignments:
I allow you to resubmit lab assignments if you are not satisfied with the grade you have earned on a lab. However, there are a couple of “ground rules”.

- The grade of a lab you want to resubmit must be less than a 90.
- The original version of the lab was submitted on time (that means by 11:59 PM on the due date). Labs that were submitted late the first time are NOT eligible to be resubmitted!
The material originally submitted must be at least 50% completed. For example, if there are 4 end-of-chapter exercises and 10 short answer questions, you must have done at least 2 of the exercises and answered at least 5 of the questions in order to be eligible to resubmit the lab. If you are submitting a lab that is less than complete, you must have it checked by me to make sure it is an acceptable submission. If you do not have incomplete worked checked for admissibility prior to submission, you may not be eligible to resubmit that lab. All decisions about what is eligible for resubmission are final.

- Do not resubmit a lab until you have received a grade for the previous submission. For example, if you turn in lab 6, but know it's not complete, wait until you get the results back before resubmitting it again.
- Do not resubmit a lab unless you have made the changes/corrections necessary to improve your grade! Resubmitting a lab without making any corrections will not earn you any extra points!
- Only one lab per directory will be accepted. You may submit more than one lab at a time, but each must be in a separate directory.
- Be sure to include ONLY files/documents that have been modified or corrected along with a list of what has been corrected/modified.
- This is VERY important: FOLLOW THE INSTRUCTIONS FOR RESUBMITS IN THE DROPBOX INSTRUCTIONS VERY CAREFULLY!
- No resubmits will be accepted after 11:59 PM on Tuesday, December 6, 2011!

Classroom/professional behavior: Texas A&M University – Corpus Christi, as an academic community, requires that each individual respect the needs of others to study and learn in a peaceful atmosphere. Under Article III of the Student Code of Conduct, classroom behavior that interferes with either (a) the instructor's ability to conduct the class or (b) the ability of other students to profit from the instructional program may be considered a breach of the peace and is subject to disciplinary sanction outlined in article VII of the Student Code of Conduct. Students engaging in unacceptable behavior may be instructed to leave the classroom. This prohibition applies to all instructional forums, including classrooms, electronic classrooms, labs, discussion groups, field trips, etc.

Academic Advising: The College of Science and Technology requires that students meet with an Academic Advisor as soon as they are ready to declare a major. The Academic Advisor will set up a degree plan, which must be signed by the student, a faculty mentor, and the department chair. The College's Academic Advising Center is located in Center for Instruction room 350, and can be reached at 825-6094.

Dropping a Class: I hope that you never find it necessary to drop this or any other class. However, events can sometimes occur that make dropping a course necessary or wise. Please consult with me before you decide to drop to be sure it is the best thing to do. Should dropping the course be the best course of action, you must initiate the process to drop the course by going to the Student Services Center and filling out a course drop form. Just
stopping attendance and participation WILL NOT automatically result in your being dropped from the class. Friday, November 5, 2011, is the last day to drop a class with an automatic grade of “W” this term.

**Grade Appeal Process:**
As stated in University Rule 13.02.99.C2, Student Grade Appeals, a student who believes that he or she has not been held to appropriate academic standards as outlined in the class syllabus, equitable evaluation procedures, or appropriate grading, may appeal the final grade given in the course. The burden of proof is upon the student to demonstrate the appropriateness of the appeal. A student with a complaint about a grade is encouraged to first discuss the matter with the instructor. For complete details, including the responsibilities of the parties involved in the process and the number of days allowed for completing the steps in the process, see University Rule 13.02.99.C2, Student Grade Appeals, and University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures. These documents are accessible through the University Rules Web site at http://www.tamucc.edu/provost/university_rules/index.html. For assistance and/or guidance in the grade appeal process, students may contact the Office of Student Affairs.

**Notice to Students with Disabilities:**
Texas A&M University-Corpus Christi complies with the Americans with Disabilities Act in making reasonable accommodations for qualified students with disabilities. If you suspect that you may have a disability (physical impairment, learning disability, psychiatric disability, etc.), please contact the Services for Students with Disabilities Office, located in Driftwood 101, at 825-5816. If you need disability accommodations in this class, please see me as soon as possible.

If you are a returning veteran and are experiencing cognitive and/or physical access issues in the classroom or on campus, please contact the Disability Services office for assistance at (361) 825-5816.