CSCI 152 **Programming Fundamentals II** **Spring 2014**
Class time: MW 4:30pm-5:45pm **Location: Jour 234**

Instructor: Dr. Daniel Creider
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Office Hrs: **MW** 9:00am – 10:45am; 2:00pm – 4:00pm
Other times by appointment (not in office on Thursday)

Course Description: This course introduces the fundamental concepts of structured programming using the C++ computer programming language. Topics include software development methodology, data types, control structures, functions, arrays, files, and the mechanics of running, testing, and debugging computer programs. Advanced topics include list processing, sort and search algorithms, structures, and an introduction to classes.

Student Learning Outcomes
(measured by exam, quiz, and programming assignment results)

- Understand the basic elements of a computer program including documentation, data declaration and procedural operations.
- Edit, translate and execute a computer program.
- Write programs to input data from the keyboard or file and output to the console or file.
- Apply control structures to alter the sequential flow of execution of program statements including selection and iteration structures.
- Create user-defined functions; develop programs consisting of multiple functions, master function parameter passing, and the scope and lifetime of an identifier.
- Define and manipulate arrays including searching, sorting and basic operations on lists implemented as arrays.
- Create and access struct(ure)s composed of heterogeneous items.
- Design and code a class and then develop applications that utilize user-defined classes.

Prerequisite: CSCI 151 or other course covering basic computer concepts and programming logic

Text: NONE REQUIRED
You can use any text book of your choice for reference material for this class or look up information about features of the C++ language on the internet.

Additional information is available under the Doc Sharing tab in eCollege for this course. A lot of the material is related to the text book: C++ Programming: from Problem Analysis to Program Design **5th edition** by D.S. Malik. However you do not need to book to make use of the information created by an instructor who taught this course in previous semesters.

You can also view notes I created for CSCI515 programming class found at the following link.
http://faculty.tamuc.edu/dcreider/index.html

For additional resources for learning C++, click on **Related Web Links**.
Some particularly recommended sites for compiler information, tutorials, and general information.
http://www.cprogramming.com/
http://www.cplusplus.com/
http://msdn.microsoft.com/en-us/visualc/default.aspx

Evaluation:

Your grade for the course will be based on the following approximate numbers and percentages:

20%	quizzes (5-10, unannounced, no makeups)
25%	Mid-Term Exam – Will be announced at least one week in advance
30%	Comprehensive **final exam**

20%	Programming assignments – usually one per week – penalty for late submission
5%	**Current events** (social, ethical, security issues in computers and technology)

Letter grades for the course will be assigned according to this scale of percentage points:

90 – 100	A
80 – 89	B
70 – 79	C
60 – 69	D
0 – 59	F

You must earn an A on your own. Assuming that you have completed all assignments, lower borderline grades may be affected by factors such as:

- the class grade distribution
- your class attendance, participation, and behavior
- the pattern of your grades (upward trend is good; downward trend is not good)

You need to give me a reason to think you deserve a grade higher than your percentage indicates, and you need to show me that you've made every effort to help yourself (attending class, completing programs).

Course Policies

Makeups:

No makeup on a missed quiz. Lowest quiz grade will be dropped

If you know ahead of time that you'll miss an exam, let me know and it may be possible for you to take an exam outside of class. Taking an exam *after* the rest of the class does is usually possible only if you can take it before the next class period.

Attendance:

You are responsible for everything covered in all class meetings, whether you're in class or not.
In order to be considered officially present for a class period, you must **sign the roster sheet** which will be passed around. You must be in class the entire class time to be considered present.

Drops:

If you are making an obvious effort in the course at the time you drop (still attending class and attempting program assignments), you may drop passing no matter what your actual grade might be. If you just disappear, your grade will be whatever you have actually earned at the end of the semester (usually a grade of F). If you find that you are unable to complete the course, please be sure to drop the course to avoid receiving an F; you will not be automatically dropped.

Details of **program requirements** will be provided on a separate handout or obtained from eCollege Doc Sharing. If an assignment is turned in after the due date, 20% of the grade will be forfeited. No assignment will be graded if submitted 7 or more days after it is due. If you have a problem submitting an assignment on time you should contact me before the due date.

eCollege:

This is a ***web-enhanced*** course (using some of the capabilities of eCollege but not set up as a self-directed online course).

You can access eCollege either directly or through your myLeo account.

1. To access eCollege through myLeo, log on to your myLeo account and click on **eCollege** in the bar in the upper right of the screen under the myLeo logo (there may be an additional link available in the menu on the left side of your screen). You can bypass the university's home page by going to **http://online.tamuc.edu**

or To connect to eCollege directly, set your browser to go to **http://online.tamuc.org/**
Enter your student id in the User Id box at the top of the screen where the cursor is blinking and enter your password in the Password box to the right of the User Id box (it's the same id and password that you use when logging in to your myLeo account). Click on **Sign In** .

As long as eCollege itself is up, you can connect to eCollege this way even when myLeo is down or the university's home page is inaccessible.

2. In eCollege click on the **MyCourses** tab (next to **Home**) in the upper left corner of the screen between the university logo and the date.

3. Scroll down to the bottom of the MyCourses screen and click on the class you want from the list of online and web-enhanced courses you may be taking this semester.

eCollege Document Sharing:

Input data files, sample programs, and most handouts can be downloaded from eCollege. All of these files can be found in the Document Sharing section. Click on **Doc Sharing** in the toolbar at the top of the screen. The files will be organized according to topic; files not associated with a particular chapter will be listed under the default category of the course name.

In the **Categories** box, click on the category (folder) you want. Then in the box below (title is the category selected), click on the name of the file to be downloaded. You're given the option of saving the file or opening it directly in its application program (most are Word 2003 files, so the document will be opened in Word) and then saving it if you wish to keep a copy of it.

Compilers:

All the computers in the Computer Science labs in Jour 101-102 and 200 have at least three C++ compilers installed: Microsoft Visual C++, Microsoft Visual C++ Express Edition (a more limited but somewhat easier-to-use version of Visual C++), and Bloodshed Dev C++. Any C++ compiler you may have access to is fine for programming assignments for this course. If you work on a Mac or in Linux, please hand in your program as a plain text file.

All of these compilers can be downloaded for free for installation on your own computer:

DevC++ 4.9.9.2 (also called 5.0 Beta 9.2 – choose the first option in the list under Downloads).
The filename is **devcpp-4.9.9.2_setup.exe** :
http://www.bloodshed.net/dev/devcpp.html

Download **Visual C++ Express Edition** 2010:
http://www.microsoft.com/express/vc/

Visual C++ Developer Center (links for how-to videos, tutorials, etc. in addition to downloading):
http://msdn.microsoft.com/en-us/visualc/default.aspx

For some Visual Studio Tips and Tricks, go to:
http://www.cprogramming.com/visual.html

The entire Visual Studio (of which **Visual C++** and the express edition are a part) is available for free download by students enrolled in computer science courses at A&M Commerce. If you don't already have an account from enrollment in a computer science course in a previous semester, an account for downloading free Microsoft products will be set up for each of you after the 12th class day (when enrollments are stabilized). Instructions for downloading from your account are at the top level in eCollege Doc Sharing (Instructions for MSDNAA Software Downloads.doc).

Not on Computer Science lab computers, but available for free for your own computer:

Code::Blocks for **Windows** users: **http://www.codeblocks.org/downloads**

Code::Blocks for **Linux** users: **http://www.cprogramming.com/g++.html**
Code::Blocks for **Mac** users: **http://www.cprogramming.com/xcode.html**

Some recommendations for a successful semester:

1) **Be here every class period**.
2) **Read assignments** and be ready for what be discussed in class.
3) **Ask** if you don't understand something.
4) **Get help** (sooner rather than later) if you have problems:
   - dept lab help (in Jour 200)
   - lab monitors for hardware or system help
   - free tutors in Mach III (part of the TRIO Programs) for those who qualify
   - make friends with at least one person in class so you can compare notes or check for anything you might have missed
   - get a study group together
5) **Stay caught up**.
6) **Get started** on programs so that you have time to get help if you find you need some help.
7) **Do your own work.** Consult with others about problem-solving strategies, but **code it yourself**.
8) What you get out of any class depends to a very large degree on what you're willing to put into it. Get in the habit of writing little practice programs to try out new language features as we learn them. As you write more programs (even small ones), the process becomes easier, you're much more likely to remember how the language works, and you get much better at programming logic (the hardest part of computer programming).
9) Know your own limits and don't over-extend yourself any more than necessary.

TENTATIVE SCHEDULE
Topics for each class period will be announced in the preceding class.

University Policies and Announcements

Students with Disabilities:
The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:
Office of Student Disability Resources and Services
Texas A&M University-Commerce
Gee Library
Room 132
Phone (903) 886-5150 or (903) 886-5835
Fax (903) 468-8148
StudentDisabilityServices@tamuc.edu

"All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment."
(See Student's Guide Handbook, Policies and Procedures, Conduct)

EARLY INTERVENTION FOR FIRST YEAR STUDENTS:

Early intervention for freshmen is designed to communicate the University's interest in their success and a willingness to participate fully to help students accomplish their academic objectives. The university through faculty advisors and mentors will assist students who may be experiencing difficulty to focus on improvement and course completion. This process will allow students to be knowledgeable about their academic progress early in the semester and will provide faculty and staff with useful data for assisting students and enhancing retention. Grade reports will be mailed by the end of the sixth week of the semester.

All students should be aware that plagiarism is a serious offense. This is true not only of written essays but also of work written in computer languages such as C++. Copying code for assignments from other students or the internet is not allowed. You may certainly discuss with one another the general aspects of programming assignments (like "what does this requirement mean?") and strategies for coding solutions for these assignments, but you must write the actual code for the programming assignments on your own.

Schedules will be dropped on **Wednesday, January 29** for students who have not paid the balance due on their accounts. Check the status of your account on MyLeo. For assistance in paying your balance, please check with the Bursar's Office (903-886-5051) or see the next announcement box for information about loans.

Financial difficulties?

Contact the Loan Office at 903-886-5051 for more information or refer to information on the main Student Accounts webpage
http://www.tamu-commerce.edu/fiscal/studentaccounts/studentaccounts.htm
for current updates or email student_accounts@tamu-commerce.edu .