Syllabus
CSCE 121 – Introduction to Program Design & Concepts
Spring 2011 (sections 507, 508)

lecture:		10:20am–11:10am (m, w, f)	ZACH 105b
labs:	section 507	3:55pm–4:45pm (t, th)	RDMC 111b
	section 508	4:10pm–5:00pm (m, w)	RDMC 111b

instructor: Zachary O. Dugas Toups, Ph.D.
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RICH 901m   office hours: 10:30am–11:30 (t, th) & by appt.

guest lecturer: Bjarne Stroustrup, Ph.D.   College of Engr. Endowed Chair in Computer Science
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HRBB 417a

teaching assistant: Elham Khabiri
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RDMC 229   office hours: 5:15pm–6:15pm (m, w) & by appt.

peer teachers: http://pt.cse.tamu.edu
In addition to the peer teacher for your section, you may also consult other peer teachers for CSCE 113, CSCE 121, or ENGR 112 if they are not busy.

course web page: http://ecologylab.cse.tamu.edu/people/zach/csce121/11spring
Check regularly; **you are responsible for posted information**.

course description: Computer programming for engineers; use of primitive types, control structures, vectors, classes, strings, functions, file I/O, searching, sorting, lists, trees, maps, and graphics to solve engineering problems with computers; introduction to program structure, design, and development, plus the use of class libraries; includes the execution of student written programs in C++.

prerequisites: This course is for CPSL majors. CECL, CEEL, and ELEL majors who have taken ENGR 111 and MATH 151 should ordinarily take ENGR 112 instead of this course.

required textbook: *Programming: Principles and Practice Using C++*, Bjarne Stroustrup, Addison-Wesley, 2nd printing, October 2009, ISBN 978-0-321-54372-1.

optional textbooks: *Thinking in C++: Introduction to Standard C++, Volume One*, 2nd ed., Bruce Eckel, Prentice Hall, 2000, ISBN 0139798099. Free online at http://www.mindview.net/Books/DownloadSites.

C++ Primer, 4th ed., Lippman, S. B., Lajoie, J., and Moo, Barbara, Addison-Wesley, 2005, ISBN 0201721481.

Learning Objectives

At the end of this course, under ABET outcomes a, e, and k, students should be able to:

1. Understand computer program structure, design and development.
2. Use primitive data types and control structures in computer programs.
3. Understand and apply vectors, strings, and structs.
4. Declare and use functions in computer programs.
5. Understand object-oriented programming concepts: objects, classes, inheritance, polymorphism, and encapsulation.
6. Design and create simple graphic user interfaces.
7. Understand and apply file I/O in computer programs.

8. Understand and use basic algorithms for searching, sorting, lists, trees and maps.
9. Navigate and make use of class libraries.
10. Write simple computer programs in a high-level programming language, C++.
11. Complete a team design project using knowledge and principles from the course.

Learning objectives 1 through 10 will be assessed using homework, quizzes and exams. Objective 11 will be assessed by evaluating student group programming projects and written reports.

method of evaluation:

		grade scheme	
lab work (labs, quizzes, papers)	30%	90–100	A
one-hour exams (2) (10 pts each)	20%	80–89	B
comprehensive final exam	25%	70–79	C
project	20%	60–69	D
attendance and class participation	5%	< 60	F
(pop quizzes and lab quizzes)			

Grading Policies

attendance: Lecture and lab attendance is expected. Infrequent unavoidable absences are understood, but each student is responsible for any missed material. For excused absences, students will not be penalized. See Section 7 of the Student Rules for the excused absence policy. For acute illnesses of less than three days, both option A and option B of section 7.1.6.2 are acceptable in this course. For unexcused absences, a grade of zero will be assigned for missed work.

class participation: Class participation will consist of attendance (in lecture and lab) and responses to short quizzes during lecture and lab meetings about the reading assignments and the lecture.

lab work: Submit lab assignments through CSNET (the CSCE departmental electronic turn-in system) and printouts to your assigned Teaching Assistant (TA). A text file (.txt) may be required for answers to non-program questions, explanations, or data. Each student should maintain backup copies of all work. Some lab quizzes will consist of short programming tasks, which will be performed during the lab and submitted to the TA for grading.

late work: Homework assignments which are submitted up to 48 hours late will be penalized 20%. Assignments more than 48 hours late will not be accepted without specific approval from the instructor. Labs submitted by web, e-mail, or any form other than through CSNET, unless approved in advance by your TA or the instructor, will not be accepted.

exams: Examinations will require the use of Scantron forms, 8½ by 11 inches, gray, from Measurement and Research Services; **you must purchase your own forms prior to each test!** Missed exams will be rescheduled without penalty for an excused absence, or with a 20% penalty if the absence is not excused.

project: A group project will be assigned to groups of 3 to 4 students each. Assignments to groups will be made by the instructor.

mid-term grades: Midterm grades will be assigned to all students in week 8, and reported to the Office of the Registrar for students who have completed less that 30 hours of college work. You must keep track of your own grades from the papers handed back.

American with Disabilities Act (ADA) statement: *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 believe you have a disability requiring an accommodation, please contact the Department of Student Life, Services for Students with Disabilities, in Room 126 of the Koldus Building or call 845-1637.*

student rules: You are responsible for complying with all provisions of the student rules posted at http://student-rules.tamu.edu.

Academic Integrity Statements

scholastic dishonesty: Scholastic dishonesty will not be tolerated. Working together on homework assignments is encouraged, but the final product submitted for grade **must be the individual work of the person turning it in.** In other words, it is all right to discuss and to assist each other concerning programming strategy or technique or for one student to help another debug code which will not work; but each student is expected to write **his or her own programs from beginning to end**. In this regard, if code from two or more students is essentially identical, and it is determined **to the satisfaction of the instructor** that the code is not the product of the individual, **all students involved are subject to the Texas A&M University Honor System Rules, including a course grade of F* (* = for academic dishonesty) if this is the first offense, plus additional penalties as determined by the Aggie Honor System Office if this is not the first offense.**

It is imperative that each student clearly understand those rules and the serious consequences that can result from adjudication of an Honor Code Violation. In particular, every student should understand that **complicity – helping or attempting to help another student commit an act of academic dishonesty also constitutes academic dishonesty and carries the same punishment as cheating.** In other words, if you provide your solution to another student, who turns it in for credit, you are both subject to the same consequences.

Plagiarism is the presentation of the work of someone else without giving him or her due credit. You can copy the words of others as long as you clearly identify them as such. In fact, documented use of program libraries is encouraged. Submitted work will be examined for plagiarism using computer software designed for that purpose. Examinations are meant to measure the knowledge or skill of each individual, so **giving or receiving** unauthorized assistance during tests and quizzes is cheating. It is assumed that college students know what is honest and what is not.

Aggie Honor Code: "An Aggie does not lie, cheat, or steal or tolerate those who do."

Upon accepting admission to Texas A&M University, a student immediately assumes a commitment to uphold the Honor Code, to accept responsibility for learning, and to follow the philosophy and rules of the Honor System. Students will be required to state their commitment on examinations, research papers, and other academic work. Ignorance of the rules does not exclude any member of the TAMU community from the requirements or the processes of the Honor System.

For additional information please visit http://www.tamu.edu/aggiehonor .

The following statement must be typed on every lab, project, or exam submitted for grading in this course. Any papers that do not include a signed statement like the one below will not be graded.

"On my honor, as an Aggie, I have neither given nor received any unauthorized aid on this academic work."

OR, for assignments with multiple components:

 "On my honor, as an Aggie, I have neither given nor received any unauthorized aid on any portion of the academic work included in this assignment."

_____   _____

 Typed or printed name of student   Signature of student

Tentative Schedule

Subject to change; check the course web site for changes.

jan.	19	chapter 1
	21	chapter 2
	24	last day to add/drop, chapter 3
	26	chapter 3
	28	chapter 4
	31	chapter 4
feb.	2	chapter 5
	4	chapter 5
	7	chapter 6
	9	chapter 6
	11	chapter 7
	14	chapter 7
	16	1st hour exam (chapters 1–7)
	18	chapter 8
	21	chapter 8
	23	chapter 9
	25	chapter 9
	28	chapter 10
mar.	2	chapter 10
	4	chapter 11
	7	chapter 11
	9	chapter 12
	11	chapter 13
	14-18	spring break – no classes
	21	chapter 13
	23	chapter 14
	25	project assignment
	28	2nd hour exam (chapters 8–13)
	30	chapter 14
apr.	1	chapter 15
	4	last day to q-drop, chapter 16
	6	chapter 17
	8	chapter 18
	11	chapter 19
	13	chapter 20
	15	chapter 21
	18	chapter 22
	20	chapter 23
	22	good friday – no classes
	25	chapter 24
	27	chapter 25
	29	chapter 26
may	2	chapter 27
	3	redefined day – attend all your friday classes, project demonstrations
	10	8:00-10:00 a.m. – final exam