

# SYLLABUS

## CSCE 121 – Introduction to Program Design and Concepts Spring 2015

<b>LECTURE:</b>	501-504	MWF 10:20-11:10	EABA 108
	505-508	MWF 1:50-2:40	EABA 108
<b>LABS:</b>	Section 501	MW 12:40-1:30	RDMC 111A (Wang)
	Section 502	MW 11:30-12:20	RDMC 111H (Nguyen)
	Section 503	TR 9:35-10:25	RDMC 111H (Chou)
	Section 504	TR 3:55-4:45	RDMC 111H (Chou)
	Section 505	TR 12:45-1:35	RDMC 111A (Nguyen)
	Section 506	TR 2:20-3:10	RDMC 111A (Chou)
	Section 507	TR 9:35-10:25	RDMC 111A (Wang)
	Section 508	TR 3:55-4:45	RDMC 111A (Wang)

**INSTRUCTOR:** Dr. Walter Daugherty      Telephone: 845-1308      Office Hrs: MW 9:00-10:00  
[daugher+CSCE121@tamu.edu](mailto:daugher+CSCE121@tamu.edu)      Teague 318A      and by appointment

**TEACHING ASSISTANTS:** Chieh (Jay) Chou, [zxcvjay@tamu.edu](mailto:zxcvjay@tamu.edu), sections  
Khuong Nguyen, [knn1989@tamu.edu](mailto:knn1989@tamu.edu), sections  
Zelun Wang, [wang14359@tamu.edu](mailto:wang14359@tamu.edu), sections

**COURSE WEB PAGE:** <http://courses.cse.tamu.edu/daugher/csce121/15spring> (coming soon)  
Check regularly; you are responsible for posted information.

**PEER TEACHERS:** See <http://engineering.tamu.edu/cse/academics/peer-teachers/current-peer-teachers> or go to HRBB 129, Peer Teacher Central. In addition to the peer teacher(s) for your section, you may also consult other peer teachers if they are not busy.

**CHAT ROOM:** An online course chat room will be set up at [piazza.com](http://piazza.com) which can be accessed from a mobile device. You will receive a message to join the chat room soon. You are responsible for information posted to Piazza.

**OPERATING SYSTEM/COMPILERS:** Unix/Linux with g++-4.9.2 and Microsoft Visual Studio C++ 2013. These are free to you. The TA's will introduce these to you in the first labs. The Linux environment is where homework will be graded, but VS may be easier to use on your home computer, particularly without internet. Familiarity with both is advantageous in obtaining summer jobs.

**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 primarily for CPSL majors who have had a previous programming course, and also CECL, CEEL, and ELEL majors who have taken ENGR 112. **However, if you have taken ENGR 112 from me and are comfortable with your performance in my ENGR 112, then you could take CSCE 113 instead of this course, and add an elective to your degree plan; to do this you must be in (or switch to) Catalog 135 or earlier—discuss this with your advisor immediately.**

**Required Textbook:** *Programming: Principles and Practice Using C++*, Bjarne Stroustrup, Addison-Wesley, 2<sup>nd</sup> edition, May 2014, ISBN 978-0-321-99278-9. **You MUST have the 2<sup>nd</sup> edition, which says "Using C++11 and C++14" on the front cover!**

**Required Clicker:** Purchase an “i>clicker” and register it at [iclicker.com](http://iclicker.com) with your UIN. This is required for graded in-class quizzes.

**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*, 5th ed., Lippman, S. B., Lajoie, J., and Moo, Barbara, Addison-Wesley, 2012, ISBN 0321714113.

*The C++ Programming Language*, 4<sup>th</sup> ed., Bjarne Stroustrup, Addison-Wesley, 2013, ISBN 978-0-321-56384-2.

**Optional Online Code Lab:** <http://www.tcgo1.com> or <http://www.tcgo2.com> (more information later)

**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:

Homework (Labs, Drills, Papers)	30%
One-hour Exams (2) (10 pts each)	20%
Comprehensive Final Exam	25%
Project	20%
Attendance and Class Participation (Pop quizzes and lab quizzes)	5%

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

#### 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 8½ by 11 inch Scantron forms 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 than 30 hours of college work. You must keep track of your own grades from the papers handed back.

**Quibbles:** Grades may be appealed to the instructor using a “quibble form” available on the course web site. Note: All grade appeals must be made no later than two weeks after the grade is assigned.

**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 Disability Services, in Cain Hall, Room B118, or call 845-1637. For additional information visit <http://disability.tamu.edu>.*

**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://aggiehonor.tamu.edu>.

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.”

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Typed or printed name of student

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Signature of student