

Computer Science 225
Computer Science II
Spring 2015 10:00 – 10:50 MWF
Stuart Hall 208

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| Instructor: | Dr. Stephen Hughes | Office Hours: |
| e-mail: | shughes@coe.edu | Mon 3:00 – 4:00 |
| phone: | 399-8231 | Thurs 10:00 – 11:30 |
| | | By Appointment or Open Door. |
| | | 315 Stuart Hall |

COURSE DESCRIPTION

This course continues the introduction the discipline of Computer Science. It is focused on the use of data structures and their implementation in the programming language C++. These structures include arrays, linked structures, lists, stacks, queues, and trees. Students will also explore the use of exception handling, recursion, and object-oriented programming as additional mechanisms for problem solving. A study of computational complexity will allow students to begin to measure and compare the efficiency of their solutions.

CLASS ENVIRONMENT

This class will be taught in a practice-based environment. Some conceptual material will be introduced through lectures, but a majority of class time will be devoted to working interactively with the instructor and peers to co-develop and explore coding examples that support the concepts. While there is not a designated lab component for this course, there will be regular tasks that you will be asked to complete to bridge the time between class meetings. You should expect to be prepared to present and discuss your work with small groups and with the class as a whole.

COURSE MATERIALS

Textbook:

[Data Structures and Algorithms in C++](#), (Second Edition)
Michael Goodrich, R. Tamassia and D. Mount, Wiley, ISBN-13: 978-0-470-38327-8

We will be using the Microsoft Visual C++, specifically the Visual Studio 2010 Express edition. This software is installed on the lab computers, but if you would like to install it on a personal machine, you may download it for free using the following link:

<http://go.microsoft.com/?linkid=9709949>

It is highly recommended that you acquire a thumb drive that you can *dedicate* to the coursework that you create for this class.

STUDENT ASSESSMENT

- 15% Weekly Tasks:** In-class activities will occasionally include extensions that can be completed (or attempted) between classes. These serve as a mechanism for solidifying concepts being discussed in class.
- 5% Quizzes:** Short quizzes will be given regularly to assess your progress in the course. These are designed to ensure that you are keeping up with the pace of the class and to give you a sense of the level of mastery that is expected.
- 15% Exam 1:** Week of Feb9
- 15% Exam 2:** Week of Mar 23
- 25% Comprehensive Final Exam:** May 1, 8:00am
- 25% Assignments:** There will be 4-5 larger scale programming assignments during the semester.

Letter grades will be assigned based on the following scale.

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| | $87 \leq B+ < 90$ | $77 \leq C+ < 80$ | $67 \leq D+ < 70$ | |
| $93 \leq A$ | $83 \leq B < 87$ | $73 \leq C < 77$ | $63 \leq D < 67$ | $F < 60$ |
| $90 \leq A- < 93$ | $80 \leq B- < 83$ | $70 \leq C- < 73$ | $60 \leq D- < 63$ | |

Your grades are considered confidential in accordance with FERPA (See page 47 of the [Coe College Catalog](#)).

COURSE POLICIES

Academic Integrity

Honesty and integrity are qualities we value in ourselves and in others. You are expected to be fully aware of your responsibility to maintain the highest degree of integrity in all of your work. It is accepted that you have read and understood the standards for academic integrity outlined on page 41 of the [Coe College Catalog](#), and will abide by these standards for this course.

I believe that you can learn a lot from your peers, both in the class and in the broader community. Therefore, I strongly encourage collaboration with both. However, do not mistake this as a license to cheat. It is one thing to *learn* from and with your peers; it is another to pass their work off as your own. With respect to writing code for this class:

- You are expected to document any collaboration that takes place.
- Absolutely no electronic transfer of code between students is permitted.
- Any code that you “find” on the Internet must be cited, with an active link to that code.
- While you are encouraged to engage in conversations in online forums, under no circumstances are you permitted to solicit other individuals to complete your work for you.
- “Divide-and-Conquer” is not a legitimate form of collaboration for this class. Every student is responsible for engaging in all aspects of a submission; you may not split portions of the assignment to be completed by certain individuals without explicit permission.

Ultimately, YOU are responsible for all aspects of your submissions. Failure to be able to explain and defend your submission to my satisfaction will be treated as a violation of academic integrity.

Attendance Policy

Class attendance is vital to your success in this course; material covered during missed sessions is the responsibility of the student. Conversations held in class illuminate the published class materials and should not be missed. Graded in-class activities will not be available for make-up without prior approval or extreme circumstances.

Late Work

All assignments are expected to be submitted on time. I understand that events sometimes conspire against us. If your work is going to be late, you should contact me in advance to *negotiate* a new deadline. Work that is submitted late without prior approval will not receive full credit; work submitted beyond two weeks of the deadline will not be accepted.

Office Hours

Office hours are an opportunity for you to clarify details you may have missed in class, discuss general computer science issues, or to have a profound conversation about marmots. It is time that is reserved for you; I may appear busy, but you are not interrupting me – unless another student has arrived first. If you come to office hours with a problem on the assignment, you should come prepared to answer questions, as well as ask them. If you have questions regarding code, you also should come prepared with access to an electronic version of your work.

Special Services

If you have special academic or physical needs requiring accommodations, please meet with me during my regular office hours or schedule an appointment as soon as possible. We need to discuss any accommodations before they can be implemented.

End of Course

This course officially ends with the scheduled Final Exam session. No work for this class will be accepted beyond that point