

SCMP 118: Introduction to Programming (with C++) Spring 2020
T & R 1:10-2:30 RBH 311

Learning to program teaches you how to think. Computer science is a liberal art. (Steve Jobs)

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Course web page: <http://www2.kenyon.edu/depts/math/aydin/teach/118>

Office Hours: MW 11:10-12; T&R: 9:30-11 and by appointment. See my schedule on course web site.

Textbook: Problem Solving with C++, 8th ed, by W. Savitch, Addison Wesley, ISBN: 978-0-13-216273-9

Software: We will be using the IDE CodeBlocks. You may also use Dev-C++ or NetBeans. See course web page for more details.

Course Content and Objectives: This course presents an introduction to computer programming intended both for those who plan to take further courses in which a strong background in computation is desirable and for those who are interested in learning basic programming principles. The course will expose the student to a variety of applications where an algorithmic approach is natural and will include both numerical and non-numerical computation. The principles of program structure and good style will be emphasized. Active learning methods will be used. Major concepts of the chapters 1-8, 10-12, 14 in the text, and part of 15 will be covered.

Grades: Final grades will be determined based on the performance in the following components.

Component	Points
Labs	350
CodeLab	150
Quizzes	100
Midterm Exam	100
Attendance/Participation/Enthusiasm	25
History Essays	50
Final Exam	250
Total	1025

Daily Reading and Quizzes: You are expected to read the sections to be discussed for each class BEFORE the class. The format of the class will be mainly discussion, clarification and practice rather than lecturing. Not only should you read the material but also you should try out some of the things on the computer (you should install the IDE on your personal computer). If you come to class having read the material, you will be able to participate in class discussions which is part of your grade. To make sure you do the readings, we will have frequent, unannounced quizzes. The total number will be 10+n, with best 10 counting. There will be NO make ups for missed quizzes for any reason (except possibly for long term special circumstances). The in-class quizzes will be used to evaluate and solidify what you have learned from the readings in the textbook. They will be based on readings and the "Self Test Exercises". Make sure you do these exercises as you read. Quizzes may include some basic questions that are not yet discussed in class that anybody who read the section should be able to do.

CodeLab: CodeLab is a tool that develops coding skills and understanding through online coding exercises with immediate feedback. Most of the exercises are very short. *There will be more CodeLab exercises in the early part of the semester.* They are not uniformly distributed throughout the semester.

Weekly Labs: The only way to learn to speak a language is to speak it. The only way to learn to program is to program. Therefore, the weekly programming assignments are the most important element of this course. There will be 12 programming projects during the semester some of which containing multiple parts. You will learn the particulars of turning in homework in class. Programming assignments must be submitted on time to be considered for credit. Make sure that whatever you submit for a grade is your own work that truly reflects your own understanding. We will watch for codes that are suspiciously similar to each other or to online sources and report such cases to the Academic Infractions Board. Make sure that the programs you submit compile and run on Kenyon computers with CodeBlocks. In case of pair programming, make sure you follow the guidelines and include a statement attesting that you did.

Computer History Assignments: Once a week you will turn in a brief essay on some computer history fact. See course web page for more information. Please submit them either as a word document or as a pdf.

Exams: Midterm- Tuesday, Feb 25 (week 7)

Final- Monday, May 4, 6:30 pm, in the usual classroom.

Final exam will be comprehensive and 3 hours long (though you should not need all 3 hours)

Program Grading: All programs will be graded according to the following components.

Correctness: Each program should conform to specifications stated in the problem statement. A program should demonstrate correct handling of ordinary input, special cases and error conditions.

Design: Your programs should be modularized into coherent independent functions or classes with strong cohesion.

Style and Documentation: Your program should be easy to read and understand. This involves program indentation, modular design, variable names, user interface and comments.

NOTE: If a submitted program **fails to compile** it will be graded out of 50% of the total point value. If a submitted program has a **run-time error**, then it will be graded out of 75% of the original point value.

Late Policy: *No work will be accepted late.* You need to submit your labs in your folder in *P drive*. Be aware that the time and date is attached to your work once it is submitted. If the file is modified anytime after the submission, the date and time change accordingly. **Do not open your submitted files after the due date**, until graded.

Attendance, Engagement and Tardiness: Active participation in class activities as part of your group is critical for your success in this course. You want to be FULLY engaged and committed for your own learning. Hence, coming to class every day is critical. After one unexcused absence, each unexcused absence will lower your overall course grade by $(n-1)*0.75\%$ where n is the number of unexcused absence. A total of 6 absences (whether excused or not) will result in automatic expulsion from the course. Tardiness and walking out of the classroom are really distracting for everyone. Unless there is a real emergency, please do not leave the classroom before the class is over. Two tardiness or leaving the room during the class will count as an unexcused absence. [See Math Dept's Class Attendance Policy](#). If you are late to the class, you will likely miss a quiz too. A part of your course grade will be based on your attendance together with your level of engagement, enthusiasm, and participation in class activities.

Academic Honesty: The rules set forth in the 2019-2020 Course Catalog apply to all aspects of this course.

<http://www.kenyon.edu/directories/offices-services/registrar/course-catalog-2/administrative-matters/academic-integrity-and-questions-of-plagiarism/>

Any work submitted for credit must result directly from your own understanding, thoughts, and ideas. Presenting the work of others as your own is strictly prohibited. You may discuss lab projects with others, but *the final submitted work must be done independently and should reflect your own understanding*. That is, after discussing the problems with others (or the tutor), sit down and write your own code. Violation of this rule will result in a report to AIB (Academic Infractions Board). In case of pair programming, make sure to follow the guidelines and include a statement attesting that you did. If you are uncertain about the expectations for this class, please talk to me for clarification.

Disabilities: If you have a disability which requires an accommodations in this class, please feel free to discuss your concern with me, but you should also consult Ms. Erin Salva, the coordinator of student access and support services (salvae@kenyon.edu, x5453). It is Ms. Salva who has the authority and expertise to decide on the accommodations that are proper for your disability. Though I am happy to help you in any way I can, I cannot grant any accommodations without a notification from Ms. Salva.

Title IX

Kenyon College seeks to provide an environment that is free of bias, discrimination, and harassment. If you have experienced any form of harassment/misconduct/assault, interpersonal violence, or stalking we encourage you to report it. If you report the incident to a faculty member, they must to notify Kenyon College's Civil Rights and Title IX coordinator of any information about the incident you provide. More information can be found at <https://www.kenyon.edu/directories/offices-services/ocr/discrimination/>

Please read the materials on the course web site for more information and advice.

<http://www2.kenyon.edu/Depts/Math/Aydin/Teach/118/>

How to Start Using CodeLab

The first 10 exercises in CodeLab are free so you can start doing the CodeLab exercises before paying. But first you must register to get a username and password and put yourself on the class roster.

REGISTRATION:

- 1) Go to www.tcgol.com OR www.tgo2.com
- 2) Click "Register for CodeLab"
- 3) When prompted enter the Section Access Code: KENY-27508-AXDM-43

LOGIN:

- 1) Go to www.tcgol.com OR www.tgo2.com
- 2) Click "Login to CodeLab"

GETTING FULL ACCESS:

log in to CodeLab, click LOBBY, click the button "Get Full Access", follow the directions