

# Beginning C Programming for Engineers

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## 1 Introduction

This course (CSCI-1190) teaches the rudiments of computer programming and some of the essentials of the C programming language. Students taking this course are not expected to have any previous experience with computer programming.

*Students will not receive credit for this course if they take any other Computer Science course. If you desire more than an introduction to programming, you may wish to take Computer Science 1 instead.*

## 2 Textbook

The required textbook for this course is *C How To Program* by H. M. Deitel and P. J. Deitel. This book covers both the process of programming and the C programming language. The bookstore carries the fifth edition, but the third or fourth edition can also be used. Lectures cannot take the place of reading the assigned sections!

## 3 Schedule

Date		Topic	Suggested Readings	Due
Section 4	Section 1			
1/14	1/15	Introduction, types, variables	1, 2.1–2.4	
1/28	1/22	Conditionals, logic, and repetition	2.5–2.6, 3.1–3.10, 4.10–4.11	HW1
2/4	1/29	Iteration	3.11–3.12, 4.1–4.9, 4.12	HW2
2/11	2/5	Functions	5	HW3
2/19	2/12	Arrays / Project assignment	6, 8 <sup>a</sup>	HW4
2/25	2/26	Bit operations	10.9, App. D <sup>b</sup>	HW5
3/3	3/4	Course evaluations, project review, final exam		HW6, Project

<sup>a</sup>Material in chapter 8 is optional.

<sup>b</sup>Appendix E, in 4th and earlier editions.

Table 1: Schedule

This is a one-credit course meeting two hours each week. We will have seven sessions, as shown in Table 1. Most classes will begin with a quiz. Homework problems will be made available electronically on the course web site. Your solutions will be due at the *beginning* of the following class, unless otherwise noted. Unless prior arrangements have been made, late submissions will not be accepted. If you have trouble with a homework problem, *please see me for help!*

## 4 Grading Policy

Numeric grades are determined by weighting the components as shown in Table 2. Note that this is a “studio” course; the in-class exercises are important.

In-class exercises	10%
Homework	15%
Project	20%
Quizzes	25%
Final exam	30%

Table 2: Relative weights

$\geq 90$	A
$\geq 80$	B
$\geq 70$	C
$\geq 60$	D
$< 60$	F

Table 3: Letter grade mapping

Numeric grades are mapped to letter grades as shown in Table 3. Note that we reserve the right to modify this mapping if circumstances warrant. Grade modifiers will be used at the discretion of the instructor. Grades are based on demonstrated mastery of the course material.

## 5 Academic Integrity and Rules for Collaboration

Successful education requires trust between students and instructors. Students must trust that instructors are presenting appropriate material, requiring appropriate work, and grading that work fairly. Instructors must trust that students are turning in their own work. Violating this trust undermines education.

Collaboration during in-class activities is encouraged. Students may team up to present a joint solution to an in-class exercise; all students in the team will receive credit for that solution.

Study groups of up to three (3) students, all within the same section, may work together on homework assignments and the project. Each submission must clearly indicate the names of each of the students in the group. *The project submission and all homework submissions must be the work of that study group alone.* Copying code, such as via file transfer, cut-and-paste, dictation or discussion, typing in what you see or recollect of another student’s working program, any other collaboration, or any other form of cheating or copying, is strictly forbidden. Submitting work created by or with a person not part of the group is forbidden, with the exception that you may request help from the instructor or TA. If you have any questions about what is permitted, please discuss your concerns with the instructor.

Quizzes and the final exam are to be strictly independent work. No discussion or collaboration with other persons, students or otherwise, is permitted. You are permitted to bring a crib sheet, handwritten by yourself on a single letter-sized sheet of paper (both sides), for each quiz and the final exam. These crib sheets may not contain programs, other than those given in class notes. Crib sheets must be signed, and will be collected.

Incidents of academic dishonesty will bring about strict penalties. The penalties for cheating and plagiarism can be quite harsh, including administrative failure of the course. Generally, plagiarized homework will bring about a reduction of course grade by a letter; a plagiarized project will reduce the course grade by two letters. Cheating on a quiz or the final will result in automatic failure. Typically, incidents will be referred to the Office of the Dean of Students, who provides an appeals process.

## 6 Contact Information

The best way to reach me is by email to [toddr@rpi.edu](mailto:toddr@rpi.edu). You can also call me at 276-2605. My office is VCC 307; stop by if you need help. My preference is that you come Monday or Tuesday, 9:00-11:00AM. The grad TA will also offer office hours.

This course has a web page. All class notes, assignments, and other hand-outs can be found at

<http://www.rpi.edu/~toddr/Classes/BeginningC/>