

Exploring Computer Science

Fall 2009 Syllabus

Course website: <http://garfieldcs.com>
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Room: 115

This course is designed for students who are curious about computing careers and are interested in a broad introduction to computer science. We'll learn how computers work, talk about the process of designing software and explore major programming building blocks by creating games and animations. Throughout the course, we will work to develop problem solving skills by learning to approach programming challenges systematically and to write elegant solutions.

We will also attempt to uncover all the different things programmers and computer scientists do by exploring research projects, meeting industry professionals and reading about interesting sub-fields. Understanding who technologists are and how they work is important for everyone as more and more jobs involve computing technology.

Goals

Successful completion of this course and its projects will provide students with a broad understanding of computing fields. Students will be able to:

- identify and discuss the major hardware and software components of a computer system
- assess whether a career in a computing field is interesting to them
- discuss the role of computing in various fields
- design, implement and debug computer-based solutions to small-scale problems
- recognize the ethical ramifications of software creation and use

Grading

Over the course of the semester, you will complete several projects as well as shorter lab activities. That's where the learning happens, so these are weighed heavily. Each assignment will be graded according to the criteria listed in the assignment write-up. Paper exams are also an important opportunity for you to demonstrate learning. Points will be distributed between the different categories approximately as follows:

35% - programming projects

30% - exercises, worksheets, participation

35% - tests and quizzes

Exams

You will have pencil and paper quizzes and exams during each unit. These will include programming questions as well as short essay questions on topics covered. The semester exam will be comprehensive.

Class materials

We will not be using a paper textbook in this class. Instead, I will use the course website to link to readings, write lecture summaries and post slides. Assignment descriptions will also be posted on the website. It will be your responsibility to make sure you either download materials ahead of time or have access to the Internet when you need them. You can participate in making materials available by writing blog post summaries of class days for 5 points extra credit each (up to 15 points for the semester).

Getting Help

You may sometimes get stuck while working on an assignment for this class – please ask for help! I will try to make myself available most days after school. You can also usually find me in the room during lunch and 5th period but if you know you'll need help then, it's always a good idea to make an appointment to make sure I'll be there. I will also try to answer all e-mail within 24 hours.

Feedback

This is a new course, so sometimes things may not work as well as you wish they would. You have a great opportunity to shape the class into something you love by providing lots of feedback. You can always talk to me before/after class or send me e-mail. If you'd prefer to remain anonymous, I have posted a form on the website.