CS200: Foundations of Computer Science

From Ada and Euclid to Quantum Computers and the World Wide Web

Computer Science is the study of imperative knowledge. Where mathematics is about declarative (“what is”) knowledge, computer science is all about “how to” knowledge.

This course will focus on three simple but powerful ideas:

1. You can define things in terms of themselves (recursive definitions).
2. You can treat procedures and data as one and the same (first class procedures).
3. When you give something a name, it becomes more useful (abstraction).

Some things you will learn:

How languages work and what they are made of
Why there is no largest English word
How to create photomosaics and fractals
How the Allies deciphered German secrets during WWII
That there are hard problems, really hard problems and impossible problems
That all really hard problems are actually the same
What is the true meaning of “true”
How to create infinitely many functions that return infinitely many functions
How to program a quantum computer
How to use DNA to calculate the best route for your cross-country tour

Meetings: Mondays, Wednesdays and Fridays at 11:00-11:50 am in Cabell Hall Room 431.

First and second year CLAS students are especially encouraged to take this course. No prior background is expected. Others may be allowed to take it with my permission. The course will be limited to about 30 students.

Teacher: David Evans developed this course as part of his University Teaching Fellowship.

For more Information:
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