What is Computer Science?

What do you hope to learn in this class?
What is Computer Science?

Computer science is the study of solving problems using computation. - Computers are part of it, but the emphasis is on the problem solving aspect. A computer scientist is a problem-solver.

Computer Scientists work across disciplines

<table>
<thead>
<tr>
<th>Mathematics</th>
<th>Geoscience</th>
<th>Medicine/Surgery</th>
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<tbody>
<tr>
<td>Biology (bioinformatics)</td>
<td>Archeology</td>
<td>Engineering</td>
</tr>
<tr>
<td>Chemistry</td>
<td>Psychology</td>
<td>Linguistics</td>
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<td>Physics</td>
<td>Sociology</td>
<td>Art</td>
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<tr>
<td>Geology</td>
<td>Cognitive Science</td>
<td>…</td>
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Why Study Computer Science?

Computing is Consistently Ranked Among the Best Occupations

CS Careers Rank Highly In:
- Job satisfaction
- Salary
- Work/life balance
- Growth potential
- Employment rate
- Work environment
Why Study CS at Rhodes?

“Everyone should learn how to program a computer, because it teaches you how to think. I view computer science as a liberal art, something everyone should learn to do.” - Steve Jobs

• Liberal arts background is great!
• Employers want to see:
  – Communication skills (written & verbal)
  – Strong work ethic
  – Teamwork skills (works well with others)
  – Initiative
  – Interpersonal skills (relates well to others)
  – Problem-solving skills

Things to Remember

1. Computers are dumb!
2. Computers only do what you tell them to do.
3. Computer do what you tell them to do really fast, so they appear smart (but they are not).
4. Computer don’t remember anything unless you tell them how to remember.
5. Computers take your instructions literally. If you tell them to do something dumb, they do it.
6. A computer only does what it is told and in exactly the order you tell it.

Syllabus

• [http://cs.rhodes.edu/welshc/COMP141_F14/syllabus.pdf](http://cs.rhodes.edu/welshc/COMP141_F14/syllabus.pdf)

Fun Activity

• Go to Start -> All Programs -> Computer Science-Math Programs - > Python 3.4.
• Open Python (command line)
• Type the following (use the exact capitalization as shown):
  >>> import turtle
  >>> turtle
  >>> sven = turtle.Turtle()
  >>> sven.forward(100)
  >>> sven.right(90)
  >>> sven.forward(50)
• Try other commands
  - forward, backward, right, left
  - sven.color('blue')
  - sven.pensize(3)
Homework 0

• Tell me about yourself.
• Make sure you’ve added this class to your course list on Moodle.
• Due Friday, 8/29 by 11:55pm

Next Time

• Read Chapter 1
• Hardware/Software