CS 101
Introduction to Computer Science

Lecture 1
Instructor

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  - Email: jobagy@email.arizona.edu
  - Tentative Office Hours: Mon & Fri 10-11am, Tue 11am-noon
    - Or by appointment
Section Leaders

• Section leaders
  ○ Chris Benz
  ○ Hannah Parraga
  ○ Henry Nguyen
  ○ Daniel Tweedy
  ○ Daniel Vergara

• GS 228 Lab hours will be posted on Piazza
Introduce yourselves!!!

1. Go around your table and introduce yourselves to everyone
   a. Say your name/major/year

2. As a group, try to answer these questions (no Googling)
   a. How many words are in the book “A Tale of Two Cities”? 
   b. How many official “Halo” video games are there?
   c. What is the longest-living mammal?
Introduce yourselves!!!

1. Go around your table and introduce yourselves to everyone
   a. Say your name/major/year
2. As a group, try to answer these questions (no Googling)
   a. 135,420
   b. 13
   c. Bowhead Whale
General Info

- This is probably your very first CS course!
  - Prerequisites: None!
- If you already have significant CS background, this might not be the course for you
  - More on this later...
Learning outcomes

By the end of this course, you (the student) will:

- Understand what the field of Computer Science (CS) is
- Be better equipped to solve problems using computational methods
- Know how to understand and develop basic algorithms
- Have a broad understanding of the many applications of CS
- Know the history and origins of computing
Learning outcomes

- By the end of this course, you (the student) will:
  - Understand how computers and computer networks are physically structured
  - Realize that not all problems can be solved by computers
  - Be able to write simple, well-structured computer programs
    - Using: variables, conditionals, loops, functions, events
Sections

- Section is on Tuesday (same room!)
  - 3:30pm
- Attendance is required
- Section is your chance to solve problems/practice with us here
- Section leaders
  - Help lead and run the weekly section
  - Grade your assignments
  - Act as a “point of contact” for course questions, grading, and help
  - Hold lab hours in GS 228
Textbook

- Two required books:
  - *Understanding the Digital World (Kernighan)*
    - Many of the weekly readings will come from this book
    - Will also require readings from other online/free resources
  - *Getting Started with Processing (Fry, Reas)*
    - This will be the main book we use to learn programming
    - Some of the weekly section problems will come from this
- Thankfully, both of these books are under $20
- If you don’t already have them, order them now!
Assignments

- Roughly 1 assignment per week
  - Some will be programs, others will be written
    - Some programming assignments will have multiple parts
- Will be a total of 13-15 assignments (some multi-part)
- No assignment grades will be dropped!
- Typically will be due on Wednesdays
Assignments

- Each assignment is due at the day and time given on the assignment specification
- Don’t start last-minute!
- You have 3 “free” late days
  - A **late day** allows you to turn in an assignment up-to 24 hours after the due date/time
  - These should be used sparingly… you only get 3!
  - Cannot use more than 1 for a single assignment
- Assignments are worth **48% of your final grade!**
Quizzes and Exams

- There will be 4 exams
  - Regular (10% * 3) 50 mins
  - Final (12%) 120 mins
  - No Drops!

- There will be 14 ~10 minute In-class activities/group quizzes
  - Worth 5% of the grade
  - No make-ups!

- 30% + 12% + 5% = 47% of the final course grade
Quizzes and Exams

- Exams held at beginning of class
  - Show up on time! You won’t be given extra time if you show up late
- Group quizzes are unannounced
  - On average: 1 per week
  - Will not have any on an exam day
  - Maybe beginning, middle, or end of class!
  - Can work in pairs, and ask questions
- There will be **no make-up quizzes or exams**, except in the case of extreme emergencies
  - “I slept in” is not an emergency :)

In section, you will go over topics and practice problems based on what we talk about in lecture.
Section attendance is recorded and required!
Section is 5% of the final course grade.
## Grading Breakdown

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group Quizzes</td>
<td>5%</td>
</tr>
<tr>
<td>Sections</td>
<td>5%</td>
</tr>
<tr>
<td>Regular Exams</td>
<td>30%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>12%</td>
</tr>
<tr>
<td>Assignments</td>
<td>48%</td>
</tr>
</tbody>
</table>
Grading

- We will do our best to get all grades back (quizzes, exams, assignments) within **7 days** after the last possible submission (including late)
- From the time you receive a grade, you have at most **4 days** to submit a grade complaint or regrade request
  - request a regrade on Piazza – private post
- After that, your grade is final
Classroom behavior

- Treat other respectfully
- Do not be noisy or disruptive during lecture
- In class you may use technology, but only for note-taking and following along with lecture
  - You may not (game, facebook, netflix, etc)
  - We will enforce this
- If you have to do any of these, leave class and come back when done
Lecture

- Show up on time!
- Some days will have group quizzes
- Even when we don’t have group quizzes, will have in-class-activities
Getting help

- **Office/Lab Hours**
  - Dr. O'Bagy’s office hours on class website
  - The SLs will all have lab hours (also available online)

- **Piazza** (all course communication)
  - If you have a questions about course administration, or high-level questions about a topic of assignment, create a public post
  - If you have a question that requires including details of your implementation of an assignment, or contains details about your course grade, make a private post

- **Email**
  - Just use Piazza!
Getting help

• Replying to Piazza/Email
  ○ *Weekdays 8am - 5pm*
    ▪ I check my email and Piazza frequently
  ○ *After 5pm*
    ▪ Won’t guarantee reply until the next day
  ○ *Weekends*
    ▪ Typically check my email only 1-2 times per day, so I will respond but probably not as quickly

• The SLs will monitor Piazza –all questions are answered
  o within reasonable hours (not at 2am!)
Academic Integrity

- **You may**
  - Have high-level discussions with others about techniques and strategies for solving a problem

- **You may not**
  - Discuss the specifics of code/work/solutions
  - Partner with someone on the assignment
  - Copy/Paste or Share code/work/solutions
  - Solicit help from online forums

- See syllabus for more details
How to Succeed

• Make sure you understand the material!
  ○ If you do not, ask questions and come to office hours!
• Attend lectures and sections (for online students, watch!)
• Do all of the readings!
• Participate
  ○ Ask questions, be engaged
• Do all of the assignments
  ○ Start early, test thoroughly, follow the directions, submit
• Study and practice topics on your own
Are you in the right class?

This is the intro course sequence for the CS department

You are here

CSc 101
Intro to Computer Science

CSc 110
Intro to Computer Programming I

CSc 120
Intro to Computer Programming II
Are you in the right class?

If you have zero programming or CS background, 101 is probably the right class

CSc 101
Intro to Computer Science

CSc 110
Intro to Computer Programming I

CSc 120
Intro to Computer Programming II

Prerequisites: None!
Are you in the right class?

If you have a little bit of background, or do not but you want a “fast-paced” introduction, 110

CSc 101
Intro to Computer Science

CSc 110
Intro to Computer Programming I

CSc 120
Intro to Computer Programming II

Prerequisites:
College Algebra
Are you in the right class?

If you have significant CS background, or completed 110

CSc 101
Intro to Computer Science

CSc 110
Intro to Computer Programming I

CSc 120
Intro to Computer Programming II

Prerequisites:
CS 110 (or much exp)
Online resources

- **Main Course website:**
  [http://www2.cs.arizona.edu/classes/cs101/fall18/](http://www2.cs.arizona.edu/classes/cs101/fall18/)
  - Syllabus, schedule, assignments, lecture resources posted here

- **Piazza:** [https://piazza.com/arizona/fall2018/csc101/home](https://piazza.com/arizona/fall2018/csc101/home)
  - Question/Answer platform

- **D2L:** [d2l.arizona.edu](http://d2l.arizona.edu)
  - Used only for assignment submission and grades
What is **Computer Science**?

1. Get into groups of 2-3
2. Devise a 1-3 sentence definition of computer science, in your own words
   a. No Googling!!!
What is **Computer Science**?

“Computer science is a very large subject with lots of applications. Computer scientists design new software, solve computing problems and develop different ways to use technology.” (BBC)

“Computer Science is the study of computers and computational systems” (UMD)
What is Computer Science?

“Computer science is the study of the theory, experimentation, and engineering that form the basis for the design and use of computers. It is the scientific and practical approach to computation and its applications and the systematic study of the feasibility, structure, expression, and mechanization of the methodical procedures (or algorithms) that underlie the acquisition, representation, processing, storage, communication of, and access to information.” (Wikipedia)
What is Computer Science?

- These definitions are correct, but they are not easy to comprehend
- Let’s devise a definition that is easier to understand
What is Computer Science?

In simpler terms, computer science can be defined as...

**Problem Solving using Computational Techniques**

...but this definition depends on the definition of “Problem Solving” and “Computational Techniques” so let’s define them...
What is **Computer Science**?

**Problem Solving:** The process of finding solutions to difficult or complex issues.

**Computational Techniques:** Defining a set of steps or instructions to be run by a computer for accomplishing a particular task.
What is **Computer Science**?

**Combining the definitions:**
The process of finding solutions to difficult or complex issues by defining a set of steps or instructions to be run by a computer for accomplishing a particular task.
First Assignment

Posted on Wednesday's, due following Wednesday.

See class website . . .