

# CSCI 1100: Humanities CS1 Concept Syllabus

Lecture: 1.5 Hours, twice a week

Lab: 2 hours, once a week

Instructor: CS Faculty Member

Co-Instructor: STS Faculty Member

TA: Information Technology & Web Science (ITWS) or Computer Science (CS) graduate student

Mentor Contact and Office Hours:

CS Undergraduate Students

STS Undergraduate Students

## Learning Outcomes

- By successfully completing the readings below and participating in class discussions, students will achieve the following:
  - Demonstrate proficiency in the purpose and behavior of basic programming constructs.
  - Design algorithms and programs to solve small-scale computational programs
  - Write, test and debug small-scale programs
  - Demonstrate an understanding of the wide-spread application of computational thinking to real-world problems.
  - Demonstrate basic proficiency in discussing the mutual formation of technology and society
  - Articulate some of the biases that enter into higher education, technology, and the design of algorithmic systems
  - Understand and critique dataset provenance, particularly along lines of race, gender, and class
  - Effectively communicate to others the biases that enter your own systems

## Required Texts

Students should purchase or otherwise obtain copies of the following texts:

- Cathy O’Neil, *Weapons of Math Destruction*(2016).
- Virginia Eubanks, *Automating Inequality: How High-Tech Tools Profile, Police, and Punish the Poor*(2018).

All other readings can be obtained from the links provided in the course schedule below.

## Course schedule

Week	Lecture 1	Lecture 2	Lab	Reading	Due
1		Introduction	Lab 0: Setup		
2	Python as calculator	String	Lab 1: What is Education, and What does it Do?	“Liberal Education has Failed,” by Matt Wisnioski	Hwk 1
3	Functions	Decisions	Lab 2: Epistemologies and Ideologies of Code	“US Operating Systems at Mid-Century” by Tara McPherson	

4	Tuples, Modules, Images	EXAM 1	Lab 3: Modularization and Masculinity	“Technology as Masculine Culture” by Judy Wajcman	Hwk2
5	Lists	While Loops	Lab 4: Loops and Bridges: Does Code have Politics?	“Do Artifacts have Politics?,” by Langdon Winner	Hwk3
6	Controlling Loops	Data from Files and the Web	Lab 5: If Statements, Non-linearity, and Queer Stories	“Depression Quest, from <i>Videogames for Humans</i> ,” meritt kopas ed.	Hwk 4
7	Problem Solving and Design	EXAM 2	Lab 6: How do we Define a Problem?	“Algorithms of Oppression, Introduction and Chapter 1,” by Safiya Noble	
8	Sets	Dictionaries	Lab 7: Who Gets Counted?	“Weapons of Math Destruction, Chapter 1,” by Cathy O’Neil	Hwk 5
9	Dictionaries	Classes	Lab 8: How do we Count?	“Can an Algorithm be Agonistic?” by Kate Crawford	Hwk 6
10	Classes	Searching	Lab 9: Building Classes, Constructing Class	“The Allegheny Algorithm,” by Virginia Eubanks	Hwk 7
11	Sorting		Lab 10: Theories and Politics of Information and Order	“The Information: A Theory, a Flood,” by James Gleick	
12	TKInter	Recursion	Lab 11: Who Builds?	“Programmed Inequality, Conclusion” by Marie Hicks	Hwk 8
13	Functional Programming		Lab 12: Recursion and Recursive Narratives	“The Garden of Forking Paths,” by Jorge Luis Borges	