**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 *Videogames for Humans*," 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 Sofia 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 | |