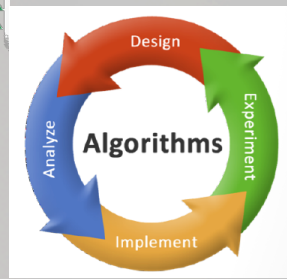


Turtle Graphics

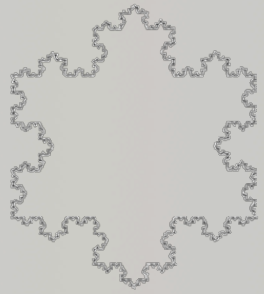


Welcome to CS 8

"Introduction to Computer Science"

Winter 2019

Ziad Matni, Ph.D.



A Word About Registration for CS8

FOR THOSE OF YOU NOT YET REGISTERED:

- This class is currently **FULL**
- If **you are on the waitlist**, you will be added automatically IF others drop the course
 - If you do not get in by end of day tomorrow, you will not get in ☹️
- If you are not on the waitlist, you will **not** get into this class

Your Instructor

Your instructor: **Ziad Matni, Ph.D** *(zee-ahd mat-knee)*

Email: ***zmatni@cs.ucsb.edu***

(please put **CS8** at the start of the subject header)

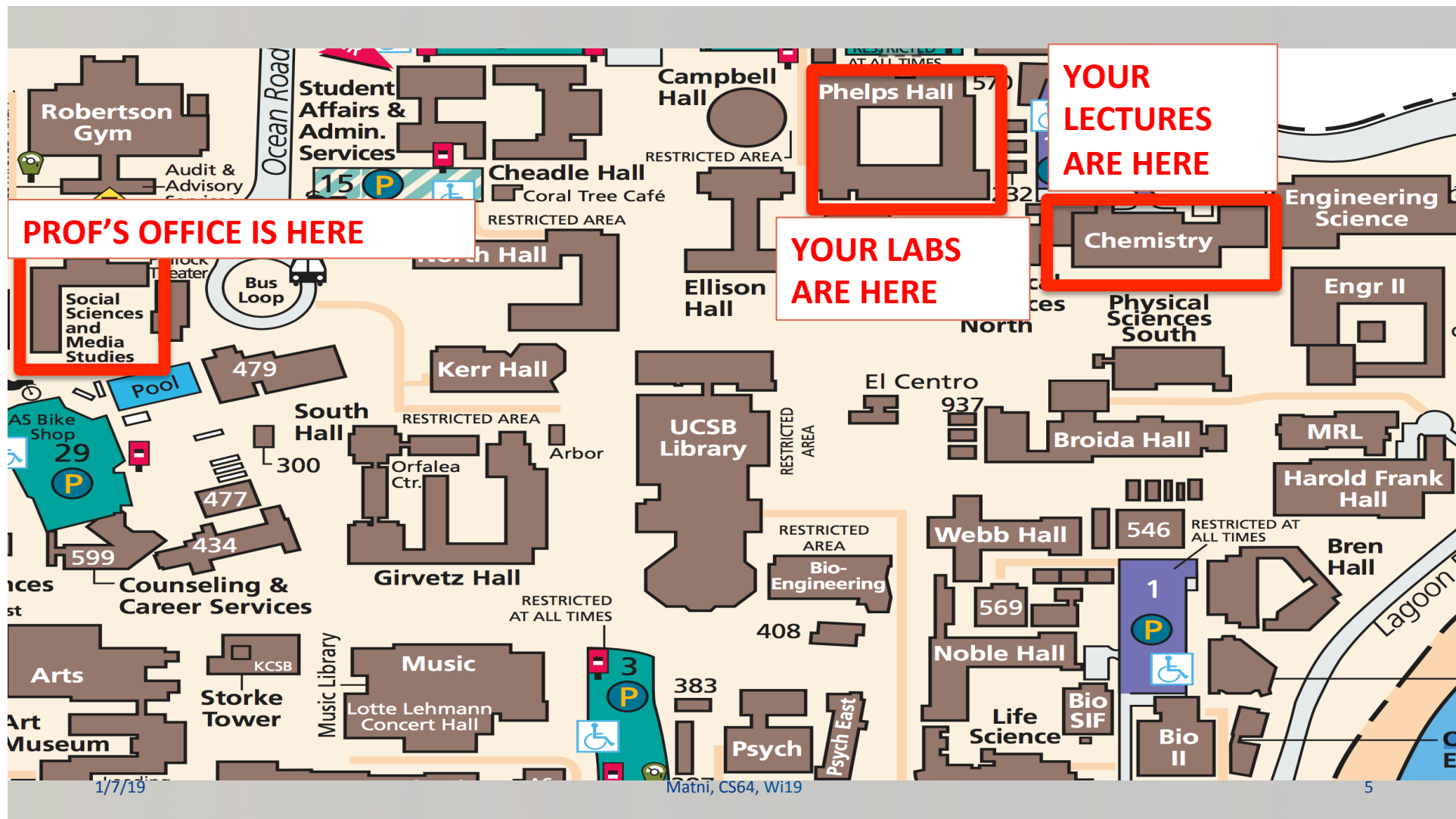
My office hours:

Wednesdays 1:00 PM – 2:30 PM, at SMSS 4409

Your TAs

TEACHING ASSISTANT	LAB SECTION
Alex Ermakov	Tue. 1 pm
M. Muqsit Nawaz	Tue. 2 pm
Zexi Huang	Tue. 3 pm
Keqian Li	Tue. 4 pm

All labs will take place in **PHELPS 3525**



You!

With a show of hands, tell me... how many of you...

- A. Are Freshmen? Sophomores? Juniors? Seniors? Other?
- B. Are Engineering & CS majors?
- C. Are Science (Physics, Chem, Bio, Geog, etc...) majors?
- D. Are Math, Stats, ActuarialSci, etc... majors?
- E. Are Econ or Psych majors?
- F. Are Social Science (Soc, Comm, PoliSci, etc...) majors?
- G. Are Humanities (English, languages, history, etc...) majors?
- H. Have programmed ***anything*** before? What language?
- I. Have used a Linux or UNIX system before?

What Is Computer Science?

What does it mean to you?

CS \neq Programming

programming :: CS, as:

surfing :: Santa Barbara

equations :: mathematics

grammar :: English literature


pokéballs :: the adventure of a lifetime!

*“Does not equal to”
in computer-ese!*



What Is Computer Science?

CS == Computing Science

 *"Equals to" in computer-ese!*

The science of solving problems
using abstractions and algorithms

https://www.youtube.com/watch?v=Zwwzrynqv_o

What is CS 8?

- A **beginner's** class in computer science
- Through the lens of the ***Python*** programming language
 - More specifically, Python 3 (nothing earlier than ver. 3.4.3)
 - This course is not a *comprehensive* Python course
- We'll discuss both motivations (why? who cares?)
and techniques (how do I do that?)

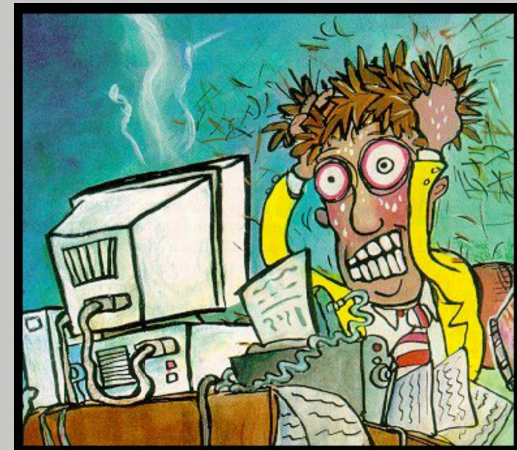
What Can You Expect Computer Programming to Be Like?

Thrilling!

... but...
(you knew there
was "but" coming...)



Also sometimes frustrating
(computers are stupid machines
and instructing them isn't always easy)



About Python

- *Python is one of the most widely used and in-demand programming languages for both engineering and non-engineering applications*
 - Very popularly used in Small Applications
 - Data Mining, Statistical Analysis
 - Content Analysis and Text Analysis, etc...
- A gateway programming language
 - It has “forgiving” ***syntax*** and ***form***
- It looks great on your resume!

How Is This Class Taught?

- Every class has a lecture based on the readings
YOU SHOULD DO THE READINGS BEFORE CLASS!!!
- You will be in a lab on Wednesdays
YOU SHOULD READ YOUR LAB ASSIGNMENT BEFORE YOU GO TO LAB!!!
- You have to do a bunch of (short) homeworks and (kinda-short) lab assignments
PRACTICE MAKES PERFECT!!!



There's a LOT work to do...

- ~8 Homeworks (10%)
- ~8 Lab Assignments (30%)
- 1 or 2 Project Assignments (?)
- 2 Midterm Exams (30%)
- 1 Final Exam (30%)

*All of these need
regular practice*

... and a partridge in a pear tree...

Why All the Work?

- Programming is a **skill**
- Learning how to program requires *time*, *perseverance*, and *consistent* practice
 - Exactly like practicing a musical instrument
 - There's a *science* behind programming,
but it is also about *technique*
- You learn by **doing** and by getting “*your hands dirty*”

Resources?

Class webpage – has ALL information you need!

<https://ucsb-cs8.github.io/w19-matni>

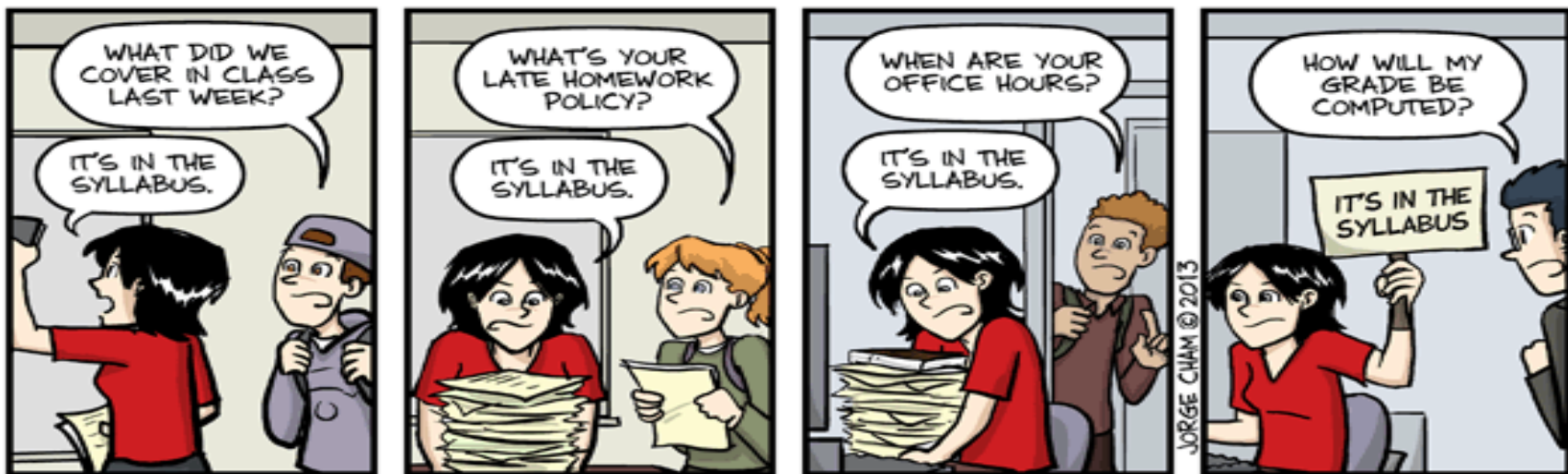
Or use the shortcut: <https://bit.ly/cs8Matni>

Piazza discussions/Q&A:

<https://piazza.com/ucsb/winter2019/cs8>

Grades will be posted on **Gauchospace**

Just in Case...



IT'S IN THE SYLLABUS

This message brought to you by every instructor that ever lived.

WWW.PHDCOMICS.COM

So...

Let's Take A Look At That Syllabus...

Electronic version found at:

http://cs.ucsb.edu/~zmatni/syllabi/CS8W19_syllabus.pdf

Also found on the class webpage

Python IDLE

- Our programming environment
 - Works on Mac OS, Windows, Linux
- Free install at: <http://www.python.org>
- Let's do a **CLASS DEMO!** 😊😊😊
 - Of Linux commands and some Python code
 - Basic Linux workshop will be announced

Lab Etiquette

- **When you go to the lab (PHELP 3525), please don't do anything that can harm other users of the computers or the computers themselves**
 - No food, no drinks
 - Do not unplug computers
 - Just log in and then log out when done
 - Do not use the computers to download illegal/pirated material. There are real legal consequences to you.

CoE Computer Accounts

- You will need to establish a **UCSB College of Engineering (CoE) computer account**
- Please read the knowledge base website at:
 - <https://doc.engr.ucsb.edu/display/EPK/New+UCSB+Community+Member+Information>
- CoE account creation page:
 - <https://accounts.engr.ucsb.edu/create>
 - **Only people actively enrolled in the class will be able to create accounts**

Switching About In The Labs...

... is frowned upon ☹

- Stick to the lab time that you have per your registration
 - The labs are pretty full and at capacity

**IF YOU WANT TO SWITCH LAB SECTIONS,
YOU MUST:**

- 1. Find a person in the other lab to switch with you**
- 2. Get the OK from BOTH T.A.s**

Your TO-DOs before **TOMORROW**

- Get on **Piazza** (I will send invites to all registered students)
- Do **ic00** (under “**Homework**” in the main website)
 - Bring ic00 printout to lab tomorrow
- Read/print out **lab00** (under “**Lab**” in the main website)
 - Be prepared for lab **BEFORE you go to lab!**

Note: if you are not registered, you may not be able to complete the lab.

The REST of Your TO-DOs for This Week

- READ THE SYLLABUS and prepare your **first homework**:
 - Do **h01** (under “Homework” in the main website)
 - It’s due **next Monday (1/14) by start of class (9:30 AM)**
- For WEDNESDAY’S (1/9) lecture:
 - Read **Chapter 1** in the textbook
- Confirm that you have access to **Python IDLE**, version 3.x
 - Available for you at CSIL and Collaborate labs too
 - If you want to install on your own computer – go to <http://www.python.org/>
- **Play with Python at every opportunity**
 - For instance, try out examples from textbook and lectures

</LECTURE>