cse30s21

Syllabus for cse30s21

Note:

This syllabus is available online at https://jeff.cis.cabrillo.edu/classes/cse30s21 [https://jeff.cis.cabrillo.edu/classes/cse30s21]

Basic Info

Instructor	Jeffrey Bergamini [https://jeff.cis.cabrillo.edu]
Email	jbergami@ucsc.edu [mailto:jbergami@ucsc.edu?subject=[cse30]] (please prefix the subject with `[cse30]`) Note: Use this address only for messages that absolutely need to to seen by only the instructor! Otherwise see the section below regarding Piazza vs. email.
Office Hours	M/F 0800–0900 at this Zoom link! [https://ucsc.zoom.us/j/99238129522?pwd=SGJ0dmxZQTZVMGFCcUhXYWNuZDhNUT09]
Schedule	Meetings: M/W/F 0920–1025 at this Zoom link! [https://ucsc.zoom.us/j/95158180386?pwd=Rkc4TTVWQ25mOGV1RVJjRDIzcGxNdz09]

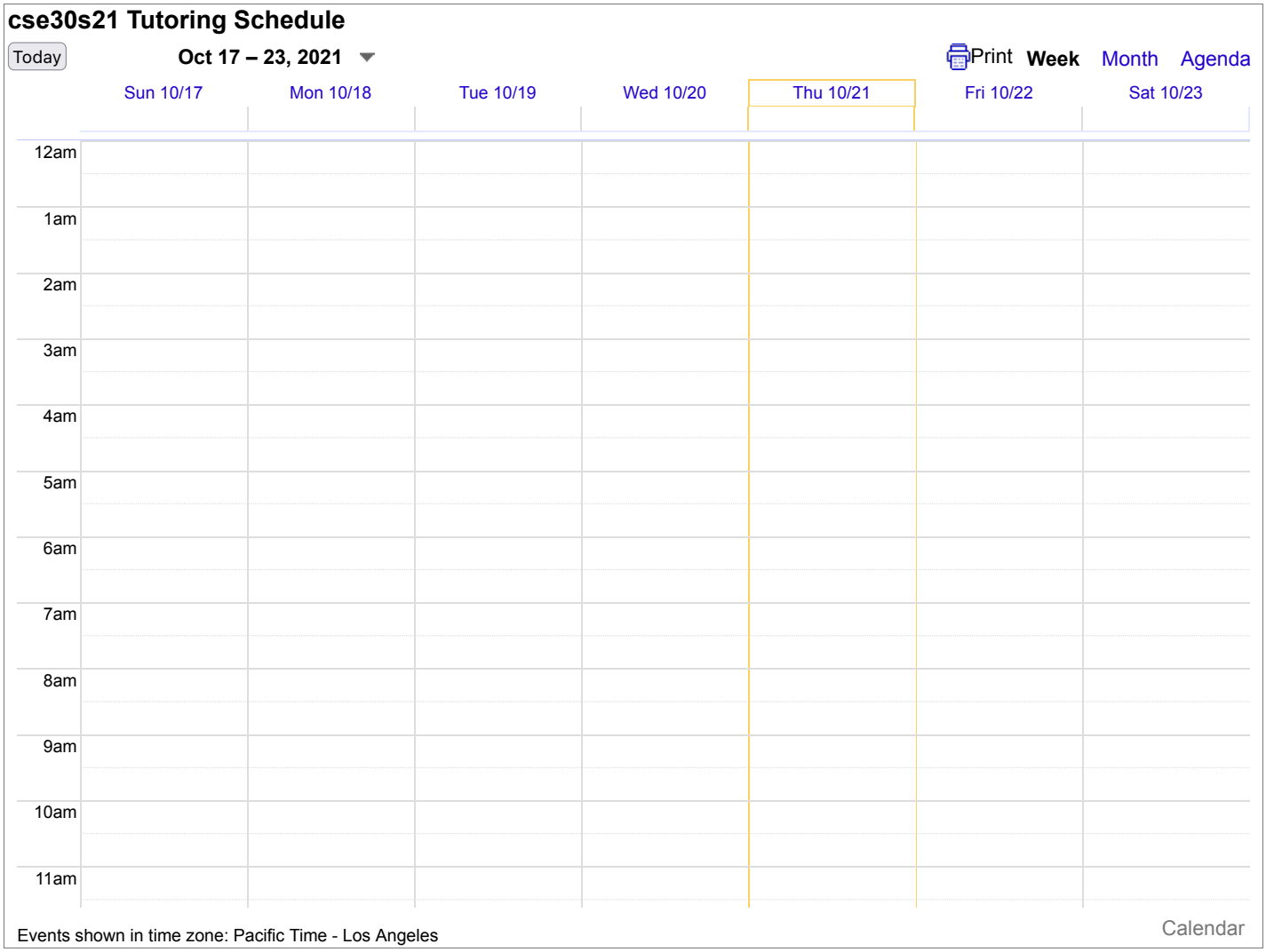
Teaching Assistants	**Email**	**Open Section/Tutoring Hours**
Chung-Ning (Johnnie) Chang [https://www.soe.ucsc.edu/people/johnniec]	cchan60@ucsc.edu [mailto:cchan60@ucsc.edu]	M 1300–1700, Tu/Th 0900–1100 (Zoom link) [https://ucsc.zoom.us/j/93319907350?pwd=MDRjQVFuV05YY1Vwbm1Xc09OTWtpQT09]
Christopher Garcia-Cordova [https://www.soe.ucsc.edu/people/complingperson]	cgarci28@ucsc.edu [mailto:cgarci28@ucsc.edu]	M/W/F 1400–1600, F 1700–1900 (Zoom link) [https://ucsc.zoom.us/j/96601585248?pwd=Vk1obWZ0V0hoS2VsTG92S1p4OVJnZz09]
Donald (Donnie) Stewart [https://www.soe.ucsc.edu/people/donniestewart]	dolstewa@ucsc.edu [mailto:dolstewa@ucsc.edu]	Tu/Th 1300–1700 (Zoom link) [https://ucsc.zoom.us/j/99244289878?pwd=dkFWNWU5MTl4d2lIakJuT0Q5R0NJdz09]

Tutors	**Email**	**Tutoring Hours**
Andre Assadi	anassadi@ucsc.edu [mailto:anassadi@ucsc.edu]	M/W 1920–2120, Tu/Th 1600–1800, F 1100–1300 (Zoom link) [https://ucsc.zoom.us/j/96249870795?pwd=c0dzQlZ0enZsNXNGN1FUV1FkK0NVdz09]
Kenneth Santa Cruz	kcsantac@ucsc.edu [mailto:kcsantac@ucsc.edu]	M/W/F 1200–1400, Tu/Th 1130–1330 (Zoom link) [https://ucsc.zoom.us/j/92921928762?pwd=WTRHUzUvSXRMZk9FSXMrK3VoUWd1Zz09]
Singaravelavan (Vela) Rajesh	sirajesh@ucsc.edu [mailto:sirajesh@ucsc.edu]	M/W 1300–1600, Th 1300–1500, F 0900–1100 (Zoom link) [https://ucsc.zoom.us/j/9502354307?pwd=TWdnTitOcS9FQ2RMbHViak5UYkI3dz09]

MSI [https://lss.ucsc.edu/programs/modified-supplemental-instruction/] Learning Assistant	Connor Masterson [https://lss.ucsc.edu/about/tutor-and-la-bios.html] (ccmaster@ucsc.edu [mailto:ccmaster@ucsc.edu])
ACE [https://ace.science.ucsc.edu/] Learning Skills Adviser	Andres Aranda [https://ace.science.ucsc.edu/ace-people/] (aaranda1@ucsc.edu [mailto:aaranda1@ucsc.edu])

Tutoring/Help Schedule

Between three TAs and (expected to be) four tutors, you should have access to over 40 hours a week of tutoring/help available. Here is a schedule (to be updated as more details arrive) of those time slots, along with associated Zoom URLs:



Prefer Piazza Over Email

Given the number of students in this course, **you should usually ask questions via Piazza**. (You'll get participation credit for it!)

However, if you need to communicate directly with the instructors/TAs, you may send email to the general address **cse30@jeff.cis.cabrillo.edu [mailto:cse30@jeff.cis.cabrillo.edu]**. Messages sent to this address will be delivered to the **main instructor, all of the TA's, and any tutors** that wish to be in this list as well.

Piazza for cse30s21 [https://piazza.com/ucsc/spring2021/cse3001/home] (you will need to sign up [https://piazza.com/ucsc/spring2021/cse3001] first)

Catalog Description

CSE 30: Programming Abstractions: Python

> *Introduction to software development in Python focusing on structuring software in terms of objects endowed with primitive operations. Introduces concepts and techniques via a sequence of concrete case studies.*

Learner Outcomes

- Ability to build programming abstractions that provide a simple interface and a simple set of primitive operations, while encapsulating complexity.
- Ability to reason about the tradeoffs about implementation on the basis of different data structures.
- Ability to go from a verbal and mathematical description of a problem, to its implementation into code.
- Familiarity with Python and its object-oriented and imperative constructs, and ability to write medium-sized (up to a thousand lines roughly) software projects.
- Ability to write code unit tests, and ability to debug medium-complexity software projects.

Textbooks and Materials

There is no required text for this course, but the following open texts and resources are available as supplements. Suggested reading may be posted in the lecture materials, as applicable.

- Think Python: How to Think Like a Computer Scientist - 2e [https://open.umn.edu/opentextbooks/textbooks/think-python-how-to-think-like-a-computer-scientist]
- How to Think Like a Computer Scientist: Learning with Python [https://open.umn.edu/opentextbooks/textbooks/how-to-think-like-a-computer-scientist-learning-with-python]
- Python for Everybody: Exploring Data Using Python 3 [https://open.umn.edu/opentextbooks/textbooks/python-for-everybody-exploring-data-using-python-3]
- A Byte of Python [https://open.umn.edu/opentextbooks/textbooks/a-byte-of-python]
- Think Complexity: Exploring Complexity Science with Python - 2e [https://open.umn.edu/opentextbooks/textbooks/think-complexity-exploring-complexity-science-with-python]

All other materials will be on the course website [https://jeff.cis.cabrillo.edu/classes/cse30s21].

Keep in mind that a lot of this information is available online as well. This class is a good opportunity to learn how to use search engines effectively, if you haven't already. Check out Google's advanced search options [https://support.google.com/websearch/answer/2466433] and DuckDuckGo's syntax rules [https://help.duckduckgo.com/results/syntax/] for some very useful pointers.

Schedule

This schedule is subject to change.

Week	Dates	Topics	Assignments and Due Dates
01	03/29 – 04/02	Python Basics Refresher; Command-Line and Git Orientation	
02	04/05 – 04/09	Decomposition into Modules and Functions	04/05 : Assignment 00 (`cse30s21as00`)
03	04/12 – 04/16	List comprehensions; Generators; Lambda expressions	04/12 : Assignment 01 (`cse30s21as01`)
04	04/19 – 04/23	Basic OOP	04/19 : Assignment 02 (`cse30s21as02`)
05	04/26 – 04/30	Inheritance and Polymorphism	04/26 : Assignment 03 (`cse30s21as03`)
06	05/03 – 05/07	Searching	05/03 : Assignment 04 (`cse30s21as04`)
07	05/10 – 05/14	Recursion	05/10 : Assignment 05 (`cse30s21as05`)
08	05/17 – 05/21	Graph Representation	05/17 : Assignment 06 (`cse30s21as06`)
09	05/24 – 05/28	Graph Manipulation	05/24 : Assignment 07 (`cse30s21as07`)
10	05/31 – 06/04	Holiday 05/31 Hashing	05/31 : Assignment 08 (`cse30s21as08`)
Finals	06/07 – 06/11	Final exam period: 06/07 0800–1100	06/07 : Assignment 09 (`cse30s21as09`) 06/10 : Assignment 10 (extra credit) (`cse30s21as10`)

Grading

Grades will be recorded on a point basis, and your final letter grade will be determined by the percentage of points earned, with standard ranges of 90+% for an A, 80–90% for a B, etc. Real-time grade information is available on our course website.

Category	Percentage	Points Possible
Assignments	90%	900
Participation	10%	100
Total	**100%**	**1000**

If average scores are unexpectedly low, class-wide scores may be shifted upward at the instructor's discretion. In other words, **you will mainly be assessed relative to your peers**.

Assignments

This course focuses on **hands-on, project-based assignments**. You will apply concepts from lecture, experiment with the material we cover in class, and demonstrate **creative problem solving**.

All programming assignments must at least be interpretable in order to receive a nonzero grade.

Participation

This portion of your grade is meant to encourage you to work in the interest of the collective success of your peers. Participation shall be assessed as follows:

1. Spending **at least 4 hours per week (Mon–Sun) in active terminal sessions** on our server will earn you **60%** of your participation grade. You can get a history of your recent sessions by running the `sessions` command on the server. Your logged hours will update nightly on the Grades page.
2. Making **one substantive post per week (Mon–Sun)** (questions, answers, supplementary info) on Piazza will earn you **40%** of your participation grade. "Substantiveness" is up to the interpretation of the instructor, but will generally be based on thoughtfulness and length of post. Posts made "anonymously" can't be assessed for credit.
3. In lieu of Piazza posts, you can also earn this 40% by **attending a TA's section hours**.

Feedback Robots

Most (if not all) assignments will provide you with relatively immediate feedback via "robot" programs that assess your submissions, and give you the opportunity to refine and resubmit your work. This feedback will often also provide an estimated grade, which is likely to be near your actual grade for the assignment. The tradeoff for being able to receive this amount of feedback and resubmit assignments is an expectation that you are very detail-oriented with regard to your work and the assignments' requirements. Sometimes the robot will seem very picky, but this is by design. **It is your responsibility to attempt to pass its tests.**

Policies

Late Work

Each assignment specifies a due date on this syllabus. I realize that emergencies, medical or otherwise, may affect your ability to submit work. It is your responsibility to make me aware of any problems, so please contact me and make arrangements **before the work is due**, if at all possible.

You are always allowed to submit late work, no matter how late. In general, late work will result in a percentage reduction of what would have been the grade had you submitted by the due date, by roughly 2.5% for every day late, capped at a maximum deduction of 50%.

Plagiarism

All work submitted is to be your own, unless explicitly stated in the instructions. Claiming another's work as your own, copying material from another student, or acquiring prior knowledge of assignments, will result in at least a grade of zero, and possible dismissal. Any content presented in class, on our course website, or in any of the official textbooks and materials, is fair game for reuse, but make sure to cite the source. Cited reuse is much better than uncited plagiarism, which will be considered academic misconduct and dealt with according to campus policies and procedures. [https://ue.ucsc.edu/academic-misconduct.html] If you are ever unsure whether you are crossing that line, ask the course staff for advice.

Please keep in mind that I will perform similarity tests on programming-assignment submissions and other work, and plagiarized material is usually very easy to detect.

Collaboration

Working together is an important aspect of learning, and a good thing in general. You are encouraged to study with your fellow students and discuss general topics, concepts, strategies, etc. This does not mean you can copy from them! Be sure to follow the plagiarism guidelines, and err on the side of caution. Don't hesitate to ask for clarification/advice on this.

DRC Statement

UC Santa Cruz is committed to creating an academic environment that supports its diverse student body. If you are a student with a disability who requires accommodations to achieve equal access in this course, please submit your Accommodation Authorization Letter from the Disability Resource Center (DRC) to me by email, preferably within the first two weeks of the quarter. I would also like us to discuss ways we can ensure your full participation in the course. I encourage all students who may benefit from learning more about DRC services to contact DRC by phone at 831-459-2089 or by email at drc@ucsc.edu.

CARE Statement

Title IX prohibits gender discrimination, including sexual harassment, domestic and dating violence, sexual assault, and stalking. If you have experienced sexual harassment or sexual violence, you can receive confidential support and advocacy at the Campus Advocacy Resources & Education (CARE) Office by calling (831) 502-2273. In addition, Counseling & Psychological Services (CAPS) can provide confidential, counseling support, (831) 459-2628. You can also report gender discrimination directly to the University's Title IX Office, (831) 459-2462. Reports to law enforcement can be made to UCPD, (831) 459-2231 ext. 1. For emergencies call 911.
