Welcome to your 1st PINC (Minor in Computing Applications) course!

Course Syllabus

Course Number: CSC 306
Course Title: Introduction to Programming with Python
Number of Credits: 3
Course Level: Undergraduates and Graduates (GOLD program)

Class hours: MW 2pm to 3:15pm
Class location: Zoom and iLearn

Instructor: Professor Nicole Adelstein (nicoleal@sfsu.edu)
Office hours: Both mentor and instructor TBD on zoom

Prerequisite: Consent of the instructor.


Course Website ilearn.sfsu.edu

Course Objectives: The objectives of this course are to:
1. introduce the principle concepts of computer programming through python
2. show how programming can solve problems in the biological and physical sciences
3. practice principle coding skills, especially in teams

Learning Outcomes: At the end of this course students will be able to:
1. write code in python that
   a. uses integers, floats, strings, and Booleans
   b. uses functions
   c. uses lists and subsets of lists
   d. reads input and writes output
   e. uses recursion, both for and while loops
   f. uses dictionaries
   g. implements error analysis
2. describe how programming can solve problems in the biological and physical sciences by writing pseudo-code to set up a solution
3. use Jupyter notebooks and github to work in teams.

Grading:

Plus/Minus Letter grades are defined by the standard cut-offs (see iLearn)

Semester Points Break down:

30% In-class and mentor office hours participation
5% Reading Reflections or Quizzes
20% Homework and Team Contributions
15% Mid-term project
15% Final project
15% Quizzes (two/five will be on the projects)

NOTE: Students cannot pass the course if they do not participate in the projects and take the associated quizzes.

Course Policies:

**Attendance:** Attendance at online class and mentor sessions is mandatory. Note the 30% of points given to in-class participation and mentor sessions. While it might seem possible to get 70% of points (a passing score) without attending class, it is not actually possible due to team work and quizzes that will occur during class time. **Technology needs:** If you need additional technology or internet access to attend online classes and complete assignments, please request assistance during Week 1 of the semester.

**Cheating and plagiarism:** Any form of cheating or plagiarism will incur very serious consequences. Carefully review the department’s policy on this matter: [http://www.cs.sfsu.edu/plagarism.html](http://www.cs.sfsu.edu/plagarism.html)

**Students with disabilities:** Students with disabilities who need reasonable accommodations are encouraged to contact the instructor. The Disability Programs and Resource Center (DPRC) is available to facilitate the reasonable accommodations process. The DPRC is located in the Student Service Building and can be reached by telephone (voice/TTY 415-338-2472) or by email (dprc@sfsu.edu).
SF State fosters a campus free of sexual violence including sexual harassment, domestic violence, dating violence, stalking, and/or any form of sex or gender discrimination. If you disclose a personal experience as an SF State student, the course instructor is required to notify the Title IX Coordinator by completing the report form available at [http://titleix.sfsu.edu](http://titleix.sfsu.edu), emailing [vpsaem@sfsu.edu](mailto:vpsaem@sfsu.edu) or calling 338-2032. To disclose any such violence confidentially, contact:

**The SAFE Place** - (415) 338-2208; [http://www.sfsu.edu/~safe_plc/](http://www.sfsu.edu/~safe_plc/)

**Counseling and Psychological Services Center** - (415) 338-2208
[http://psyservs.sfsu.edu/](http://psyservs.sfsu.edu/)

For more information on your rights and available resources: [http://titleix.sfsu.edu](http://titleix.sfsu.edu)

### Tentative List of Course Topics:

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<th>Topics</th>
<th>Readings</th>
<th>Homework (tbd)</th>
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<td>Introduction to Programming, Jupyter Notebooks, Calculator</td>
<td>Girls Who Code, Ch 0 &amp; 1</td>
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<td>2</td>
<td>Variables, Types, Slicing, Lists</td>
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<td>For Loops</td>
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<td>7</td>
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<td>Recursion</td>
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<tr>
<td>9</td>
<td>Recursion</td>
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<tr>
<td>15</td>
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<td>Quiz*</td>
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*Dates of quizzes and projects are an estimate*