Math 340: Programming in Mathematics

Course Information:

Instructor:	Chris Curtis
Office:	GMCS 591
Meeting Times:	M/W, 15:30-16:45 in GMCS 421
Office Hours:	T, 9-12, in GMCS 591
Email:	ccurtis@sdsu.edu

Prerequisites: Mathematics 150,151,245

Official Course Description: Introduction to Python programming. Modeling, problem solving, and visualization.

Learning Outcomes: The overaching outcomes in this course will be for students to, using the Python programming language,

1. Procedural Programming in Python: Students will define and use: data types, conditional statements, while and for loops, functions.

   - Course Activity: This will be done through active learning practices done during lecture.

   - Assessment: Student facility with this outcome will be assessed through performance on assignments and exams.

2. Basic Data Structures: For storing and manipulating data, students will use: NumPy arrays, lists, tuples, dictionaries.

   - Course Activity: This will be done through active learning practices done during lecture.

   - Assessment: Student facility with this outcome will be assessed through performance on assignments and exams.

3. Doing Mathematics on Computers: Students will practice translating problems and notation in mathematics into algorithms via the Python language.

   - Course Activity: This will be done through active learning practices done during lecture.

- Assessment: Student facility with this outcome will be assessed through performance on assignments and exams.

4. Data Visualization and Manipulation: Students will learn how to read and write to files.

   - Course Activity: This will be done through active learning practices done during lecture.
   - Assessment: Student facility with this outcome will be assessed through performance on assignments and exams.

5. Working in Modern Computing Environments: Students will use the features of various programming environments to solve problems and present their work.

   - Course Activity: Active learning practices done during lecture.
   - Assessment: Student facility with this outcome will be assessed through performance on assignments and exams.

Grading Policy: Your final score will consist of homework (40%), one midterm (30%), and a final exam (30%). Homework is roughly due every week, though please pay attention to the schedule since there are exceptions to this (and every) rule.

Homework Policy: Work you submit should be as stand alone Python files or in Jupyter notebooks per the request of the problem. Late work is not accepted unless you make arrangements with me in advance.

Students with Disabilities: If you are a student with a disability and believe you will need accommodations for this class, it is your responsibility to contact Student Disability Services at (619) 594-6473. To avoid any delay in the receipt of your accommodations, you should contact Student Disability Services as soon as possible. Please note that accommodations are not retroactive, and that accommodations based upon disability cannot be provided until you have presented your instructor with an accommodation letter from Student Disability Services. Your cooperation is appreciated.

Week	Dates	Sections
Week 1	08/26, 08/28	
Week 2	09/02, 09/04	No Class
Week 3	09/09, 09/11	
Week 4	09/16, 09/18	
Week 5	09/23, 09/25	
Week 6	09/30, 10/02	
Week 7	10/07, 10/09	Midterm I (10/09)
Week 8	10/14, 10/16	
Week 9	10/21, 10/23	
Week 10	10/28, 10/30	
Week 11	11/04, 11/06	
Week 12	11/11, 11/13	No Class (11/11)
Week 13	11/18, 11/20	
Week 14	11/25, 11/27	No Class(11/27)
Week 15	12/02, 12/04	
Week 16	12/09, 12/11	Last Day of Class(12/11)