Introduction to Bioinformatics Programming in Python  
MSCBIO 2025 - FALL 2018 (8/29 - 12/7)

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Optional Books:  

Course Description: The course will introduce students to a variety of computational tools for solving common problems in biological research. Students will be taught the Python programming language through hands on exercises and assignments. Students will acquire knowledge and programming skills that will increase their productivity as researchers.

Lectures and Recitations: There will be two lectures a week, Tuesday and Thursdays from noon to 1:30pm in 3073 BST3. The class will start with a short series of lectures that cover basic Linux and Python concepts. These will be followed lectures that use these basic concepts in a hands-on interactive lab exercise that focuses on a single problem domain and programming toolkit. Finally, the remainder of the class will be devoted to in-class projects that require the integration of multiple concepts and toolkits.

Communication The schedule and assignments will be posted to the class webpage. We will use Piazza for class discussion. The system is highly catered to getting you help fast and efficiently from classmates and myself. Rather than emailing questions, I encourage you to post your questions on Piazza (but please do not post source code to public discussion boards).

Assignments There will be 12 programming assignments and a final project. Each assignment will accomplish a common and useful task related to research in computational biology. Most assignments will allow for partial credit. Assignments will be auto-graded. You may submit your assignment as many times as you wish before the deadline until you achieve a working submission. Assignments must be completed in a timely manner as solutions will be discussed in class after the submission deadline.

Grades Course grades will be determined completely by the successful and timely completion of assignments with each assignment contributing to 5–10% of the total grade. The exact weighting of assignments will be assigned at the end of the course at the discretion of the instructor. All assignments must be completed to the minimum amount of partial credit in order to receive a passing grade. Assignments turned in late will be awarded partial credit at the discretion of the instructor (likely a 50% penalty). The cutoff for an A will be, at a minimum a 93% and for a B 85%.

Academic Honesty You must do all your own work. You are encouraged to discuss general concepts, strategies for debugging, and the particulars of a specific software package with other class members. However, specifics of individual assignments should not be discussed, and you should not show your code to fellow classmates.