BNFO 135-002: Programming for Bioinformatics

Jonathan Kapleau

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BNFO 135: Programming For Bioinformatics

Syllabus

Instructor Info

Instructor: Jonathan Kapleau
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Course Description

The ability to use existing programs and to write small programs to access bioinformatics information or to combine and manipulate various existing bioinformatics programs has become a valuable part of the skill set of anyone working with biomolecular or genetic data. This course provides an understanding of the architecture of bioinformatics toolkits and experience in writing small bioinformatics programs using one or more of the scripting ("glue") languages frequently employed for such tasks. Python will be used for this course.

Textbooks

Think Python
Allen B. Downey
ISBN: 144933072X

Grading Scheme

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<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Midterm</td>
<td>20%</td>
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<tr>
<td>Final</td>
<td>30%</td>
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<tr>
<td>Homeworks</td>
<td>10%</td>
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<tr>
<td>Labs</td>
<td>15%</td>
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<tr>
<td>Projects</td>
<td>15%</td>
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<tr>
<td>Miscellaneous</td>
<td>10%</td>
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Topics

- Introduction to python
- Variables, expressions, & statements
- Functions
- Conditionals & recursion
- Value returning functions
- Iteration
- String processing
- Lists, dictionaries, & tuples
- Files, input & output
- Classes

Attendance Policy

Attendance in every lecture is mandatory. If a student is absent from lecture five times (the first day counts), the student's name will be recommended for withdrawal to the Dean of Freshman Studies. Two lates is equivalent to one absence. Make sure that you fully understand this attendance policy.

Cheating Policy

Cheating on a programming assignment results in zero credit for all students involved. Programming assignments may NOT be solved in collaboration, unless specifically stated in the assignment. Cheating on an exam will result in an "F" in the course.

You may discuss problems with each other. Where does discussion end and cheating start? You may NOT copy lines of code from anybody or anywhere. You may NOT use code in your assignments that you did not write. As a general rule: If you don't understand the code and can't explain the code, you can't use the code.

Please familiarize yourself with the NJIT Academic Honor Code. Violations of the honor code will be dealt with seriously and reported immediately to the Dean of Students.

Late Policy

To receive credit, all lab assignments must have been demonstrated to the instructor on or before the due date. Assignments that are not submitted on time will not be accepted.

Prerequisites

None