

Fall 2020

## **BNFO 135-001: Programming for Bioinformatics**

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# **BNFO 135: Programming For Bioinformatics**

## **Syllabus**

### **Instructor Info**

Instructor: Jonathan Kapleau

Office: GITC 4412

Office Phone: 973-596-2657

### **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.

### **Grading Scheme**

Midterm 20%

Final 30%

Labs 40%

Miscellaneous 10%

### **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

## Academic Integrity

- ***“Academic Integrity is the cornerstone of higher education and is central to the ideals of this course and the university. Cheating is strictly prohibited and devalues the degree that you are working on. As a member of the NJIT community, it is your responsibility to protect your educational investment by knowing and following the academic code of integrity policy that is found at: <http://www5.njit.edu/policies/sites/policies/files/academic-integrity-code.pdf>.***

***Please note that it is my professional obligation and responsibility to report any academic misconduct to the Dean of Students Office. Any student found in violation of the code by cheating, plagiarizing or using any online software inappropriately will result in disciplinary action. This may include a failing grade of F, and/or suspension or dismissal from the university. If you have any questions about the code of Academic Integrity, please contact the Dean of Students Office at [dos@njit.edu](mailto:dos@njit.edu)”***