

**COURSE TITLE:** Programming for Biologists  
**COURSE NUMBER:** Biol- 955  
**TERM OFFERED:** Winter 2016  
**INSTRUCTOR:** T. Babak

**Outline of Topics:**

This course will be a hands-on introduction to essential bioinformatics skills. The goal is to build a foundation of computational skills that enable analysis of large biological data. We will learn command-line Unix/Linux, shell scripting, and installation/testing/usage of popular public bioinformatics packages. We will spend significant time learning Perl and/or Python and Matlab. The course will rely heavily on problem-based learning and in-class discussion. Assignments will involve analyses that use primary literature data, particularly next-gen sequencing data. No prior programming experience is necessary.

**Prerequisites:**

Graduate student in Biology

**Method of instruction:**

Lectures and tutorials 3 hours/week.

**Student participation:**

Class discussion, leading a new skills lecture, in-class assignments

**Evaluation:**

Participation and Quizzes: 20%

Presentation: 30%

Assignments: 50%

**Textbooks:** TBD

**Prerequisite and Assumed Background:** None

**Other Instructions for Students:** Will require a laptop for use during class

**Equivalent:**