

Syllabus: Introduction to Perl Programming (BOT6935) – Spring, 2013

INSTRUCTOR - GORDON BURLEIGH

Office: 218 Carr Hall

Phone: 392-2776

Email: gburleigh@ufl.edu

COURSE DESCRIPTION AND SUMMARY

This class will provide hands on instruction in the basics of Perl scripting. Graduate Students can sign up for 1 or 2 credit hours. Perl is a popular scripting language for biological applications and bioinformatics. This class will provide an introduction to Perl scripting. Class will meet once a week for 2 hours to work on Perl exercises, and students will complete a Perl programming project for the end of the semester.

CLASS

Location / Times: Class meets in Carr 611 Wednesdays 12:50 – 2:45 pm (periods 6-7).

TENTATIVE CLASS SCHEDULE (Please check for updates)

WEEK	TOPIC
8-Jan	Introduction/Syllabus
15-Jan	Getting Started / String Analysis
22-Jan	Input & Output
29-Jan	Motifs & Loops
5-Feb	Regular Expressions I
12-Feb	Regular Expressions II
19-Feb	if & while
26-Feb	Arrays
12-Mar	Hash Tables
19-Mar	Subroutines
26-Mar	GenBank / Database Files
2-Apr	Getting Started With BioPerl
9-Apr	Advanced Topics
16-Apr	Work on Independent Projects
23-Apr	Project Presentations

PREREQUISITES

This class is open to any graduate students. Previous experience with Perl is not required.

COURSE MATERIALS

Textbook

There is no official textbook for this class. Most weeks I will provide a written exercise that will include instructions for Perl scripting. However, there are many good Perl books that you may find useful. The O'Reilly series "Learning Perl, 5th edition" is one of my favorites. If you do not want to purchase it, the 2nd edition of the book is available as an e-book through the UF library. Other useful, but more specialized, books for learning Perl include "Perl for Exploring DNA" by LeBlanc & Dyer and the O'Reilly book "Beginning Perl for Bioinformatics". The O'Reilly book "Programming Perl" is an excellent reference, but it may not be that helpful when you are just beginning. Also, there are also some tremendous resources for learning Perl available for free on the internet.

Computer

Our classroom has computers that you can use. They are PCs with a Windows operating system. However, if you have your own laptop, I strongly encourage you to bring it to class. You do not need to purchase any software for this class. You may need to download some free software.

Web Site

We will have a Sakai web site for the class. All assignments and supplemental files as well as example scripts will be posted on this web site.

CREDITS / EXPECTATIONS

Credit

Students may sign up for 1 or 2 credits.

Attendance

Each week we will cover a new set of topics in Perl, and most of these topics will build on things covered in previous weeks. It will be easy to get lost if you miss class. Therefore, attendance is strongly encouraged.

Assignments / Projects

Most weeks I will give short homework assignments to allow students to practice and develop their Perl skills. I will check the assignments. The goal of this class is to enable students to design and write Perl scripts that will help with his or her work and research. While I will provide some set exercises, students are encouraged to explore and modify these exercises to match their interests. Each student will also do a class project, which will consist of writing a script or multiple scripts that address his or her research interests. I will ask for a short (maximum 1-page) written proposal for the project due April 2. This will include a description of the question or problem the script will address, the input and output, and a brief summary of how the script(s) will be designed. On the last day of class, each student will give a short (5-10 minute) presentation on his or her script project.