

Tools for Bringing Bioinformatics into Your Undergraduate Classrooms

Dr. Joanne Fox, Nuts & Bolts Session, ASMCUE 2009

Thursday May 28th, 2009, 7-9pm.

CSU, Microbiology A202

Bioinformatics is well placed to appeal to students in a wide variety of disciplines at early stages in their education. There is, however, a gap between this specialized area of research and the undergraduate learning opportunities available to students. This session will provides you with a hands-on opportunities to try our set of bioinformatics “mini-labs” for yourself, access the supporting teaching materials, and understand approaches for introducing these modules into your own classrooms.

ACCESS SUPPORTING TEACHING MATERIALS HERE:

<http://www.bioteach.ubc.ca/asmcUE2009/>

Mini Lab #1

NCBI's
ENTREZ

This tutorial gives students a chance to practice advanced searching techniques using NCBI's Entrez .

- Tutorial slides (ppt/pdf)
- Background Lecture Slides (ppt/pdf)

Mini Lab #2

BLAST

Students follow a guided tour of BLAST, carry out a BLAST sequence similarity search and interpret the results.

- Tutorial slides (ppt/pdf) available
- Background Lecture Slides (ppt/pdf)
- Background Lecture Notes available (doc/pdf)
- Follow-up Exercise – Jurassic Park (ppt/pdf/URL)
-

Mini Lab #3

Genome
Browsers

This tutorial introduces practical skills for navigating several different genome browsers (UCSC, MapViewer, Ensembl, & Artemis).

- Tutorial slides (ppt/pdf) available
- Background Lecture Slides (ppt/pdf)

Mini Lab #4

Multiple
Sequence
Alignments

Students learn how to do their own multiple sequence alignments by downloading ClustalX.

- Tutorial slides (ppt/pdf) available
- Background Lecture Slides (ppt/pdf)

Joanne Fox is a faculty member with Advanced Molecular Biology Laboratory (AMBL), the educational facilities of the Michael Smith Laboratories, at the University of British Columbia (<http://www.bioteach.ubc.ca/>).

Questions? Dr. Joanne Fox, joanne@mssl.ubc.ca, 604-827-3911

<http://www.michaelsmith.ubc.ca/faculty/fox/>



We gratefully acknowledge the funding for the development of these teaching materials provided by UBC students through the Teaching and Learning Enhancement Fund (TLEF) from 2005-2007.

