Computational Skills for Informatics Workshops

"CSI Chicago" workshops are back for Spring 2018

Galter Library, NUIT Research Computing and NUCATS are bringing back Computational Skills for Informatics ("CSI").

Most sessions will be held on **Thursday afternoons from 3:00 - 4:30pm**.

- Sessions are available to individuals with valid Northwestern identification only
- Sessions will be approximately 1.5 hours long, depending on the topic
- Sessions will be held in Galter Library’s Learning Resources Center (LRC)
- Space will be limited, register using the links below each class description
- We will provide some snacks for the sessions
- Users should bring their own computers for hands-on sessions

**Topics and Instructors**

**The UCSC Genome Browser** - Thursday April 12, 2018

Location: Galter Library, Learning Resources Center (LRC)
Instructor: **Pamela Shaw**, Biosciences & Bioinformatics Librarian, Galter Library

The UCSC Genome Browser holds a wealth of genomic data from international genomic databases and genome studies. This class provides a basic guided introduction to the browser. Users will learn: how to search by genomic coordinate or by gene name; how to turn on, turn off, expand or compress genome tracks in the browser window; how to access and download genomic coordinates for features in the genome (transcription start and stop sites, etc.) using the UCSC Table Browser.

**This is a hands-on session. Bring your computer, or you can use one of ours.** The class is web-based.

**Register here**

**NGS and Single Cell Analysis with Partek Software** - Wednesday, April 18, 2:00 - 3:30pm

(NOTE special day and time)

(Special Session)
Location: Galter Library, Learning Resources Center (LRC)
Instructor: **Dr. Cherry Ignacio**, Product Manager, Partek Incorporated

Join us for a seminar where Partek representatives will show you how the intuitive graphical user interface and interactive tools of Partek® Flow® software can simplify your NGS and Single Cell RNA-Seq data analysis. We will demonstrate how to analyze a scRNA-Seq data set with multiple biological replicates and detect genes that are differentially expressed between cell populations across sample groups.

**A computer is not required for this special seminar.**
Introduction to High Performance Computing on Quest - Thursday April 26, 2018, 3:00 - 4:30pm
Location: Galter Library, Learning Resources Center (LRC)
Instructors: Janna Nugent, Sr. Bioinformatics Specialist, Research Computing Services, NUIT
Alper Kinaci, Computational Specialist Sr, Research Computing Services, NUIT
Pascal Paschos, Sr. High Performance Computing Specialist, Research Computing Services, NUIT

An overview of the University’s High Performance Computing System, including Quest’s system architectural design principles, user support infrastructure, resource allocation request requirements, and usage policies. Users are encouraged to bring their laptops for a hands-on demonstration of sample tools and workflows in Quest.

This is a hands-on session.

Users should bring their own computers for this session.

You should have a secure shell environment installed on your computer. We will provide instructions on installing the secure shell in advance of the session.

Register here

Additional sessions to be announced May 3 & May 10. Check this page again soon!

Introduction to Sequence Analysis on Quest - Part 1 - Thursday May 17, 2018
Location: Galter Library, Learning Resources Center (LRC)
Instructor: Elizabeth Bartom, Assistant Professor, Biochemistry and Molecular Genetics

This workshop will begin with an overview of some of the diversity of sequence-based methodologies currently in use and rising in popularity. ChIP-seq, exome sequencing, 4-C, and RNA-seq are examples of these. We will then discuss some common components of the analyses of these different data types, primarily assuming that a reference genome and annotation exists for the organism under study.

This is a hands-on session.

Users should bring their own computers for this session.

You must have a Quest allocation if you want to participate in this session. Please see the Quest allocation (account) page if you don’t have one. At the Quest page, click the link “Apply, Renew or Join an Allocation” under the middle column. The best allocation to get started with is a “Research I” allocation.

Register here

Introduction to Sequence Analysis on Quest - Part 2 - Thursday May 24, 2018
Location: Galter Library, Learning Resources Center
Instructor: Elizabeth Bartom, Assistant Professor, Biochemistry and Molecular Genetics

In the second half of this hands-on workshop, we will delve more deeply into the specifics of RNA-seq analysis from genome alignment to functional analysis, to visualization tools. Students can carry out their own analysis of an example RNA-seq data set.

This is a hands-on session.
Users should bring their own computers for this session.

**Prerequisite:** you must attend Introduction to Sequence Analysis on Quest Part 1 to attend this session.

Register here