

# **CB2-101 – Bioinformatics Computing**

## **GBSC 703-01A (3 Credits)\***

**Computational Biology and Bioinformatics (CB2) Course at UAB**  
<http://cmb.path.uab.edu/training/cb2-101.html>

**Fall 2017**  
**Nov 2- 17, 2017**  
**9:00 a.m. – 1:00 p.m.**  
**(Location: Volker Hall VH073)**

### **Course Director:**

Malay Basu, PhD  
West Pavilion, Room P220  
934-5251  
[malay@uab.edu](mailto:malay@uab.edu)

### **Course Program**

#### **Week 1: Nov 2-3**

Introduction to Linux  
Linux Commands and Scripting

#### **Week 2: Nov 6-10**

Unix toolchains and programming languages  
Introduction to R and Bioinformatics data parsing  
Basic statistics in R  
Bioinformatics using R  
Reproducible research in R

#### **Week 3: Nov 13-17**

Homology search BLAST and HAMMR  
Advanced topic: Molecular evolution  
Large-scale data analysis/introduction of NGS  
Basic pipelines in NGS  
Mutational processes and VCF  
Introduction to RNASeq

### **Reference:**

Bioinformatics Data Skills (2015) Vince Buffalo

### **Registration:**

The course requires registration through online form:  
<https://goo.gl/forms/2pNKDdp6FawWmJ3J2>

- \* If you're a graduate student and willing to get credit for this course please contact the course director directly.**
- \* Earlier version of the course was a prerequisite for our advanced bioinformatics course, CB2-201. Because of the restructuring and incorporation of many materials from this course into the current one, there will be no CB2-201 offered next-year.**