Spring 2022

**BCMB 3600/H - Genomics and Bioinformatics**

**Tues/Thurs, 12.45 – 2.00 pm: Life Sciences Bldg., Rm C114**

**Instructors:**  Mike Adams (adamsm@uga.edu)

Natarajan Kannan ([nkannan@uga.edu)](mailto:nkannan@uga.edu))

Mike Terns (mterns@uga.edu)

**Text:** No text is recommended

**Examinations: *Type*  *Date Coverage % of Grade***

Adams Paper #1 02/16 (due) 01/14 - 02/11 11.1

Papers #2 and #3 03/25 (due) 01/14 - 02/16 22.2

Terns Written Exam 1 03/04 02/18 - 03/02 15.0

Written Exam 2 03/23 03/09 - 03/18 18.3

Kannan Assignment 1 04/13 (due) 03/30 - 04/08 15.2

Assignment 2 04/29 (due) 04/15 - 04/27 18.1

There will not be a final exam during Final Exam week (05/05-05/11)

### Instructor: Mike Adams

### The History of Genomics

Jan. 11 The Genomics Revolution *(#1*)

Jan. 13 Genomics and You

Jan. 18 Genome Databases

Jan. 20 The Human Genome Project

Jan. 25 Individual Human Genomes

Jan. 27 The Human Encyclopedia

Feb. 01 Human Evolution & Eukaryotic Genomes

Feb. 03 Metagenomes

Feb. 08 DNA Sequencing *(#2 and #3*)

Feb. 10 Synthetic Life/DNA Storage *(#1 due*)

### Instructor: Michael Terns

**Functional Genomics**

Feb. 15 Functional Genomics Overview

Feb. 17 Eukaryotic Gene Expression

Feb. 22 Gene Expression Regulation

Feb. 24 Chromatin Structure and Epigenetics

Mar. 01 Written Exam 1

Mar. 03 The CRISPR Revolution

**Mar. 07 – 11: SPRING BREAK**

### Instructor: Michael Terns

**Functional Genomics** (cont)

Mar. 15: Gene Editing

Mar. 17 Other CRISPR-Based Technologies

Mar. 22 Biological and Biomedical Applications

Mar. 24 Written Exam 2

#### Instructor: Natarajan Kannan

**Introduction to Bioinformatics Methods**

Mar. 29 Introduction (*Adams #2 and #3 due*)

Mar. 31 Sequence alignment methods

Apr. 05 Structure prediction and comparisons

Apr. 07 Function prediction methods

Apr. 12 Assignment #1

Apr. 14 Bioinformatics applications

Apr. 19 Data integration methods

Apr. 21 Ontology and data resources

Apr. 26 Breakout Session-1

Apr. 28 Assignment #2

May 03 ?????????????