

# Spring 2022

## BCMB 3600/H - Genomics and Bioinformatics

**12.45 – 2.00 pm, Tues (room C112) and Thurs (room C114, Life Sciences Bldg.)**

**Instructors:** Mike Adams (adamsm@uga.edu)  
 Natarajan Kannan (nkannan@uga.edu)  
 Mike Terns (mterns@uga.edu)

**Text:** No text is recommended

<b>Examinations:</b>	<b>Type</b>	<b>Date</b>	<b>Coverage</b>	<b>% of Grade</b>
Adams	Paper #1	02/10 (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	04/28 (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  
 Apr. 07 Data visualization tools  
  
 Apr. 12 Function prediction  
 Apr. 14 Breakout session #1 (Assign. #1 due)  
  
 Apr. 19 Bioinformatics applications  
 Apr. 21 Data integration methods  
  
 Apr. 26 Gene ontology and applications  
 Apr. 28 Breakout session #2 (Assign. #2 due)  
  
 May 03 Assignment solutions and feedback

