

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

Examinations:	Type	Date	Coverage	% of Grade
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

