

BIOD25 Genomics 2017 Syllabus

Instructor: Dan Riggs

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Office Hours: Monday 11AM-noon; Thursday 1-2PM (just after BIOB11, so I may be late)

Class: Wednesdays 2-4PM, in BV355

Textbook: there is no formal textbook for the course; I will occasionally refer to figures from the book by Gibson and Muse "A Primer of Genome Science" which is on 3hr reserve at library. I will post some primary literature articles on Blackboard for you to read.

Exams/Assignments

Midterm Exam: in class on Wed. Feb 8th: 25%

Bioinformatics assignment: Distributed Jan 25th, Due Feb 15th: 5%

Techniques summary papers: 2 x 5% (due dates are by lottery): 10%

Research Project: Due March 13: 25%

Final Exam: date TBA by registrar: 35%

Date	Lecture #	Topics
Jan 4	1	Intro/genome projects/review of molecular biology methods
Jan 11	2	Review of molecular biology methods/sequencing techniques
Jan 18	3	DNA sequencing technologies; sequence databases
Jan 25	4	Bioinformatics/databases/search algorithms; Bioinformatics assignment distributed.
Feb 1	5	Sequence variation/SNPs/LD/association mapping/genome wide association studies (GWAS)
Feb 8		Midterm Exam (in class on lectures 1-5)
Feb 15	6	Transcriptome/microarrays/Q-PCR Bioinformatics assignment due
Feb 22	NO CLASS	READING WEEK
Mar 1	7	Applications of arrays-compendium approach/ Chromatin and genomic technologies (ChIP, ChiP on Chip, epigenetics, ChIP seq)
Mar 8	8	Transcriptomics/alternative splicing/RNA seq/ Functional genomics
Mon, March 13		RESEARCH PROJECTS DUE by NOON
Mar 15		Research project presentations
Mar 22		Research project presentations
Mar 29		Research project presentations