

## BIO D25 Genomics 2016 Syllabus

Instructor: Dan Riggs

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Office Hours: Monday 11AM-noon; Thursday 1-2PM

Class: Wednesdays 3-5PM

Textbook: there is no text 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

Quiz: Jan 20 on lectures 1-2= 5%

Midterm Exam: in class on Wed. Feb 10<sup>th</sup> 30%

Bioinformatics assignment: Distributed Feb 4<sup>th</sup>, Due Feb 24<sup>th</sup> 5%

Research Project: Due March 20 (20%)

Final Exam: TBA by registrar (40%)

Date	Lecture #	Topics
Jan 6	1	Intro/genome projects/review of molecular biology methods
Jan 13	2	Review of molecular biology methods
Jan 20	3	Quiz; DNA sequencing technologies; sequence databases
Jan 27	4	Bioinformatics/databases/search algorithms
Feb 3	5	Sequence variation/SNPs/LD/association mapping/genome wide association studies (GWAS)
Feb 10		Midterm Exam (in class on lectures 1-5)
Feb 17	NO CLASS	READING WEEK
Feb 24	6	Transcriptome/microarrays/Q-PCR Bioinformatics assignment due
Mar 2	7	Applications of arrays; compendium approach
Mar 9	8	Chromatin and genomic technologies (ChIP, ChiP on Chip, epigenetics, ChIP seq); Transcriptomics/alternative splicing/RNA seq
Mar 16	9	Functional Genomics
Mar 20		Research project due
Mar 23		Coverage of research topics
Mar 30		Coverage of research topics