

Syllabus BIOL4536 Fall 2023

Schedule (may change dependent on progress and other factors)

Date	Topic	ASSIGNMENTS	Lecturer	Lecture #
8/30	Introductions, Review of Prob/Stat.		GRANT	1
9/6	Regression	HW#1 due	GRANT	2
9/11	Genome Browser	Quiz #1	GRANT	3
9/13	Genome Browser	HW#2 due	GRANT	4
9/18	Unix	Quiz #2	GRANT	5
9/20	Unix	HW#3 due	GRANT	6
9/25	Nucleic Acid, Sequencing, Global Alignment		GRANT	7
9/27	Local Alignment, Multiple Alignment, Phylogenetics	HW#4 due	GRANT	8
10/2	Midterm #1 (covers material from 8/30 through 9/25)			
10/4	Protein Alignment / BLOSUM Substitution Matrices		GRANT	9
10/9	Markov Models / PAM Substitution Matrices		GRANT	10
10/9	End of Drop Period			
10/11	BLAST	HW#5 due	GRANT	11
10/16	BLAST continued. Cluster Compute	Quiz #3	GRANT	12
10/18	DNA Sequencing, ChIP-Seq, ATAC-Seq	HW#6 due	GRANT	13
10/23	DNA-Seq and RNA-Seq	QUIZ #4	GRANT	14
10/25	RNA and RNA-Seq	HW#7 due	GRANT	15
10/30	Multiple Testing, q -values, Non-Parametric Methods		GRANT	16
11/1	Midterm #2 (covers material from 9/27 through 10/25)			
11/6	Pathway Enrichment, Dimensionality Reduction		GRANT	17
11/6	Last day to withdraw			
11/8	SNP Calling, microarrays and sequencing, GWAS	HW #8 due	GRANT	18
11/13	Machine Learning - Supervised Learning		GRANT	19
11/15	Machine Learning - Unsupervised Learning	HW #9 due	GRANT	20
11/20	TBD		TBD	21
11/27	Data presentation and visualization with R	HW #10 due	LAHENS	22
11/29	Data presentation and visualization with R		LAHENS	23
12/4	Data analysis with R	HW #11 due	LAHENS	24
12/6	Data analysis with R		LAHENS	25
12/11	Data analysis with R	HW #12 due	LAHENS	26
TBD	Final Exam (not cumulative, covers material from 10/30 to 12/11)			