## Biophysics 205: Computational and Functional Genomics Spring 2020 SYLLABUS

Monday, January 27

Martha Bulyk

Genome Sequencing Lecture

Wednesday, January 29 Transcriptome I

Martha Bulyk Transcriptional Profiling and Clustering Lecture

Monday, February 3 Transcriptome II

Martha Bulyk

Wednesday, February 5 Genome Analysis

Shamil Sunyaev Genome Analysis Lecture

Monday, February 10 Comparative Genomics and Metagenomics

Shamil Sunyaev

Wednesday, February 12 Genomics and Protein Structures

Shamil Sunyaev

Monday, February 17 No Class: President's Day

Wednesday, February 19 Noncoding RNAomics

Martha Bulyk

Monday, February 24 Genetic Variation I

Shamil Sunyaev Genetic Variation Lecture

Wednesday, February 26 Metabolome

Marc Vidal

Monday, March 2 HiC, DHS, and Histone Modifications

Martha Bulyk Histone Modifications Mini-Lecture

Wednesday, March 4 Sequence Motifs

Martha Bulyk

Monday, March 9 Regulome

Martha Bulyk

Wednesday, March 11 Phenome

March Vidal

Monday, March 16 No Class: Spring Break

Wednesday, March 18 No Class: Spring Break

Monday, March 23 **Epigenomes and Epitranscriptomes** Martha Bulyk Wednesday, March 25 **Proteomics and Mass Spectrometry** Peter Sorger Proteomics Lecture Monday, April 30 **Genetic Variation II** Shamil Sunyaev Wednesday, April 1 No Class: NHGRI Trainees Conference Monday, April 6 **RNA Stability and Translation Regulation** Peter Sorger Wednesday, April 8 **Genetic Variation III** Shamil Sunyaev Monday, April 13 **Protein Interactions, Modifications, and Networks** Peter Sorger Wednesday, April 15 **Network Analysis** Shamil Sunyaev Monday, April 20 **Cell-to-Cell Variability** Peter Kharchenko Wednesday, April 22 **Genetic Interactions** Shamil Sunyaev Monday, April 27 **Signaling Dynamics** Peter Sorger Signaling Dynamics Mini-Lecture **Chemical Genomics and Drug Discovery** Wednesday, April 29 Peter Sorger

**Proposal Presentations** 

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Monday, May 4

Wednesday, May 6