

Bio 404/504
Spring 2017
Cooke 508, MWF 11:00-12:10

Instructors:

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Exams: There will be 4 exams, each of which will be 1/4 of the final grade. The last exam will not be cumulative. Make-up exams will be given only with a valid medical excuse and will be oral or written at the instructor's option. If you have a medical reason for missing an exam, the instructor must be notified within 24 hours of missing the exam. If notification is not given, you will receive a grade of zero for that exam. The following is an approximate schedule of lectures. Exam dates will not change. Readings will consist of references to the literature.

BIO 404/504 COURSE OUTLINE Spring 2016

<u>Lecture #</u>	<u>Date</u>	<u>Topic</u>	<u>Instructor</u>
1	Jan. 30	Introduction /overview of course	Gollnick
2	Feb. 1	RNA Polymerase Structure/Fuction	Gollnick
3	Feb. 3	Transcription Initiation in Bacteria	Gollnick
4	Feb. 6	Transcription Elongation in bacteria	Gollnick

5	Feb. 8	Transcription Termination in bacteria	Gollnick
6	Feb. 10	Regulation of Transcription Repressors/Activators	Gollnick
7	Feb. 13	Regulation of Transcription Attenuation/Antiterm.	Gollnick
8	Feb. 15	Regulation of Transcription Riboswitches II	Gollnick
9	Feb. 17	Regulation of Transcription Riboswitches II	Gollnick
10	Feb. 20	Exam I	
11	Feb. 22	overview of eukaryotic chromosomes	Rusche
12	Feb. 24	Reading the histone code	Rusche
13	Feb. 27	Building heterochromatin	Rusche
14	Mar. 1	Genome editing	Walker
15	Mar. 3	Cohesin-rings around chromosomes	Rusche
16	Mar. 6	Overview of transcriptional regulation of pol II	Rusche
17	Mar. 8	Formation of the pre-initiation complex	Rusche
18	Mar. 10	Polymerase pausing	Rusche
19	Mar. 13	Non-coding RNA and transcriptional regulation	Rusche
20	Mar. 15	Insulators and topological domains	Rusche
21	Mar. 17	Exam II	
22	Mar. 27	Ribosomes	Walker
23	Mar. 29	Translation Initiation	Walker
24	Mar. 31	Translation Elongation	Walker
25	Apr. 3	Translation Termination/Recycling	Walker
26	Apr. 5	RNA Pol I transcription	Yu
27	Apr. 7	RNA Pol I transcription	Yu
28	Apr. 10	RNA Pol III transcription	Yu
29	Apr. 12	RNA Pol III transcription	Yu
30	Apr. 14	RNA processing: Splicing I	Yu
31	Apr. 17	RNA processing: Splicing II	Yu

32	Apr. 19	Post-transcriptional Gene Regulation in Eukaryotes: mRNA export	Yu
33	Apr. 21	Exam III	
34	Apr. 24	DNA Replication Mechanisms	Berezney
35	Apr. 26	Replication Timing	Berezney
36	Apr. 28	Replication Factories	Berezney
37	May 1	Chromosome Territories and Genomic Regulation	Berezney
38	May 3	Post-transcriptional Gene Regulation in Eukaryotes: Nuclear Surveillance	Yu
39	May 5	Post-transcriptional Gene Regulation in Eukaryotes: Nuclear Surveillance	Yu
40	May 8	Gene Silencing by Small RNAs	Yu
41	May 10	Gene Silencing by Small RNAs	Yu
42	May 12	Exam IV	