MGY200H1S  An Introduction to Molecular Genetics and Microbiology  
Tuesdays and Thursdays 12:10pm-1:00pm  
Health Sciences Building, 155 College Street, Rm 610 (HS610)  
2018 Syllabus  

Jan 4  
Course Introduction  
1. Prof. Roy- Understanding Patterns of Inheritance  

Jan 9  
2. Prof. Roy- Understanding Genetic Linkage  
Submit (via Survey Monkey) a ranked list of 5 labs in the Department of Molecular Genetics and Microbiology that you would like to write about:  
https://www.surveymonkey.com/r/MGY200H1S2018  

Jan 11  
3. Prof. Roy- The Discovery that DNA encodes Genetic Information  
Lab assignments for Essay #1 are given out.  

Jan 16  
4. Prof. Roy- Understanding the Central Dogma (a most beautiful genetic story)  

Jan 18  
5. Prof. Roy- A Review of Major Molecular Biology Lab Techniques- from sequencing to cloning to sequencing  
Essay #1 title and 5 bullet point outline due (worth 1%). 0.5% deduction if handed in late until by Friday Jan 19 at noon. No marks awarded thereafter. Title and bullet points are submitted on ‘Blackboard’.  

Jan 23  
6. Prof. Roy- Understanding mutations, RNAi, and modulation of protein activity with small molecules.  

Jan 25  
7. Prof. Roy- Understanding Gene Expression Patterns, Cell Autonomy and Cell Non-Autonomy  

Jan 30  
8. Prof. Taipale- The future is here: Genome Engineering (OMICS 1)  

Feb 1  
9. Midterm (on lectures 1-7); Location: TBD  

Feb 6  
10. Prof. Roy- Understanding Genetic Screens, and Genetic Interactions I  

Feb 8  
11. Prof. Roy- Understanding Genetic Screens, and Genetic Interactions II
Feb 13
12. Prof. Roy- An Introduction to Stem Cells

Feb 15
13. Prof. Roy- Cancer & Stem Cells

Feb 19-23
Reading Week

Feb 27
14. Prof. Taipale- HIV, Ebola, Zika – what’s next?: The emergence and spread of infectious diseases (Microbiology 1)
_February 27 at 12:10pm: Essay #1 due._
The e-copy must be submitted to ‘Turn it in’ by February 27th at 12:10pm. The ‘turn it in’ delivery date and time is the official delivery time, but late penalties will also apply should either the e-copy or paper copy be late. The paper copy must be submitted before the beginning of class that day. ‘Turn it in’ e-copy is what will be considered the official copy. If the hard copy differs from the e-copy, the e-copy is what will be marked.
Late deductions (if either the e-copy or paper copy is late):
- 10% off if submitted late, but by 11:59pm on Feb 27.
- 20% off if submitted by 5pm Feb 28
- 30% off if submitted by 5pm March 1
- 50% off if submitted by 5pm March 2, after which a zero will be given.

March 1
15. Prof. Taipale- Friends and foes: Why only some microbes cause disease (Microbiology 2)
_ESSAY #2 (Molecular Genetics Techniques Essay) Title and 5 bullet point outline due (worth 1%). 0.5% deduction if handed in late until by Monday March 5 at noon. No marks awarded thereafter. Title and bullet points are submitted on ‘Blackboard’._

March 6
16. Prof. Taipale- When drugs don’t work: Combating antibiotic resistance (Microbiology 3)

March 8
17. Prof. Taipale- Express yourself: What determines gene expression patterns (Gene expression 1)

March 13
18. Prof. Taipale- Are we there yet?: Posttranscriptional regulation (Gene expression 2)

March 14- Last day to drop S section code courses from academic record.

March 15
19. Prof. Taipale- So you’re a linear chain of amino acids – now what? Protein structure and function (Proteins 1)

March 20
20. Prof. Taipale- Pimping up proteins: Posttranslational modifications (Proteins 2)
March 22
21. Prof. Taipale- Background matters: why mutations affect only some individuals (OMICS 2)

March 27
22. Prof. Bader- Enter the Matrix: Computational Biology Investigation

March 27 at 12:10pm: Essay #2 due.
The e-copy must be submitted to ‘Turn it in’ by March 27 at 12:10 pm. The ‘turn it in’ delivery date and time is the official delivery time, but late penalties will also apply should either the e-copy or paper copy be late. The paper copy must be submitted before the beginning of class that day. ‘Turn it in’ e-copy is what will be considered the official copy. If the hard copy differs from the e-copy, the e-copy is what will be marked. Late deductions (if either the e-copy or paper copy is late):
10% off if submitted late, but by 11:59pm on March 27.
20% off if submitted by 5pm on March 28.
30% off if submitted by 5pm on March 29
50% off if submitted by 5pm on March 30, after which a zero will be given.

March 29
23. Prof. Taipale- Social networks in the cell: protein-protein interactions (OMICS 3)

April 3
24. Prof. Roy- Towards Understanding the Biological Complexity of Humans

April 4
University classes end

April 9-30
Exam period