### Syllabus:

<table>
<thead>
<tr>
<th>Date</th>
<th>Subject</th>
<th>Lodish et al., 6th ed.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-Lec1)</td>
<td>Aug 26 Course mechanics;</td>
<td>Chaps. 1:1-13; 2:14-22; and brettch</td>
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<tr>
<td></td>
<td>Review biology, society, technology</td>
<td>Lodish, et al. MolCel Bio: Chaps. 't and 2</td>
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<td>2-Lec2)</td>
<td>Sept 02 Basic science</td>
<td>Chaps. 3: 23-27; 4: 47-89;</td>
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<td></td>
<td>Protein chemistry and biochemistry</td>
<td>Lodish, et al. MolCel Bio: Chaps. 3 and 5: 91-120</td>
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<tr>
<td>3-Lec3)</td>
<td>Sept 09 Molecular Biology and Applied science</td>
<td>Chapt. 3:23-46; 4:47-90; Chapt. 5:91-120</td>
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<td>Lodish, et al. MolCel Bio: 4:111-139</td>
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<td>Lodish, et al. MolCel Bio: 5:165-185</td>
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<td>4-Lec4)</td>
<td>Sept 16 Genome-based science and technology</td>
<td>Chapt. 6: 121-162</td>
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<td>5-Exam1)</td>
<td>Sept 23 FIRST EXAM (Lectures 1-4)</td>
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<td>6-Lec5)</td>
<td>Sept 30 Prokaryotes: biology and biotechnology</td>
<td>Chapt. 7: 163-189; Chapt. 4: 481-509</td>
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<td>7-</td>
<td>Oct 07 No Class: &lt;&lt;&lt;&lt; Oct 14! Columbus day instead</td>
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<td>8-Lec6)</td>
<td>Oct 14 Eukaryotes: biology and biotechnology</td>
<td>Chapt. 1: 3-13; Chapt. 9: 227-255</td>
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<td>9-Lec7)</td>
<td>Oct 21 Medical applications</td>
<td>Chapt. 8: 190-223</td>
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<tr>
<td>10-Lec8)</td>
<td>Oct 28 Moral and Ethics, Legal and Social Issues (ELSI)</td>
<td>topics from Chaps. 7, 9, 10</td>
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**Notes:**
- topics from Chaps. 10 and 12
11-Exam2 Nov 04 EXAM 2 (Lectures 5-8)
12-Lec9 Nov 11 Manipulating genomes and organisms Capt. 12
13-Lec10 Nov 18 Non-Ag animal-based molecular biotechnology Chapt. 11
14-Lec11 Nov 25 Animal agriculture/aqua-agriculture Chapt. 11
15-Lec 12 Dec 02 Plant agriculture Chapt. 8 and 12
13. Student presentations
16-Exam3 Dec 09 EXAM 3 (Lectures 9-12)

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BINF 633, Fall 08: Molecular Biotechnology
Class: Tuesday 7:20pm
Course website under BINF Department website: http://baf.gmu.edu/websites.html

Grading format:
-three exams @ 100pts ea
-two oral presentations @ 25pts ea
-one written presentation @ 25pts DUE 11/18 no exceptions
-one homework @ 25pts ea
total = 400pts
Grading structure: 85%A, 70%B, 55%C

[TBD] extra credit 50pts total
Adherence to academic integrity and the GMU Honor Code expected (http://honorcode.gmu.edu).

Concerns regarding email address privacy should be addressed with instructor.

Presentations:

#TWO oral presentations and ONE written presentation
Oral 1: present "pro" side of a debate
Oral 2: present "con" side of a debate
Written: Present debate, both sides

Topics:
1. Mandatory vaccination
2. Genetically modified food-plants
3. Genetically modified food-animals
4. Organism cloning
5. Use of animals for organ donations
6. Extending protection for endangered species
7. Limiting "biodefense" and "biowarfare" research
8. Extending life through advances in medicine
9. Right to die
10. Right to use non-FDA approved medication
11. Restrict science policy issues to committees of scientists
12. Legislate lower prices for all medicines
13. Legislate same prices for all medicines
14. Other to be discussed