

# MB&B 301b/601b-Principles of Biochemistry II—2016

**Lectures:** Tuesday, Thursday 11:35-12:50, 305 Bass

**Texts:** Preferred: Voet & Voet *Biochemistry* 4<sup>th</sup> Edition (John Wiley & Sons) (hardcopy or ebook)  
Lehninger *Principles of Biochemistry* 6<sup>th</sup> Edition (W.H. Freeman & Co.) provides scant coverage.  
Other readings will be accessible in PDF form on the class website (<http://classes.yale.edu/MBB301b>).

**Instructors:** Karla Neugebauer karla.neugebauer@yale.edu SHM C-123  
Christian Schlieker christian.schlieker@yale.edu (in charge) BASS 236A

**Teaching Assistants:** Chin Leng Cheng chinleng.cheng@yale.edu Bass 217  
Katie Farley katherine.farley@yale.edu SHM C114  
Ivy Huang Pei-tzu.huang@yale.edu Bass 424

Date	Lec #	Topic	Lecturer	Text Readings	
				Voet & Voet 4 <sup>th</sup> edition	Lehninger 6 <sup>th</sup> edition
<b>Jan 19</b>	1	Molecular Basis of Heredity	Schlieker	82-90, 1145-1154	281-293, 297-299
<b>21</b>	2	Prok. Genetics & Gene Structure	Schlieker	1-28	-/-
<b>26</b>	3	Genetic Code	Schlieker	1340-1344	1103-1113
<b>28</b>	4	DNA Replication I	Schlieker	1173-1201	1009-1026
<b>Feb 2</b>	5	DNA Replication II	Schlieker	1158-1170, 1173-1201	985-994
<b>4</b>	6	DNA Modification & Repair	Schlieker	1213-1221	297-302, 1027-1038
<b>9</b>	7	Recombination & Transposition	Schlieker	1225-1245	1038-1049
<b>11</b>	8	Transcription in Bacteria	Schlieker	1265-1276, 1284	1057-1064
<b>16</b>		MIDTERM #1 (Lectures 1-8)			
<b>18</b>	9	RNA Structure & Chemistry	Neugebauer	176-185, 1151-1158, 1264-1265, 1328, 1345-1359, 1362-1365	1077-1080, 1115-1123
<b>23</b>	10	Catalytic RNA	Neugebauer	1304-1311, 1329-1331	1082-1084
<b>25</b>	11	Protein Synthesis I	Neugebauer	1365-1366, 1371-1376, 1379-1398	1113-1115, 1127-1139
<b>Mar 1</b>	12	Protein Synthesis II	Neugebauer	1365-1376, 1379-1398	1113-1115, 1127-1139
<b>3</b>	13	Prok. Gene Expression I	Schlieker	1260-1264, 1283-1296	1155-1165
<b>8</b>	14	Prok. Gene Expression II	Schlieker	1296-1301	1165-1174
<b>10</b>	15	Regulation of Phage $\lambda$	Schlieker	Chapter 33 W20-W39 available on book companion website	-/-
<b>29</b>	16	Cloning & Genomic Analysis	Neugebauer	104-125	313-351
<b>31</b>	17	Euk. Genome I	Neugebauer	1201-1207, 1209-1213; pp W-53–W-78 (from Chapter 34) available on book companion website	979-985, 994-1002, 1025-1026, 1089-1092
<b>April 5</b>		MIDTERM #2 (Lectures 9-16)			
<b>7</b>	18	Euk. Genome II	Neugebauer	1244-1252, 1301-1304	1069-1077, 1088-1089
<b>12</b>	19	Euk. Transcription	Neugebauer	1276-1283; pp W-83–W-119 (from Chapter 34) available on book companion website	335-337, 1064-1069, 1160-1165, 1175-1182
<b>14</b>	20	Euk. RNA Processing	Neugebauer	1304-1306, 1311-1322, 1328-1331	1071-1080, 1111-1113
<b>19</b>	21	Euk. Translation	Neugebauer	1323-1327, 1376-1379, 1397-1403, 1405-1411	1081, 1128-1029, 1131, 1139-1140, 1147-1149, 1185-1186
<b>21</b>	22	Tumor Viruses & Oncogenes	Neugebauer	1207-1209, chapter 34 W134-145 available on book companion website	488-494, 1085-1088
<b>26</b>	23	Development	Neugebauer	W-121–W-134 (from Chapter 34) available on book companion website	1186-1193
<b>28</b>	24	Immunology	Schlieker	Chapter 35, W179-205, available on book companion website	174-179, 1049-1052
<b>May 6 2 pm</b>		FINAL EXAM (Cumulative with emphasis on lectures 17-24)			