

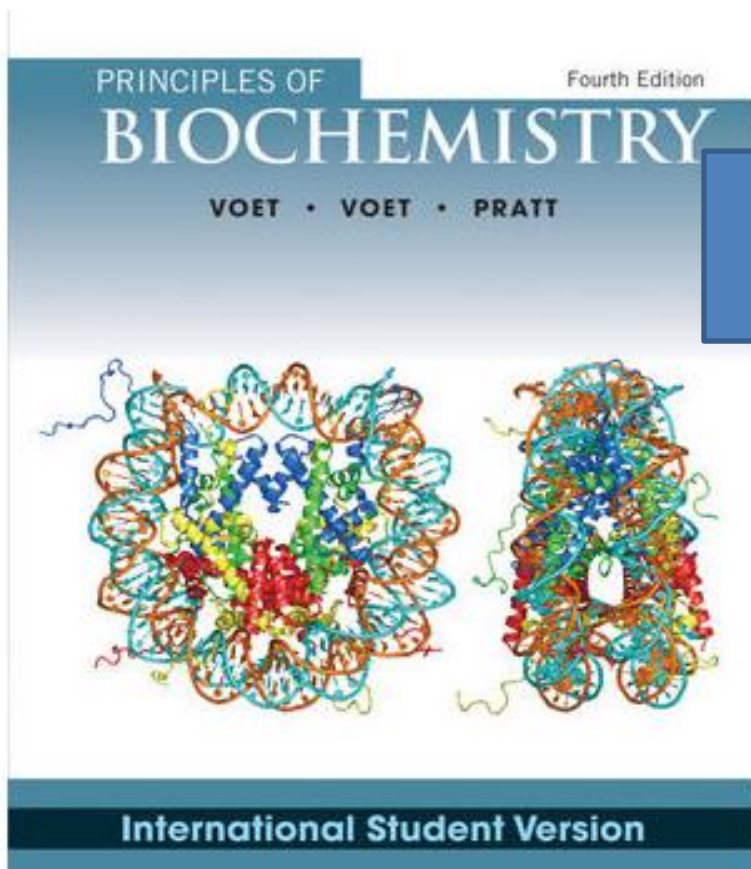
Level Two
Science Track (Medical)
Biochemistry (MDL111)

COURSE SYLLABUS
Semester 391

Course Description (3 Credits) (4 Contact Hours)

The Main Reference:

Principles of Biochemistry by Donald Voet, Judith Voet & Charlotte Pratt, Fourth Edition, International Student Version, John Wiley & Sons, Inc.



Principles of Biochemistry
Fourth Edition

Donald Voet • Judith G. Voet • Charlotte W. Pratt

Course Outline:

Week	Date	Chapter	Topics	Pages	
1	22-26/12/1439	Introduction			
2	29/12/1439 – 3/01/1440	Chapter 1	Life, Cells, and Thermodynamics	1-5	
		Chapter 2	Physical and Chemical Properties of water	22-25	
3	6-10/01/1440	Chapter 2	Physical and Chemical properties of water Following topics are not included: Table 2-2, 2-4 Box 2-1, The pH of a solution is determined by the relative concentrations of acids and bases, Fig: 2-17, Fig 2-18, Box 2-2, Sample calculation 2-1, 2-2, 2-3, 2-4	25-37	
4	13-17/01/1440	Chapter 3	Overview of DNA Function, and Engineering	40-51	
		Quiz-I			
5	20-24/01/1440	Chapter 4	Amino Acids: the Building Blocks of Proteins Following topics are not included: Box 4-1, In table 4-1 Residue Mass, Average occurrence in Proteins, pK_1 , pK_2 and pK_R are not included D -The pK values of ionizable groups depend on nearby groups, Sample calculation 4-1.	76-84	
6	27/01-2/02/1440	Chapter 4	Amino Acids: the Building Blocks of Proteins Following topics are not included: Box 4-2, 4-3	84-90	
		Chapter 8	Saccharide Chemistry	217-219	
7	5-9/02/1440	Chapter 8	Saccharide Chemistry Following topics are not included: Sugars can adopt different conformations and Box 8-1 and 8-2	219-228	
8	12-16/02/1440	Mid Term Exam			
9	19-23/02/1440	Chapter 9	Lipids, Bilayers and Membranes In table 9-1 common systematic names of fatty acids are not included. Student should know relationship between symbols and structures,	241-246	

			then relationship between structures and melting points. In table 9-2, only first three classes of glycerophospholipids (name, formula etc) are included. Box 9.1 is not included.	
10	26-30/02/1440	Chapter 11	Mechanism of Enzyme Action Following topics are not included: Table 11-1 & Activation Energy and the Reaction Coordinate	315-320
11	3-7/03/1440	Chapter 13	Hormones and Signal Transduction Box 13-1 is not included	396-401
Quiz-II				
12	10-14/03/1440	Chapter 15	Glycolysis and Pentose Phosphate Pathway Following topics are not included: Box 15-1, 15.2, Fig 15.2, 15.3, 15.4, 15.5, 15.6, 15.8, 15.9, 15.10, 15.11, 15.12, 15.13, 15.14 (Instructor would explain further detail in class)	472-491
13	17-21/03/1440	Chapter 17	The Citric Acid Cycle Following topics are not included : Box 17.1, 17.2, Table 17.1, Fig 17.3, 17.4, 17.5, 17.6, 17.7, 17.8, 17.9, 17.10, 17.11, 17.12, 17.13, 17.15.(Instructor would explain further detail in class). 2.B-The Pyruvate Dehydrogenase Complex Catalyzes Five Reactions (Page 557-560). Pyruvate Dehydrogenase is regulated by Product Inhibition and Covalent Modification (Page-569)	551-567
14	24-28/03/1440	Chapter 17	The Citric Acid Cycle Pyruvate Dehydrogenase is regulated by Product Inhibition and Covalent Modification (Page-569) is not included	568-569
15	2-6/04/1440	Revision		
16	9-13/04/1440	Final Exam		
17	16-20/04/1440	Final Exam		

Marks distribution for MDL111

- 1) 2 Quizzes = **5%** (Average of two quizzes would be considered)
- 2) Mid Term = **35%**
- 3) Final Term = **60 %**

Syllabus

Quiz-1: Chapter 1 & 2

Quiz-2: Chapter 9 & 11

Mid-Term: Chapter 1, 2, 3, 4, 8

Final Term: Chapter 9, 11, 13, 15, 17

Note: Both quizzes would be of subjective type (Short questions/answers)