



Jordan University of Science and Technology  
Faculty of Applied Medical Sciences  
Department of Medical Laboratory Sciences  
Course Syllabus LM721

<b>Course Information</b>	
<b>Course Title</b>	Medical biochemistry (3 credit hours)
<b>Course Code</b>	LM 721
<b>Prerequisites</b>	NA
<b>Course Website</b>	www.Iww.com
<b>Instructor</b>	Professor Nabil Bashir, Ziad Jraisat, and Dr. Saleem Bani Hani
<b>Office Location</b>	M5 level - 4
<b>Office Phone #</b>	23874
<b>Office Hours</b>	TBA
<b>E-mail</b>	-
<b>Teaching Assistant(s)</b>	NA
<b>Course Description</b>	
<p>This course is an advanced course in biochemistry for master's students. Topics include the structure, function, and metabolism of the main macromolecules in the human body (proteins, enzymes, carbohydrates, lipids, nonprotein nitrogen compounds, nucleic acids, vitamins, and other specialized products). The course is also includes a description of the biochemistry of selected common human diseases.</p>	

<b>Textbook</b>	
<b>Title</b>	Textbook of biochemistry with clinical correlations
<b>Author(s)</b>	Thomas M. Devlin
<b>Publisher</b>	WILEY
<b>Year</b>	2011
<b>Edition</b>	Seventh edition
<b>Other references</b>	Handouts

<b>Assessment</b>		
<b>Assessment</b>	<b>Expected Due Date</b>	<b>Percentage</b>
<b>First Exam</b>	5 <sup>th</sup> week of the semester	25%
<b>Second Exam</b>	10 <sup>th</sup> week of the semester	25% + 10% Presentation
<b>Final Exam</b>	As determined by registrar	40%

Course Objectives	Percentage
1. To present a clear and precise discussion of the molecular basis of life of eukaryotic cells, with an emphasis on those of human tissues.	50%
2. To relate the biochemical processes at the cellular level to the physiological processes of the whole human body.	25%
2. To illustrate how biochemistry research has led to an understanding of the causes of various human diseases.	25%

Teaching & Learning Methods
<ul style="list-style-type: none"> <li>• Lecture with discussion</li> <li>• Brainstorming</li> <li>• Case studies</li> <li>• Problems solving</li> </ul> <p><b>Teaching duration:</b> 16 weeks</p>

Objective	Reference(s) Handouts
1, 3	Chapters: 10, 11, 14, 15, 16, 17, 23, 26,27 + Handouts
2, 4	Chapters: 1, 16 + Handouts
5, 6	Handouts

Useful Resources
University library, Internet, Articles (assigned by the instructor)

<b>Course Content (lectures)</b>		
<b>Week</b>	<b>Topics</b>	<b>Chapter in Textbook (handouts)</b>
1	Introduction to medical biochemistry: basic chemistry of carbohydrates, proteins, lipids, and Nucleic acids.	<b>1 Handouts</b>
2	Buffer systems	<b>1 Handouts</b>
3	Protein structure	<b>3 Handouts</b>
4	Enzymes, Coenzymes, vitamins	<b>10 Handouts</b>
5	Enzyme kinetics	<b>10 Handouts</b>
6	Carbohydrate metabolism- <i>regulation of blood glucose</i>	<b>15, 16, 22 Handouts</b>
7	TCA, Oxidative phosphorylation <i>Formation of reactive oxygen species, antioxidants, and oxidative stress.</i>	<b>14 Handouts</b>
8	Metabolism of lipids	<b>17, 18 Handouts</b>
9	Metabolism of cholesterol	<b>18 Handouts</b>
10	Urea metabolism	<b>19 Handouts</b>
11	Nucleic acid metabolism	<b>20 Handouts</b>
12	Conversion of amino acids to specialized products; heme, creatinine.	<b>19 Handouts</b>
13	Nucleotide metabolism	<b>20 Handouts</b>
14	Vitamins and minerals	<b>26 Handouts</b>
15	Review	
16	Final Exam	

### Additional Notes

#### Attendance policy

The students are required to attend all the classes. Absence for more than 15% of the classes without acceptable excuses will lead to dismissal from the course. If it is an emergency (unplanned) absence, the student is still required to provide an acceptable excuse.

#### Expected workload:

The student must attend the classes, solve the assignment, prepare for the group discussions, and attend and pass the exams. Each student must make a presentation in one of the biochemistry topics assigned by the instructor.

#### Feedback:

Any feedback from the students regarding the progression in the course can be discussed with the instructor (Dr.Nabeel Albasheer) at the assigned office hours:

### Course Content

Week	Title of the Lecture	Lecturer
1	Introduction to medical biochemistry: basic chemistry of carbohydrates, proteins, lipids, and Nucleic acids.	Prof. Nabil Bahsir
2	Buffer systems	Prof. Nabil Bahsir
3	Protein structure	Prof. Nabil Bahsir
4	Enzymes, Coenzymes, vitamins	Prof. Nabil Bahsir
5	Enzyme kinetics	Prof. Nabil Bahsir
6	Carbohydrate metabolism- <i>regulation of blood glucose</i>	Prof. Nabil Bahsir
7	TCA, Oxidative phosphorylation <i>Formation of reactive oxygen species, antioxidants, and oxidative stress.</i>	Prof. Nabil Bahsir
8	Metabolism of lipids	Prof. Nabil Bahsir
9	Metabolism of cholesterol	Prof. Nabil Bahsir
10	Urea metabolism	Prof. Nabil Bahsir
11	Nucleic acid metabolism	Prof. Nabil Bahsir
12	Conversion of amino acids to specialized products; heme, creatinine.	Prof. Nabil Bahsir
13	Nucleotide metabolism	Prof. Nabil Bahsir
14	Vitamins and minerals	Prof. Nabil Bahsir
15	Review	Prof. Nabil Bahsir
16	Final Exam	

The book "Essentials of Biochemistry" primarily focused on the essential biochemical concepts that are much helpful for medical students. The study of biochemistry helps in finding remedies for a variety of ailments that afflict human beings. Chatterjee textbook of medical biochemistry is one of the tops and best selling medical biochemistry book read by many students across the world. Medical School | Medical Students | Medical Pictures | Medical Books To Read | Medical Books Studying | Medical Humor | Medical Examination | Medical Ebooks | Medical Ebooks Download | Medical Textbooks | Free Medical | PDF Books | Biochemistry PDF. Clinical Chemistry: Principles, Techniques, and Correlations. Clinical Chemistry textbook: new edition 2013. Start by marking "Textbook of Biochemistry With Clinical Correlations" as Want to Read: Want to Read saving | Want to Read. We'd love your help. Let us know what's wrong with this preview of Textbook of Biochemistry With Clinical Correlations by Thomas M. Devlin. Problem: It's the wrong book It's the wrong edition Other. Thomas M. Devlin, Ph.D. This book was set in ITC Garamond Light by BiComp Incorporated Textbook of Biochemis Textbook of Biochemistry - For Medical Students, 6th Edition. 672 Pages 2013 25.45 MB 60,506 Downloads. VAIDYANATHAN MBBS MD. Clinical Associate Professor, Department of Biochemistry e-mail: info Textbook Environmental Monitoring and Characterization. 404 Pages 2004 15.87 MB 8,184 Downloads New! Environmental Monitoring and Characterization is an integrated, hands-on resource for monitoring Textbook of Medical Biochemistry. 894 Pages 2013 20.76 MB 18,033 Downloads. Fifth Edi