



Course Specifications

Institution: Umm Alqura University	Date: 5-12-2018
College/Department :	First Common Year – Department of Biochemistry

A. Course Identification and General Information

1. Course title and code:	Basics to Medical Biochemistry (1) - 4810120-2.																						
2. Credit hours:	2 (1+1)																						
3. Program(s) in which the course is offered.	<ul style="list-style-type: none"> - First Common Year (Medical Track) including: <ul style="list-style-type: none"> - Bachelor Degree of Medicine - Bachelor Degree of Medical Sciences - Bachelor Degree of Pharmacy - Bachelor degree of Dentistry (If general elective available in many programs indicate this rather than list programs)																						
4. Name of faculty member responsible for the course :	Dr Mohammed Ahmed Althubeti																						
5. Level/year at which this course is offered:	First semester																						
6. Pre-requisites for this course (if any):	None																						
7. Co-requisites for this course (if any):	None																						
8. Location if not on main campus:	Abdeia																						
9. Mode of Instruction (mark all that apply):	<table border="0"> <tr> <td>a. traditional classroom (IL and Lecture)</td> <td><input checked="" type="checkbox"/></td> <td>What percentage?</td> <td><input type="text"/></td> </tr> <tr> <td>b. blended (traditional and online)</td> <td><input type="checkbox"/></td> <td>What percentage?</td> <td><input type="text"/></td> </tr> <tr> <td>c. e-learning</td> <td><input type="checkbox"/></td> <td>What percentage?</td> <td><input type="text"/></td> </tr> <tr> <td>d. correspondence</td> <td><input type="checkbox"/></td> <td>What percentage?</td> <td><input type="text"/></td> </tr> <tr> <td>f. other (Practical sessions)</td> <td><input checked="" type="checkbox"/></td> <td>What percentage?</td> <td><input type="text"/></td> </tr> </table>			a. traditional classroom (IL and Lecture)	<input checked="" type="checkbox"/>	What percentage?	<input type="text"/>	b. blended (traditional and online)	<input type="checkbox"/>	What percentage?	<input type="text"/>	c. e-learning	<input type="checkbox"/>	What percentage?	<input type="text"/>	d. correspondence	<input type="checkbox"/>	What percentage?	<input type="text"/>	f. other (Practical sessions)	<input checked="" type="checkbox"/>	What percentage?	<input type="text"/>
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Comments:																							



B Objectives

1. What is the main purpose for this course?

- *To consolidate a general background in biochemistry by putting biochemical concepts into a medical sciences context.*
- *To provide the basic concepts of biochemical structure and medical significance of bio macromolecules, carbohydrates, lipids, proteins, vitamins, and minerals will be covered.*

Practical classes will introduce important practical techniques, with experiments that reinforce and complement the taught material.

The course will allow students to continue with physiology course as part of the enhanced medical track-study.

2. Briefly describe any plans for developing and improving the course that are being implemented. (e.g. increased use of IT or web based reference material, changes in content as a result of new research in the field)

- *Continues updating for content of lectures as a result of recent achievements and researches in the field.*
- *Encouraging the students to deal with electronic books, as they are using many web based reference material and by providing them with continues update for information.*
- *Implementation of more medical correlations.*
- *Planning for elective self-studies in the course to encourage students to engage in depth study of areas of interest.*
- *More efforts will be exerted to develop and improve the course to enable the student to clearly understand the biochemical and molecular basis of diseases.*

C. Course Description (Note: General description in the form used in Bulletin or handbook)

Course Description:

- *The course is one semester course of 2 credit hours (one credit for theory lectures and one for practical sessions) with total 3 contact hours.*
- *Fifteen lectures are provided to the students, covering the biochemistry principles of macromolecules, Carbohydrates, lipids, proteins, vitamins, and minerals.*
- *Thirteen practical sessions are provided to enable students to describe important practical techniques, with experiments that reinforce and complement the taught material.*

1 Topics to be Covered

List of Topics	No of Weeks	Contact hours

Introduction to the course: (scope, objectives, and evaluation)	1	1
Biochemical Aspects of Carbohydrates	4	4
Biochemical Aspects of Lipids	4	4
Biochemical Aspects of proteins	4	4
Biochemical Aspects of Vitamins	1	1
Biochemical Aspects of Minerals	1	1
Lecture: 15 contact hours	Tutorial: 0	Practical: 30 hours

2. Course components (total contact hours and credits per semester):

		Lecture	Tutorial	Laboratory/ Studio	Practical	Other:	Total
Contact Hours	Planned	15			28		43
	Actual						
Credit	Planned	1			1		2
	Actual						

3. Additional private study/learning hours expected for students per week.

4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategy

On the table below are the five NQF Learning Domains, numbered in the left column.

First, insert the suitable and measurable course learning outcomes required in the appropriate learning domains (see suggestions below the table). **Second**, insert supporting teaching strategies that fit and align with the assessment methods and intended learning outcomes. **Third**, insert appropriate assessment methods that accurately measure and evaluate the learning outcome. Each course learning outcomes, assessment method, and teaching strategy ought to reasonably fit and flow together as an integrated learning and teaching process. (Courses are not required to include learning outcomes from each domain.)

Code #	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
1.0	Knowledge		
1.1	By the end of this course, the Medical Track students are expected to be able to: <ul style="list-style-type: none"> Identify the macromolecules in biochemistry and its structure.. 	Interactive learning	Written MCQ
1.2	<ul style="list-style-type: none"> Describe the medical significance of biomolecules. 	Interactive learning	Written MCQ

2.0	Cognitive Skills		
2.1	▪ Explain the correlation between the chemical structure and the medical cellular-function.	Interactive learning	Written MCQ
3.0	Interpersonal Skills & Responsibility		
3.1	• Productive effective and interactive discussion skills.	Interactive learning +Practical sessions	Written MCQ + Practical exam
3.2			
4.0	Communication, Information Technology, Numerical		
4.1			
4.2			
5.0	Psychomotor		
5.1	Performing practical experiments to differentiate between macro biomolecules	Practical sessions	Practical exam + written MCQ
5.2			

5. Schedule of Assessment Tasks for Students During the Semester

	Assessment task (i.e., essay, test, quizzes, group project, examination, speech, oral presentation, etc.)	Week Due	Proportion of Total Assessment
1	Mid term written exam	9	25%
2	Practical Exam	15	10%
3	Quizz for practical theory	14	5%
4	Final written exam	17	60%
5			
6			
7			
8			

D. Student Academic Counseling and Support

1. Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice. (include amount of time teaching staff are expected to be available each week)

The student has the right to contact the lecturer or coordinators by their e-mails or during their office hours for academic advices or consultations, and response to students' feedback.

E. Learning Resources

1. List Required Textbooks

- **Text book of Biochemistry with Clinical Correlations**, Seventh ed. Devlin TM (2010). Ed. Wiley - LissNew York
- **Principles of Biochemistry**, A.L. Lehninger. D.L.Nelson and M.M. Cox, (2008) Worth Publication s. New York.

2. List Essential References Materials (Journals, Reports, etc.)

- **Harper's Illustrated Biochemistry**, 28edition (2006) Robert K. Murray, David A Bender, Kathleen **M. Botham , Peter J. Kennelly, Victor W., Rodwell , P. Anthony Weil, Publishers The McGraw-Hill Companies.**
- **Instant Notes Biochemistry** , Second Ed(2007) by B.D. Hames & N.M. Hooper

3. List Electronic Materials, Web Sites, Facebook, Twitter, etc.

- [Biochemical Society, www.biochemistry.org](http://www.biochemistry.org)
- [Association for Clinical Biochemistry \(ACB\), www.acb.org.uk](http://www.acb.org.uk)
- [Biochemistry website, www.bio.net/bionet](http://www.bio.net/bionet)

- [The ChemWeb Chemistry Portal, www.chemweb.com](http://www.chemweb.com)
- [Medscape, www.medscape.com](http://www.medscape.com)
- [Biomedical central, www.biomedcentral.com/bmcpublichealth](http://www.biomedcentral.com/bmcpublichealth)
- www.kumc.edu/biochemistry/resource.html
- www.medlib.iupui.edu/ref/biochem.htm
- www.ag.unr.edu/shintani/bch400-600/Chapter%20notes%20current.htm
- www.medicaleducationonline.org/component/option,com_docman/task,cat_view/gid,101/Itemid,37/
- www.bcs.whfreeman.com/thelifewire/content/chp00/00020.html
- www.science.nhmccd.edu/biol/ap1int.htm
- www.johnkyrk.com/index.html
- www.science.nhmccd.edu/biol/biolint.htm
- <http://www.ag.unr.edu/shintani/bch400-600/Chapter%20notes%20current.htm>
- http://www.medicaleducationonline.org/component/option,com_docman/task,cat_view/gid,101/Itemid,37/
- <http://www.bcs.whfreeman.com/thelifewire/content/chp00/00020.html>
- <http://www.science.nhmccd.edu/biol/ap1int.htm>
- <http://www.johnkyrk.com/index.html>

<http://www.science.nhmccd.edu/biol/biolint.htm>

4. Other learning material such as computer-based programs/CD, professional standards or regulations and software.

F. Facilities Required

Indicate requirements for the course including size of classrooms and laboratories (i.e. number of seats in classrooms and laboratories, extent of computer access, etc.)
1. Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.) Class rooms with projector
2. Technology resources (AV, data show, Smart Board, software, etc.) Audio-visual equipment for teaching (projector, microphones, speakers, smart board.
3. Other resources (specify, e.g. if specific laboratory equipment is required, list requirements or attach list)

G. Course Evaluation and Improvement Processes

1. Strategies for Obtaining Student Feedback on Effectiveness of Teaching <ul style="list-style-type: none"> ▪ Evaluation questionnaires for the student's opinions about teaching process by the end of the semester are done. ▪ Evaluation questionnaires posed by the staff for learning process at the end of the semester.
2. Other Strategies for Evaluation of Teaching by the Instructor or by the Department <ul style="list-style-type: none"> ▪ Evaluation questionnaires for the student's opinions about teaching process by the end of the semester are done, analyzed for each evaluation
3. Processes for Improvement of Teaching

- Most of the staff involved in the teaching of biochemistry are from faculty of medicine and participate in the staff developing workshops held by the faculty in cooperation with UCL (University college of London).

4. Processes for Verifying Standards of Student Achievement (e.g. check marking by an independent member teaching staff of a sample of student work, periodic exchange and remarking of tests or a sample of assignments with staff at another institution)

5. Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement.

All student exam results and questionnaire results are collected and analyzed. Then preparing of action plan for improvement will be carried out and presented to the higher curriculum committee in the department of biochemistry. Then presented to the vice-deanship of the first common year

Course Coordinator: ___Dr . Mohammed Ahmed Althubeti_____