



The University of Jordan

Accreditation & Quality Assurance Center

COURSE Syllabus

1	Course title	Basic biochemistry
2	Course number	0344321
3	Credit hours (theory, practical)	3 +1
	Contact hours (theory, practical)	3 + 3
4	Prerequisites/corequisites	0303233 (organic chemistry)
5	Program title	Bachelor of biological sciences
6	Program code	0304
7	Awarding institution	University of jordan
8	Faculty	siences
9	Department	Biological sciences
10	Level of course	Under graduate
11	Year of study and semester (s)	Third year , both semesters
12	Final Qualification	b.sc. in biological sciences
13	Other department (s) involved in teaching the course	none
14	Language of Instruction	English
15	Date of production/revision	First semester 2016

16. Course Coordinator:

Office numbers, office hours, phone numbers, and email addresses should be listed.

Office number : 213

Office hours : one hour before and after the lectures

Phone number : 22225

Email address : i. ibrahimi@ju.edu. jo

17. Other instructors:

Office numbers, office hours, phone numbers, and email addresses should be listed.

none

18. Course Description:

As stated in the approved study plan. Introduction to the basic concepts in biochemistry. A detailed discussion of the chemistry of water, acids, bases and buffers. Basic techniques to purify macromolecules especially. Proteins. Structural organization and building blocks of proteins. Enzymes: their classification, function and kinetics. Regulation of enzyme activity. An over view of carbohydrates and lipids.

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19. Course aims and outcomes:

A- Aims: this course aims at the study of acids , bases, water and buffers. The second aim is the study of protein purification . the third aim is the study of enzymes. Finally an overview of carbohydrates and lipids

B- Intended Learning Outcomes (ILOs): Upon successful completion of this course students will be able to ...

1. characterize aqueous solutions especially buffers
2. solve problems dealing with buffers
3. discriminate between buffered and unbuffered solutions
4. list the various techniques involved in protein purification
5. understand the basic principles of protein purification methods
6. discriminate between the different of protein purification
- 7 classify the various chromatographic and electrophoretic methods
8. recognize the various amino acids
9. identify the various side chains of amino acids
- 10.classify the amino acids according to their properties
11. distinguish the side chains of amino acids
12. describe the primary structure of proteins
13. determine the secondary structure of proteins
14. list the tertiary structural elements of proteins
15. clarify the concept of the quaternary structure of proteins
16. classify enzymes according to the enzyme commission rules
17. distinguish the concept of enzyme function
18. contrast the various types of enzyme inhibition
19. list the various types of enzyme ctalysis
- 20 explain the mechanisms of enzyme regulation
- 21 explore the various types of carbohydrates
22. classify lipids and recognize their properties

20. Topic Outline and Schedule:

Topic	Week	Instructor	Achieved ILOs	Evaluation Methods	Reference
Water, acids, and bases	3	Ibrahim ibrahimi	1-3	Home works and exams	Biochemistry by voet and voet book

buffers	3	=	1-3	=	=
Protein purification	4	=	4-7	=	=
Protein structure	2	=	8-15	=	=
enzymes	2	=	16-20	=	=
Carbohydrates and lipids	2	=	21-22	=	=

21. Teaching Methods and Assignments:

Development of ILOs is promoted through the following teaching and learning methods:

1. lecturing
2. solving problems
3. take home assignments
4. exams

22. Evaluation Methods and Course Requirements:

Opportunities to demonstrate achievement of the ILOs are provided through the following assessment methods and requirements:

1. Laboratory experiments
2. take home assignments
3. exams

23. Course Policies:

A- Attendance policies: taking attendance and dismissal from the course if the absence exceeds the maximum excused limit

B- Absences from exams and handing in assignments on time: make ups fore excused absences and giving extra grades for handing in assignments on time

C- Health and safety procedures: wearing lab coats and gloves in the lab

D- Honesty policy regarding cheating, plagiarism, misbehavior: reporting to investigation committee

E- Grading policy: first ,second and final exams, 25% , 25% and 50% respectively

F- Available university services that support achievement in the course: lab assistance and equipment

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24. Required equipment:

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| <ol style="list-style-type: none">1. pH meters2. spectrophotometers3. glassware4. overhead projectors |
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25. References:

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| <p>A- Required book (s), assigned reading and audio-visuals:
Biochemistry by voet and voet, fourth edition, 2009, john wiley and sons , inc. new york, usa</p> <p>B- Recommended books, materials, and media:
Biochemistry, by m. Campbell and Farrell , six edition , 2009, Thomson learning, inc. usa</p> |
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26. Additional information:

Name of Course Coordinator: الاستاذ الدكتور ابراهيم الابراهيمي Signature: ----- Date: 12/ 01/ 2016

Head of curriculum committee/Department: الاستاذة الدكتورة سوسن العوران Signature: -----

Head of Department: الدكتور هناء العبوس Signature: -----

Head of curriculum committee/Faculty: الاستاذة الدكتورة أمل العابودي Signature: -----

Dean: الاستاذ الدكتور صالح محمود Signature: -----

Copy to:

Head of Department
Assistant Dean for Quality Assurance
Course File