

Clinical Biochemistry 2; Code: PHB 702

A-Basic Information

Programme(s) on which the course is given:	Master Degree in Pharmaceutical Sciences (Biochemistry)
Department responsible for offering the course:	Department of Biochemistry and molecular biology.
Department responsible for teaching the course:	Department of Biochemistry and molecular biology.
Academic year:	2020/2021
Course title and code:	Clinical Biochemistry 2; Code: PHB 702
Contact hours (credit hours):	Lecture: 4 (4)
Course Coordinator:	Prof. Dr. / Nadia Hamdy.

B- Professional Information

The course aim and intended learning outcomes are based on that mentioned in the programme specifications, with more course-related specific details.

1- Overall Aims of Course

Upon the end of this course,

- The students should recognize recent development in diagnosis, biomarkers, together with prognosis and screening programs for various diseases.
- The students should be able to illustrate the use of certain biochemical molecules as enzymes, proteins, tumor markers in efficient diagnosis of various diseases as liver, heart, inherited errors of metabolism together with other clinical features in diagnosis.
- They should show awareness of the ongoing problems and visions, identify professional problems and find solutions to them.
- They should be able to interpret changes in levels of different blood constituents and relate them to different human pathologies.

2- Intended Learning Outcomes of Course (ILOs)**a- Knowledge and Understanding:**

The students should be able to:

- a1-List the biochemical features of various diseases and appropriate medical intervention
- a2-Define different case studies of biochemical abnormalities in various diseases.
- a3-Describe results from various techniques of biochemistry lab and their applications in addressing issues related to human diseases.
- a4-State how to prevent complications or limit complications of various diseases

b-Intellectual Skills:

The students should be able to:

- b1-Assess biochemical information quickly.
- b2-Evaluate and interpret abnormal blood tests results
- b3-Assess the critical way of thinking to reach final cases diagnosis.
- b4-Suggest clear advice and critical decisions about patient's state of health.

d- General and Transferable Skills:

The students should be able to:

d1-Search the internet for information.

d2- Communicate effectively in different ways.

d3- Demonstrate critical thinking, problem-solving, decision making, and interpretation of laboratory results.

3-Course Contents

Topics	No. of hours	# of Lecture/weeks	Date
Introduction, How to ...	2	1	3 April
Drug Repurposing for cancer, Covid-19, ...	8	2	5 April
Hallmarks of Inflammation, cancer, Covid-19	8	2	10,12 April
Immunotherapy, Epigenetic drugs, Apoptosis-directed drugs	8	2	17,19 April
Biomarkers and small molecules/markers	8	2	24,26 April
Easter Vacation			1,3 May
Different Tumor Markers	4	1	8,10 May
Theranostics, Liquid biopsy, FC, Methylated PCR, HPLC, WB, microarray, array PCR,...	6	1.5	17 May
Targeted therapy, gene editing, MDR	6	1.5	22,24 May
Hormonal Therapy for cancer	4	1	29 May
Case studies	2	Week # 14	31 May
Exam		Week # 15	June
Total	60	15	

Lecturers:

Prof. Nadia Hamdy+

Dr. Dina Hamada, Dr. Marwa Omar, Dr. Sherihan Galal

4-Teaching and Learning Methods

- ✳ Lectures (board, data show) on line via google classroom and F2F (blended mode)
- ✳ Peer discussion panels for various topics
- ✳ Directed reading, Independent study, web conferencing, self-directed study, self-study packages, computer simulations, practical demonstrations,
- ✳ Course j club, debate papers on topics (blended mode)

5- Student Assessment Methods

- ✿ To assess general and transferable skills (blended mode) via seminars, case studies, independent research, student-led seminars, workshops, tutorials.
Final exam to assess knowledge, understanding, intellectual, general and transferable skills
- ✿ Oral exam to assess knowledge and intellectual skills

Assessment Schedule

Assessment 1	Pre assessment Periodical through student-led seminars, Case study	Week 1, Week 7, Week 14
Assessment 2	Oral exam	Week 15
Assessment 3	Final written exam	Week 15

Weighting of Assessments

Final-term Examination	80.00	%
Oral Examination	10.00	%
Periodicals	10.00	%
Total	100	%

6- List of References

Links to Read and Use

https://en.wikipedia.org/wiki/Tumor_metabolome
<https://www.sciencedirect.com/topics/medicine-and-dentistry/tumor-metabolism>
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4928883/pdf/1600200.pdf>
<http://themedicalbiochemistrypage.org/>
<https://www.ibiology.org/explore/>

Elsevier Research Academy with countless e-learning resources/ Research Cycle
<https://researcheracademy.elsevier.com/learn>

How to Write a Research Proposal

<https://ascholarship.com/research-proposal-how-to-write-a-research-proposal/>

How to Read a Paper

<http://blizzard.cs.uwaterloo.ca/keshav/home/Papers/data/07/paper-reading.pdf>

How to Present a Paper

<https://ocw.mit.edu/courses/brain-and-cognitive-sciences/9-916-the-neural-basis-of-visual-object-recognition-in-monkeys-and-humans-spring-2005/assignments/>
<https://www.youtube.com/watch?v=6UXxmTFsNf0&t=1s>

7- **Facilities Required for Teaching and Learning** (blended mode)

Google classroom,
Emails, youtube, ppt,
Videos, virtual labs,
Group discussion, Links, Voice messages,
zoom meeting for live sessions.

Course Coordinator: Prof. Dr. / Nadia Hamdy
Head of Department: Prof. Dr. / Nadia Hamdy

Date: 2 / 2021

Course name	Clinical Biochemistry 2
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Clinical Biochemistry 2 702 Course matrix

Course content	a1	a2	a3	a4	b1	b2	b3	b4	d1	d2	d3
Introduction, How to ...											
Drug Repurposing for cancer, Covid-19, ...											
Hallmarks of Inflammation, cancer, Covid-19											
Immunotherapy, Epigenetic drugs, Apoptosis-directed drugs											
Biomarkers and small molecules/markers											
Different Tumor Markers											
Theragnostics, Liquid biopsy, FC, Methylated PCR, HPLC, WB, microarray, array PCR,...											
Targeted therapy, gene editing, MDR											
Hormonal Therapy for cancer											
Case studies											

تم الاعتماد في (محضر مجلس قسم الكيمياء الحيوية)
جلسة رقم (٦) بتاريخ ٢٠٢١/٢/١٦ م

رئيس قسم الكيمياء الحيوية



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