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Lebanese International University

School of Pharmacy

Beirut – Bekaa Campuses

Spring Semester 2021-2022

PHAR620 – Pharmacotherapeutics VI (Hematology/Oncology)

3 credits

Course Syllabus

Instructor	Campus	Sect	Room	Offered Time	Office hours	Address
Dr. Mariam Dabbous	Beirut	A	401-E	MW:8:00-9:30	TT 9:30-10:30	Mariam.dabbous@liu.edu.lb
Dr. Mariam Dabbous	Beirut	B	404-E	MW: 9:30-10:45	TTH 9:30-10:30	Mariam.dabbous@liu.edu.lb
Dr. Etwal Bou Raad	Beirut	C	502-E	TTH: 8:00-9:15	TTH 12:30-14:00	Etwal.bouraad@liu.edu.lb
Dr. Etwal Bou Raad	Beirut	D	502-E	TTH: 9:30-10:45	TTH 12:30-14:00	Etwal.bouraad@liu.edu.lb
Dr. Etwal Bou Raad	Beirut	E	502-E	TTH: 11:00-12:15	TTH 12:30-14:00	Etwal.bouraad@liu.edu.lb
Dr. Susana Abdel Fattah	Bekaa	A	101-C	TTH: 12:45-14:00	TTH 12:30-13:30	susana.abdelfattah@liu.edu.lb
Dr. Susana Abdel Fattah	Bekaa	B	101-C	TTH: 14:00-15:15	TTH 12:30-13:30	susana.abdelfattah@liu.edu.lb

Course Coordinator: **Dr.Etwal Bou Raad**
Department: Biomedical sciences
Office: Pharmacy School-Block A Beirut Campus/ Block C Bekaa Campus

COURSE PREREQUISITE:

- 4th year courses

REQUIRED BOOKS:

- Pharmacotherapy: A Pathophysiologic Approach, 10th : Joseph T. DiPiro, Robert L. Talbert, Gary C. Yee, Gary R. Matzke, Barbara G. Wells, L. Michael Posey
- Pharmacotherapy Casebook: A Patient-Focused Approach, 9e
- Harrison's Principles of Internal Medicine, 19e
- NCCN guidelines. www.nccn.org , FREE

COURSE DESCRIPTION:

This 3-credit course enables the students to develop knowledge regarding the pathophysiology of the most common cancer diseases, risk factors, prevention, and treatment approaches based on updated guidelines.

COURSE OBJECTIVES:

This course aims to prepare the students to:

1. Identify the pathophysiology of the most common types of solid and liquid tumors.
2. Review the general prevention and management for chemotherapeutic induced adverse drug reactions and oncological emergencies.
3. Discuss the assessment and management of major solid tumors and liquid tumors based on updated guidelines.

INTENDED LEARNING OUTCOMES:

Upon the completion of the course, the student will be able to:

Domain 1: Foundational Knowledge

PLO	ILOs
1.1.1	• Describe the pathophysiology of cancer including the hallmarks of cancer, the metastatic process, tumor markers, and mechanisms of resistance. • Distinguish between the different types of tumors (Benign vs. carcinogenic, solid vs. liquid, leukemia vs. lymphoma…).
1.1.2	• Indicate the prevention and management of chemotherapeutic induced adverse drug reactions.
1.1.3	• Assess the patients' laboratory tests, staging, and factors that indicate the best prevention and treatment modalities.

	• Recognize the various screening methods for several cancer types.
1.1.4	• Distinguish the main treatment modalities of cancer (surgery, radiation and systemic therapy) including their mechanisms of action, role, and use at various stages of the disease process. • Develop prevention and management strategies for common hematological, gastrointestinal, and organ toxicities induced by anticancer treatments, as well as for oncological emergencies.
1.1.6	Identify the appropriate oncological interventions and treatment modalities including neoadjuvant, adjuvant and palliative treatment.

Domain 2: Pharmaceutical Care

PLO	ILOs
2.1.2	• Recognize the importance of the different drug-drug, drug-disease and drug-food interactions that may affect therapeutic decisions among cancer patients, along with chemotherapeutic induced adverse drug reactions.
2.2.2	• Calculate accurately the doses of chemotherapeutic drugs (i.e. based on body surface area or weight). • Calculate accurately the doses of opiates and opioid analogs for pain management.

Domain 3: Essentials for Practice and Care

PLO	ILOs
3.1.1	• Interpret relevant cancer patients' history and their clinical and laboratory findings.
3.1.2	• Select the appropriate management based on the patients' disease stage, cumulative chemotherapeutic dose, and previous diseases or manifestations.
3.1.3	• Develop a patient-specific treatment plan including nonpharmacological measures, pain management, supportive and antineoplastic therapies.
3.1.5	• Interpret various diagnostic, prognostic, patient and disease related factors to propose the most effective therapeutic options for cancer patients. • Develop prevention and management strategies for chemotherapeutic induced adverse drug reactions including hematological, gastrointestinal, and other organs. • State and justify antiemetic regimens for high, moderate, low and minimal ematogenic regimens.

Domain 4: Approach to Practice and Care

PLO	ILOs
4.1.1	• Identify the primary oncological problem and accordingly define the appropriate treatment goals.

4.1.2	• Explore the various modalities and regimens available for the management of different cancer types and associated toxicities.

TEACHING AND ASSESSMENT METHODS:

ILOs	Learning Methods	Assessment Methods
1.1.1, 1.1.2, 1.1.3, 1.1.4, 1.1.6, 2.1.2, 2.2.2	• Lectures as PowerPoint presentations	• Exams I, II, and Final (MCQ's)
3.1.1, 3.1.2, 3.1.3, 3.1.5, 4.1.1, 4.1.2,	• Lectures as PowerPoint presentations • Case Discussions • Mind mapping assignment	• Exams I, II, and Final (MCQ's) • Graded rubric for mind mapping project

ATTENDANCE REGULATIONS:

Attendance is obligatory.

o You cannot miss more than 1/3 of the course time (even if eligible excuses), otherwise you will be automatically receiving an AW (Academic Withdraw). (A maximum of 2 weeks of absenteeism is allowed ! (10 Hours)

o A student who wishes to stop attending must withdraw from the course to avoid an F from being posted at the end of the semester.

o No students are allowed to enter the class if they are being late for more than 5 minutes.

o Cell phones are strictly prohibited from being used during classroom time. Should a mobile ring, you will receive a warning and you will be asked to turn off the phone immediately. Moreover, under no circumstances you are not allowed to leave class to answer a phone call.

CHEATING REGULATIONS:

1. The following items are not allowed to be accessed during the exam: cell phones, other electronic or digital devices including smart watches, pagers, photographic devices, and recording devices. Any watches must be placed on the top of the desk for proctor review.
2. Cheating in any way or form will not be tolerated during exams and will be considered as evidence of academic dishonesty. **Students will be referred to the academic integrity committee and an F will be posted on the exam.**
3. Plagiarism: It is unacceptable to copy and pass off as one's own the ideas or words of another without properly crediting the source. Turnitin, the university's

designated plagiarism checker, may be used on any submitted written work. Instances of inappropriate or unacceptable academic behavior will be treated on a case by case basis with the consequences ranging from no credit on the assignment for those involved to automatic failure of or removal from the course. In addition, university administration may be notified.

4. Exams will be conducted on campus in a computerized format

CLASS RECORDINGS:

1. Photography, audio-visual recording, and transmission/distribution of classroom lectures and discussions **are prohibited**. Previous lectures recordings should not be reproduced, shared, or uploaded to publicly accessible web environments.
2. **Students who do not adhere to this policy will be considered to be breaching SOP copyrights and will be referred to the academic integrity committee.**

MAKE-UP EXAMS:

- Makeup exams are not allowed and attending exams is obligatory.
- Make up exams are ONLY allowed in cases of:
    a. Death of a first degree relative ONLY
    b. Hospitalization with a valid hospital medical report: only hospital records are allowed.

Assignments

Mind Mapping Assignment:

Students will be provided with a list of oncological and hematological topics to design a mind mapping focused on the best treatment approach and individualization of patient therapy. The mind mapping should also include the disease treatment complications along with prevention of major toxicities. Students will be using http://www.coggle.com/ and submit their group work assignments through google classroom.

Group Work Discussion:

At the end of each chapter, students will be encouraged to participate in case discussions. During case discussions, students will be provided with different patient cases. Students will learn how to individualize patient therapy, prevent disease and treatment complications. Patient's treatment plan shall include the major treatments, doses and frequency of administration. Students will be also asked to design a follow up plan for each patient case.

Case studies Guideline:

1. During the case discussion, each group will be provided with a case. A total of 10-15 minutes will be given to prepare the case. The instructors will asses the

preparedness of the students while they are discussing the case (check the grading rubric attached)

2. Each group will select a group representative to discuss the case. The instructors might refer to any other student within the assigned group to answer the question as well.
3. The instructor will grade the students (according to the attached grading rubric)
4. Please note that all students should follow the group distribution. Students will not be allowed to attend from other section or change the assigned group.
   The aim for this activity is to help students to work within a team. Within this activity students scored on average or below average for exam one will have the chance to work with students scored very good or excellent.

GRADE DISTRIBUTION AND EXAM SCHEDULE:

Exam	Date	Time	Grade distribution
Midterm	Saturday December 10th	11:30-12:45	40%
Min Mapping Assignment	Week 15	Submitted on google classroom	5 %
Final Exam	Set by the university	TBA	55 %

COURSE OUTLINE:

Week	Lecture number	Topic's details	Exams	Activities	ILOs covered
1	1	Syllabus &Principles of cancer treatment	**Midterm Material**	**Case Studies**	**1.1.1, 1.1.2, 1.1.3, 1.1.4, 1.1.6, 2.1.2, 2.2.2**
2	2, 3	Prevention and treatment of chemotherapy related ADR	**Midterm Material**	**Case Studies**	
3	3, 4	Prevention and treatment of chemotherapy related ADR	**Midterm Material**	**Case Studies**	**1.1.1, 1.1.2, 1.1.3, 1.1.4, 1.1.6, 2.1.2,**

4	4, 5	Prevention and treatment of chemotherapy related ADR Antiemetic Treatment	**Midterm Material**	**Case Studies**	**2.2.2, 3.1.1, 3.1.2, 3.1.3, 3.1.5, 4.1.1, 4.1.2**
5	6	Antiemetic treatment	**Midterm Material**	**Case Studies**	
6	7	Pain Management	**Midterm Material**	**Case Studies**	
7	8	Oncological Emergencies Colon Cancer	**Midterm Material**	**Case Studies**	
8	9	Colon Cancer	**Final Exam**	**Case Studies**	
9	10	Breast Cancer	**Final Exam**	**Case Studies**	
10	11	Prostate Cancer	**Final Exam**	**Case Studies**	
11	12	Lung Cancer	**Final Exam**	**Case Studies**	
12	13	Lung Cancer	**Final Exam**	**Case Studies**	
14	14	Leukemia	**Final Exam**	**Case Studies**	**1.1.1, 1.1.2, 1.1.3, 1.1.4, 1.1.6, 2.1.2, 2.2.2, 3.1.1, 3.1.2, 3.1.3, 3.1.5, 4.1.1, 4.1.2**
15	15	Lymphoma	**Final Exam**	**Case Studies** **Mind Mapping**	