Philadelphia University	PHILADELPHIA UNIVERSITY THE WAY TO THE FUTURE	**Approved Date: 23/10/2022**
Faculty: pharmacy		**Issue: 1**
Department:-		**Credit Hours:3**
Academic Year:2021/2022	**Course Syllabus**	**Bachler:**

Course Information

Course No.	Course Title	Prerequisite	
0510310	Pharmaceutics medicinal chemistry 2	Pharmaceutical Organic Chemistry-2 (0510210)	
Course Type		Class Time	Room No.
☐ University Requirement ■ Fuclty Requirement ■ Major Requirement ☐ Elective Compulsory			

Instructure Information

Name	Office No.	Phone No.	Office Hours	E-mail

Course Delivery Method

☐ Blended	☐ Online	■ Physical	
Learning Model			
Percentage	Synchronous	Asynchronous	Physical
			100%

Course Description

The course describes the structural properties, mechanism of action, structure activity relationships and toxicity of different class of drugs such as β-lactam antibiotics, sulfonamides, tetracyclines, aminoglycosides, quinolones, chloramphenicol, antiviral agents, antifungal agents, anti-tuberculosis agents with special emphasis on the pharmacokinetic and pharmacodynamic properties of these drugs.

Course Learning Outcome

Number	Outcome	Corresponding Program Outcomes	Corresponding Competencies
Knowledge			
K1	Studying different antibiotic classes according to their biological targets, pharmacological actions and chemical structures	K_P1	C1
K2	Building suitable structure activity relationships for the antibiotic to be studied in order to be able to apply the required chemical modifications to improve activity and overcome possible drug toxicity	K_P1	C1
K3	Recognize structural moieties essential for antibiotic target interactions and predict possible structural changes to improve binding	K_P1	C1
K4		K_P1	C1
K5		K_P6	C6
S1		S_P2	C8
S2	Demonstrate effective written and oral communication skills, especially the ability to transmit complex technical information in a clear and concise manner.	S_P6	C12

Learning Resources

Course Textbook	-An introduction to Medicinal Chemistry by Graham L. Patrick. fifth edition, Oxford, 2013.

	Foyes principle of medicinal chemistry by David H. Williams, Thomas L. Leuke, Williams O. Foye. Lippincott William and Wilkins. Seventh edition, 2013
Supporting References	-Wilson and Gisvolds text book of organic medicinal and pharmaceutical chemistry by John H. Black and John M. Beale, jr. Twelfth edition, Lippincott Williams and Wilkings 2011
Supporting Websites	www.scinecedirect.com, www.youtube.com
Teaching Environment	■ **Classroom** ☐ **laboratory** ☐ **Learning Platform** ☐ **Other**

Meetings and Subjects Time Table

Week	Topic	Learning Method*	Task	Learning Material
1	**Introduction to medicinal chemistry (II)**	Lecture problem solving based learning,	Case study	Vision and Mission of faculty of pharmacy Course syllabus Graham Patrick,
2	**Antibacterial agents (lactams)** **Penicillins**	Lecture		Graham Patrick,
3	**Antibacterial agents (lactams)** **Cephalosporins**	Lecture		Graham Patrick,
4	**Antibacterial agents (lactams)** Carbapenems Monobactams	Lecture	Quiz	Graham Patrick,
5	Antibacterial agents: B-lactamase inhibitors	Lecture	**Case study**	Graham Patrick, chapter 21
6	Antibacterial agents: Macrolides and chloramphenicol	Lecture	Quiz	Foys,
7	Antibacterial agents: Aminoglycosides	Lecture	**Midterm Exam**	Foys,
8	Antibacterial agents: Tetracyclines	Lecture	**Midterm Exam**	Wilson and Gisvold,
9	Antibacterial agents: Macrolides	Lecture	**Quiz**	Wilson and Gisvold,

10	Synthetic antibacterial agents Sulfonamides	Lecture		Wilson and Gisvold,
11	Synthetic antibacterial agents Quinolones	Lecture		Wilson and Gisvold, ,
12	Antifungal agents	Lecture		Wilson and Gisvold, ,
13-14	Antiviral agents	Lecture		Wilson and Gisvold, ,
15	Antimycobacterial agents	Lecture	Quiz	Wilson and Gisvold, ,
16	**Final Exam**			

*Includes: lecture, flipped Class, project based learning, problem solving based learning, collaboration learning.

Course Contributing to Learner Skill Development

Using Technology
Using Microsoft programs (word, power point), YouTube videos, Google and scientific websites, chemdraw and schrodenger software.
Communication Skills
Videos and home works discussion
Application of Concept Learnt

Assessment Methods and Grade Distribution

Assessment Methods	Grade	Assessment Time (Week No.)	Course Outcomes to be Assessed
Mid Term Exam	**% 30**	6 th	K(1, 2, 3, 7) and S (1&2)
Term Works*	**% 30**	Continuous	
Final Exam	**% 40**	16 th	All
Total	**%100**		

* Include: quizzes, in-class and out of class assignment, presentations, reports, Videotaped assignment, group or individual project.

Alignment of Course Outcomes with Learning and Assessment Methods

Number	Learning Outcomes	Corresponding Compatienes	Learning Method*	Assessment Method**
Knowledge				
K1	a. Studying different drug groups according to their biological targets, pharmacological actions and	C1	Lecture	Quizzes Exam

	chemical structures			
K2	Building suitable structure activity relationships for drugs to be studied in order to be able to apply the required chemical modifications to improve activity and overcome possible drug toxicity	C1	Lecture	Quizzes Exam
K3	Recognize structural moieties essential for drug target interactions and predict possible structural changes to improve binding	C1	Lecture	Quizzes Exam
K4	Demonstrate knowledge about drug chemical structure and pharmacophores	C1	Lecture	Quizzes Exam Group project
K5	Study the biological targets for drug groups to be studied at the molecular level to understand the possible binding mode and affinity, and how the drug will activate or inhibit its target at the molecular level.	C6	Lecture	Quizzes Exam
Skills				
S1	Identify building blocks in the drug structure responsible for activity and target binding Using information obtained from drug target interaction to predict the consequences of any structural modifications on pharmacological action	C8	problem solving based learning	Quizzes Exam
S2	Express ability to interpret data obtained by the team and make conclusions\ The open discussion during the lecture will strengthen the student's self confidence to ask and share his opinion and thoughts on a given subject	C12	collaboration learning.	Quizzes Exam

*Include: lecture, flipped class, project based learning, problem solving based learning, collaboration learning.
** Include: quizzes, in-class and out of class assignments, presentations, reports, videotaped assignments, group or individual projects.

Course Polices

Policy	Policy Requirements

Passing Grade	The minimum pass for the course is (50%) and the minimum final mark is (35%).
Missing Exams	• Anyone absent from a declared semester exam without a sick or compulsive excuse accepted by the dean of the college that proposes the course, a zero mark shall be placed on that exam and calculated in his final mark. • Anyone absent from a declared semester exam with a sick or compulsive excuse accepted by the dean of the college that proposes the course must submit proof of his excuse within a week from the date of the excuse's disappearance, and in this case, the subject teacher must hold a compensation exam for the student. • Anyone absent from a final exam with a sick excuse or a compulsive excuse accepted by the dean of the college that proposes the material must submit proof of his excuse within three days from the date of holding that exam.
Attendance	The student is not allowed to be absent more than (15%) of the total hours prescribed for the course, which equates to six lecture days (n t) and seven lectures (days). If the student misses more than (15%) of the total hours prescribed for the course without a satisfactory or compulsive excuse accepted by the dean of the faculty, he is prohibited from taking the final exam and his result in that subject is considered (zero), but if the absence is due to illness or a compulsive excuse accepted by the dean of the college that The article is introduced, it is considered withdrawn from that article, and the provisions of withdrawal shall apply to it.
Academic Integrity	Philadelphia University pays special attention to the issue of academic integrity, and the penalties stipulated in the university's instructions are applied to those who are proven to have committed an act that violates academic integrity, such as cheating, plagiarism (academic theft), collusion, intellectual property rights.

Program Learning Outcomes to be assessed in this Course

Number	Learning Outcome	Course Title	Assessment Method	Targeted Performance level

Description of Program learning Outcomes Assessment Method

Number	Detailed Description of Assessment

Assessment Rubric of the Program Learning Outcomes
