



Faculty: pharmacy

Department: Clinical pharmacy and pharmacy practice

Program: Bachelor of PharmD

Course Syllabus of Bachelor of PharmD



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First Year Courses

مقررات السنة الأولى

First Semester

الفصل الأول

1. Course Syllabus Islamic Culture

خطة مقر الثقافة الإسلامية

General information about the course					I. معلومات عامة عن المقرر:
الثقافة الإسلامية					1. اسم المقرر Course Title
BUSTO5					2. رمز المقرر ورقمه: Course Code and Number
المجموع Total	الساعات المعتمدة Credit Hours				3. الساعات المعتمدة للمقرر Credit Hours
	تدريب Training	عملي Practical	سمنار/تمارين Seminar/Tutorial	نظري Theoretical	
4	-	-	-	4	
حسب خطة كل برنامج					4. المستوى والفصل الدراسي: Level and Semester
لا يوجد					5. المتطلبات السابقة لدراسة المقرر (إن وجدت): Pre-requisites (if any)
لا يوجد					6. المتطلبات المصاحبة لدراسة المقرر (إن وجدت): Co-requisites (if any)
كل برامج الجامعة					7. البرنامج/ البرامج التي يتم فيها تدريس المقرر: Program in which the course is offered
اللغة العربية					8. لغة تدريس المقرر Teaching Language
قاعات الجامعة					9. مكان تدريس المقرر Instruction location:

Course Description	II. وصف المقرر الدراسي:
<p>يعد مقرر الثقافة الإسلامية من أهم المقررات الدراسية وذلك للدور الذي يساهم فيه هذا المقرر في تكوين الشخصية المسلمة القادرة على قراءة ماضيها وفهم واقعها والإسهام الإيجابي في بناء المستقبل بناءً يوافق شرع الله ويلبي احتياجات العصر من غير إفراط ولا تفريط (بوسيطية).</p> <p>ويتم أخذ هذا المقرر بطريقة الحوار والمناقشة، كما يكلف فيه الطلبة بالبحوث التي تخدم أهداف المقرر.</p> <p>ويتم تقييم الطلبة عن طريق المشاركة الصفية واللاصفية والأعمال التي يكلف بها الطلبة والاختبارات النصفية والنهائية.</p>	



Course Aims	III. أهداف المقرر :
	<p>1. إدراك عظمة الإسلام وشموليته وصلاحيته لكل زمان ومكان.</p> <p>2. المساهمة في صياغة الشخصية المسلمة الوسطية.</p> <p>3. تعميق الانتماء إلى الإسلام والاعتزاز به وتبنيه منهجاً للحياة.</p> <p>4. تمكين الطالب من التعامل مع قضايا العصر من منظور إسلامي.</p> <p>5. التعرف على العديد من مشكلات الشباب وحلولها.</p> <p>6. إدراك مكانة المرأة في الإسلام ودورها في الحياة.</p>

Course Intended Learning Outcomes (CILOs)	IV. مخرجات التعلم المقصودة للمقرر :
After completing this course, would be able to:	بعد الانتهاء من هذا المقرر سيكون الطالب قادراً على:
	أن يعدد الطالب خصائص الثقافة الإسلامية.
	أن يعدد الطالب النظم الإسلامية.
	أن يميز الطالب بين الثقافة (عامة) والثقافة الإسلامية (خاصة)
	أن يصنف الطالب الشبه التي تثار ضد الإسلام في شأن المرأة.
	أن يفند الطالب الإخفاقات التي وقعت فيها الثقافات الوضعية.
	أن يرد الطالب على الشبه الموجهة ضد الإسلام.
	أن يلتزم الطالب بالأخلاق الإسلامية.
	أن يظهر الطالب اعتزازه بقيم الإسلام.

Course Contents					V. محتوى المقرر :
					الجانب النظري: Theoretical Aspect
الرقم No.	وحدات المقرر Course Units	المواضيع التفصيلية Sub-topics	الأسبوع Week due	الساعات الفعلية Contact Hours	
1	مدخل لدراسة الثقافة الإسلامية	-تمهيد. -مفهوم الثقافة وأهم مصادرها وخصائصها	1 st	4	
2	لمحات من عصر الرسالة	-لمحات عن حياة النبي	2 nd	4	
3	النظم الإسلامية	-مفهوم النظم الإسلامية. -النظام التشريعي. -النظام الأخلاقي. -النظام الاجتماعي.	3 ^{ed}	4	
4	إسهامات المسلمين في الحضارة الإسلامية	-معنى الحضارة وأسسها. -لمحة عن أثر الحضارة الإسلامية في الإنسانية. -إسهامات علماء المسلمين	4 th	4	
5	تحديات معاصرة تواجه المجتمع المسلم	-التحديات الداخلية. -التحديات الخارجية.	5 th	4	
6	قضايا سياسية	-الخلافة وقضية فلسطين والأقليات. -الإرهاب والتطرف والجهاد.	6 th	4	
7	قضايا اجتماعية	-قضايا المرأة.	7 th	4	



		-قضايا متفرقة.		
4	8 th	استعراض تكاليف الطلبة وتقويمها	مناقشة تكاليف	8
4	9 th	-الاختبار. -حل الاختبار	الاختبار النصفي	9
4	10 th	-الربا، المصارف الإسلامية. -التأمين. -الأسواق المالية. -هجرة رؤوس الأموال الإسلامية. -ظاهرة غسيل الأموال.	قضايا اقتصادية	10
4	11 th	-مفهوم الشباب وأهمية المرحلة. -الفراغ وأفة البطالة.	الشباب ومشكلاته	11
4	12 th	-الصحة وأثارها. -الإسلام والجنس.	الشباب ومشكلاته	12
4	13 th	-المحافظة على البيئة والسلامة المهنية. -أحكام عمليات التجميل. -الإجهاد.	قضايا معاصرة	13
4	14 th	-زراعة الأعضاء ونقلها والتبرع بها. -الخلايا الجذعية، والاستنساخ. -أخلاقية المهنة.	قضايا معاصرة	14
4	15 th		استكمال مناقشة التكاليف	15
4	16 th		الاختبار النهائي	16
64	16	Total number of weeks and hours إجمالي عدد الأسابيع والساعات		

Teaching Strategies	VI. استراتيجيات التدريس
	1- المحاضرات والإلقاء.
	2- الحوار والمناقشة.
	3- حل المشكلات.
	4- التعلم التعاوني.
	5- الاستنباط والاستقراء.
	6- العصف الذهني.

VII. الأنشطة والتكليفات: Tasks and Assignments			
الرقم	النشاط/ التكليف	الأسبوع	الدرجة
No.	Task/Assignment	Week due	Mark
1.	تكليف بالبحوث	6 th +5+4+3+2	%10
2.	مناقشة البحوث	&8 15 th	%10



Learning Assessment				VIII. تقييم التعلم :
الوزن النسبي (نسبة الدرجة إلى درجة التقييم النهائي) Weight	الدرجة Mark	موعد التقييم/ اليوم والتاريخ Assessment day & date	أنشطة التقييم Assessment Tasks	الرقم No.
20%	20	الأسبوع 8+15	البحوث	1.
20%	20	الأسبوع 9	الاختبار النصفى	2.
60%	60	الأسبوع 16	الاختبار النهائي	3.
100%	100	المجموع Total		

Learning Resources		IX. مصادر التعلم:
1. المراجع الرئيسية: Textbooks		• غالب القرشي، وآخرون (2012 – 2013م)، الثقافة الإسلامية، جامعة العلوم والتكنولوجيا – اليمن.
2. المراجع المساعدة (لا تقل عن أربعة): Essential References		1. عبد الوهاب الديلمي، وآخرون (1994م)، الثقافة الإسلامية، الطبعة الخامسة، دار الفكر المعاصر - بيروت. 2. محمد الألباني (2000م)، الرد المفحم على من خالف العلماء...، المكتبة الإسلامية – عمان. 3. يوسف القرضاوي (2001م)، الصحوة الإسلامية بين الاختلاف المشروع والتفرق المذموم، دار الشروق - (د.م). 4. صالح هندي وآخرون (2000م)، الثقافة الإسلامية، الطبعة الثانية، دار الفكر – عمان.
3. مواد إلكترونية وإنترنت: (إن وجدت): Electronic Materials and Web Sites		1- عروض باور بوينت. 2- المكتبة الشاملة.

X. الضوابط والسياسات المتبعة في المقرر		
Course Policies		
1.	الحضور والغياب Class Attendance : : تحدد سياسة الحضور ومتى يعتمد الغياب وكيفية ونسبته، ومتى يعد الطالب محروماً من المقرر	
2.	الحضور المتأخر Tardy : يتم تحديد السياسة المتبعة في حالات تكرار تأخر الطالب عن حضور الفعاليات التعليمية	
3.	ضوابط الاختبارات والامتحانات Exam Attendance/Punctuality : تحديد السياسات المتبعة في حالات الغياب عن الامتحان و توصيف السياسة المتبعة في حالات تأخر الطالب عن الامتحان، وكذلك السياسات المتبعة في حالة إعادة الامتحان في الظروف المقبولة.	
4.	التكليفات / المهام والمشاريع Assignments & Projects : تحديد السياسات المتبعة في حالات تأخير تسليم التكليف والمشاريع ومتى يجب أن تسلم إلى الأستاذ.	



5.	الغش Cheating: تحدد هنا السياسات المتبعة في حالات الغش إما في الامتحانات أو في التكاليف بأي طريقة من طرائق الغش.
6.	الانتحال (Plagiarism): يحدد تعريف الانتحال وحالاته والإجراءات المتبعة في حالة حدوثه.
7.	سياسات أخرى (Other policies): أي سياسات أخرى مثل استخدام الموبايل أو مواعيد تسليم التكاليفات الخ

2. Course Syllabus English Language 1

خطة مقرر اللغة الإنجليزية 1

I. General information about the course:					
1.	Course Title :	English (1)			
2.	Course Code and Number :	BUST02			
3.	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		-	-	8	-
4.	Study Level and Semester:	First year- first Semester			
5.	Pre-requisites (if any):	None			
6.	Co-requisites (if any):	Short stories + SRAs (Short Reading Activities)			
7.	Program in which the course is offered:	All programs in university			
8.	Teaching Language:	English			
9.	Instruction location:	ILC Main building and Girls branch			

II. Course Description

- The current course provides students with the language basics of everyday English to help them communicate in different real life situations. The course focuses more on real life conversations and the basic grammars that will help each one in his major.
- Moreover the course provides students with plenty of writing and speaking practices. The updates of the book allow students to be posted with the latest language uses and functions that are easy and useable in real life situations.

III. Course Aims:

- For students undertaking this course, the aims are to:
- Introduce students to important concepts and basics in English language.
- Knowledge of the basic vocabularies and phrases used by native speakers in everyday conversation.
- Help students to apply the rules and grammars in the book, every students in his major, to present academic presentation and write their assignment reports.
- Improve the pronunciation of the students in order to get clearer and more understandable.



IV. Course Intended Learning Outcomes (CILOs) :

For students undertaking this course, students at the end of this course will be able to:

1. understand familiar words and very basic phrases about oneself, family and immediate surroundings when people speak slowly and clearly and repeat.
2. use simple phrases and sentences to describe where someone lives and about people he/she knows.
3. ask and answer simple questions on very familiar topics.
4. understand familiar names, words and very simple sentences, for example on notices and posters or in catalogues.
5. write a short, simple postcard, for example holiday postcards. Fill in forms with personal details, for example entering your name, nationality and address on a hotel registration form.
6. simply describe his/her family and other people, living conditions, his/her educational background and his/her present or most recent job.

V. Course topics :

Topics/Units of Course Contents

Theoretical Aspects

No.	Course Topics/Units	Sub-topics	Week due	Contact Hours	
1	Personal Information	<ul style="list-style-type: none"> Alphabets Personal information Numbers Names, area codes, countries, and phone numbers. 	1	8	
2	At School	<ul style="list-style-type: none"> Days and dates Classroom directions. Months classroom objects and furniture 	1	8	
3	Friends and Family	<ul style="list-style-type: none"> location. Countries and nationalities. 	1	8	
4	Health	<ul style="list-style-type: none"> health problems. Simple present tense Affirmative sentences of all tenses 	1	8	



5	Daily Life	<ul style="list-style-type: none"> Negative sentences of all tenses. Interrogative. People's activities. 	1	8	
6	Home Responsibilities	<ul style="list-style-type: none"> Asking about family relations Family chores Talking about likes and dislikes 	1	8	
7	Free Time	<ul style="list-style-type: none"> Buildings in the city. House chores. Leisure activities. 	1	8	
8	Do you like mornings?	<ul style="list-style-type: none"> Talking about special Occasions like "birthdays". One's routine 	1	8	
9	It changed my life	<ul style="list-style-type: none"> Describing events. 	1	8	
10	Trip of a life time	<ul style="list-style-type: none"> appointments. Asking and answering about time and dates. 	1	8	
11	Today is Different	<ul style="list-style-type: none"> Daily life activities. Possessive adjectives and Possessive s. 	1	8	
12	Small Things	<ul style="list-style-type: none"> Rooms in the house Places in the city Colors and common adjectives 	1	8	
13	Food and Drinks	<ul style="list-style-type: none"> Common adjectives Common verbs and nouns. Food and drink 	1	8	
14	-	Final exam	1	8	
Total number of weeks and hours			14	112 contact hours 56 credit hours	

VI. Teaching Strategies



1- Lectures 2- Games 3- Pair work 4- micro- assignments 5- Brainstorming session 6- Problem solving and language puzzles. 7- Group work	8- Presentations 9- Discussions 10- Debates 11- Competitions
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VII. Tasks and Assignments :

No.	Task/Assignment	Week due	Mark
1.	micro- assignments (1)	1,2,3,4,	2
2.	micro- assignments (2)	1,2,3,4	2
3.	Workbook	1,2,3,4,5	6

VIII. Learning Assessment:

No.	Assessment Tasks	Week due	Mark	Weight
1	Homework/Tasks/Assignments	2 ,3 ,4 , 5	10	10%
2	Quiz 1	2	5	5%
3	Story quiz 1	2	15	7.5%
4	Quiz 2	4	5	5%
5	Story quiz 2	4	15	7.5%
6	Oral skills	1,2,3,4,5	10	10%
7	Participation	1,2,3,4,5	10	10%
8	Writing assignments	1,2,3,4,5	15	15%
9	Final exam	5	100	30%
Total			100	100%

IX. Learning Resources.

Textbooks

1. Oxenden Clive, Koenig Latham, & Boyle Mike,(2013) American English File Starter. Oxford, University Press.
2. Grechen Bitterlin, Johanson Dennis, price Donna & Ramirez Sylvia,(2008)Ventures Basic, Cambridge University press.



Essential References: (short stories)

1. Rabley Stephen, (1998) The Fire Boy, Pearson Education Limited.
2. Bronte Charlotte, (1992) Jane Eyre. Longman Group UK Limited.
3. Thompson Lesley, (2006) The Real McCoy & Other Ghost Stories, Oxford university Press.

1. <http://education.cambridge.org/mena/learning-stage/teacher>

2. https://elt.oup.com/learning_resources/?cc=global&sellLanguage=en&mode=hub

X. Course Policies :

Based on university regulations, the following aspects should be figured out:

1.	(Class Attendance) : <ul style="list-style-type: none"> Students are required to attend all class lectures. A Student is dismissed from the course if she/he exceeds the maximum number of absences (10 hours with or without an excuse)
2.	(Tardy) : <ul style="list-style-type: none"> Attendance will be taken every lecture at the first 10 minutes and any student come after that will be considered absent.
3.	(Exam Attendance/Punctuality) : <ul style="list-style-type: none"> Student should be in the examination hall before 15 minutes from the beginning of the exam. Late students are not allowed to get into the examination hall after the first 30 minutes and will be considered absent. Makeup exams will be offered to students who miss a scheduled exam because of illness, death in the family or university-sponsored activity, but written documentation must be provided. A Student should present their IDs in the exam hall otherwise he/she is not allowed to take the exam.
4.	(Assignments & Projects) : <ul style="list-style-type: none"> All assignments must be done on their time. Late assignments will not be accepted. Projects are assumed to be submitted on or before the dead-lines. Teachers have to check students' workbooks regularly.
5.	(Cheating) : <ul style="list-style-type: none"> Cheating is strictly prohibited behavior. ILC regulations will be pursued and enforced on any cheating student.
6.	(Plagiarism) : <ul style="list-style-type: none"> Plagiarism is defined as "copying or stealing someone else's words or ideas and claiming or presenting them as if they were your own." ILC regulations will be pursued and enforced on any plagiarism attempt.
7.	(Other policies) : <ul style="list-style-type: none"> Students in class are required to turn off all cell phones, iPods, Students are not allowed to eat or drink inside the building of ILC. Teachers are not allowed to accept any student who are not in their class list.



3. Course Syllabus Communication Skills

خطة مقرر مهارات الاتصال

I. معلومات عامة عن المقرر:				
1.	اسم المقرر:	مهارات الاتصال		
2.	رمز المقرر ورقمه:	BUST07		
3.	الساعات المعتمدة للمقرر:	الساعات المعتمدة		
		نظري	سمنار/تمارين	عملي
		1	-	-
4.	المستوى والفصل الدراسي:	حسب خطة كل برنامج		
5.	المتطلبات السابقة للمقرر (إن وجدت):	لا يوجد		
6.	المتطلبات المصاحبة للمقرر (إن وجدت):	لا يوجد		
7.	البرنامج/ البرامج التي يتم فيها تدريس المقرر:	كل برامج الجامعة		
8.	لغة تدريس المقرر:	اللغة العربية		
9.	مكان تدريس المقرر:	قاعات الجامعة		

II. وصف المقرر الدراسي:
يهدف مهارات الاتصال إلى إلمام الطالب بالنظريات والمفاهيم الأساسية في مجال الاتصال الإنساني، وتنمية المهارات الأساسية في مجال التواصل الجيد مع الذات ومع الآخرين، وتعزيز ممارستها في حياته اليومية والعملية باستخدام أساليب جديّة تعتمد على التدريب والتقييم المتنوع والفعال، بما يساهم في إنجاح حياته الخاصة والعملية على حد سواء.
III. أهداف المقرر:
يهدف مقرر مهارات الاتصال إلى :
1. فهم العمليات الأساسية في الاتصال الإنساني
2. التعرف على آليات الإدراك الذهني ومفهوم الذات والعلاقة بينهما
3. تنمية مهارات الاتصال الكلامي وغير الكلامي لدى الطلاب.
4. تطوير وتحسين مهارة الاستماع الفعال لدى الطلاب.
5. إكساب الطلاب المهارات اللازمة للاتصال الشخصي مع الآخرين
6. تحسين قدرة الطلاب على فهم المبادئ الأساسية للاتصال في المجموعات الصغيرة.
7. إكساب الطلاب مهارة كتابة السيرة الذاتية والرسائل والتقارير الإدارية وفق القواعد الصحيحة

IV. مخرجات التعلم المقصودة للمقرر:
1. يعرف مفاهيم أنواع الاتصال وأشكاله ومهاراته.
2. يوضح العلاقة بين مهارات الاتصال وأشكالها وأنواعها.
3. يشرح كيفية ممارسة مهارات الاتصال المتعددة.
4. يفرق بين مهارات الاتصال وأشكالها ووظائفها.
5. يوظف مهارات الاتصال مع ذاته وعند تواصله مع الآخرين.
6. يطبق مهارات الاتصال الكتابي والشفوي عند عرضه أمام زملائه.
7. يعبر عن ذاته ويتحدث بطلاقة عند تواصله مع الآخرين.
8. يمارس مهارات الاتصال وقواعده في حياته العملية



V. محتوى المقرر:				
الجانب النظري:				
الرقم	وحدات المقرر	المواضيع التفصيلية	الأسبوع	الساعات الفعلية
1	مدخل إلى الاتصال الإنساني	تعريف الاتصال عناصر عملية الاتصال أنواع الاتصال نماذج الاتصال وظائف الاتصال خصائص وكفاءة الاتصال بعض المفاهيم الخاطئة عن الاتصال.	1، 2	2
2	التواصل مع الذات	مفهوم الإدراك الذهني تعريف الذات. كيف يكون الإدراك الذهني ؟ أنواع الذات طرق تحسين مفهوم الذات.	3	1
3	الاتصال الكلامي	تعريف الاتصال الكلامي. أهمية تنوع الاتصال الكلامي. عناصر اللغة وأغراض استخدام الكلمات. معوقات الاتصال الكلامي. طرق تحسين الاتصال الكلامي.	4	1
4	الاتصال غير الكلامي	تعريف الاتصال غير الكلامي. أهمية الاتصال غير الكلامي. سمات وخصائص الاتصال غير الكلامي. العلاقة بين الاتصال الكلامي وغير الكلامي. أنواع الاتصال غير الكلامي. طرق تحسين الاتصال غير الكلامي.	5	1
5	مهارة الاستماع	تعريف مهارة الاستماع. أهمية مهارة الاستماع في عملية التواصل. الفرق بين السماع والاستماع. مراحل عملية الاستماع. عوائق الاستماع الفعال. الاستماع الناقد والتفكير الناقد. مهارات الاستماع النشط.	6	1
6	الاتصال الشخصي (مع الآخر)	تعريف الاتصال الشخصي. فوائد الاتصال الشخصي. الصفات الأساسية للاتصال الشخصي. بناء العلاقات الإنسانية. أسباب إنشاء العلاقات الشخصية مع الآخرين. مراحل تطور العلاقة الشخصية مع الآخرين.	7، 8	2



		مهارات بناء العلاقات مع الآخرين. الإفصاح عن الذات. لمن نفصح عن ذواتنا. قواعد الإفصاح عن الذات.		
1	9	تعريف الاتصال في المجموعات الصغيرة. أنواع المجموعات الصغيرة. أهداف وأخلاقيات العمل في المجموعات الصغيرة. خصائص المجموعات الصغيرة. مهارات بناء الفريق وحل الخلافات داخل الفريق. أساليب حل المشكلات واتخاذ القرار	الاتصال في المجموعات الصغيرة	7
1	10	تعريف الاتصال مع الجمهور طبيعة الاتصال مع الجمهور. أهمية العرض والإلقاء مع الجمهور. مقومات العرض الجيد . مهارات العرض والإلقاء .	الاتصال مع الجمهور	8
2	12 ، 11	تعريف السيرة الذاتية. محتويات السيرة الذاتية. أخطاء السيرة الذاتية. تعريف المقابلة الشخصية. الاستعدادات الضرورية للمقابلة الشخصية.	التعبير عن الذات	9
2	14 ، 13	تعريف الرسائل الإدارية. أنواع الكتابة الإدارية. يبين أهمية إعداد الرسائل في الأعمال الإدارية. أنواع المراسلات. كيفية إعداد الرسالة من حيث شكلها وموصفاتها. تعريف التقارير. الفرق بين ماهية الرسالة والتقارير. أنواع التقارير. وظائف التقارير. خصائص التقرير الجيد. خطوات إعداد التقارير.	إعداد وكتابة الرسائل والتقارير	10
14	14	إجمالي عدد الأسابيع والساعات		

الجانب العملي / تمارين / سريري:

كتابة تجارب (مواضيع / مهام) النشاط العملي/ تمارين / سريري

الرقم	المهام / التجارب العملية/ تمارين/ سريري	عدد الأسابيع	الساعات الفعلية
1.	تقديم عرض شفوي	1	1
2.	كتابة السيرة الذاتية	1	1



1	1	كتابة رسالة إدارية	3.
1	1	إعداد تقرير إداري	4.
4	4	إجمالي عدد الأسابيع والساعات	

VI. استراتيجيات التدريس	
المحاضرات	
العروض التدريبية التقديمية	
الصور المعبرة والرسومات والأشكال التعبيرية	
الأفلام والفيديوهات التعليمية	
جلسات مناقشة وورش العمل ودراسات الحالة	
أنشطة فصلية	
التدريب التعاوني	
المهام والتكاليف	

VII. الأنشطة والتكاليف:			
الرقم	النشاط/ التكاليف	الأسبوع	الدرجة
1.	تقديم عرض شفوي	10	5
2.	كتابة السيرة الذاتية	11	5
3.	كتابة رسالة إدارية	13	5
4	إعداد تقرير إداري	14	5

VIII. تقييم التعلم:				
الرقم	موضوعات التقييم	موعد التقييم/ اليوم والتاريخ	الدرجة	الوزن النسبي (نسبة الدرجة إلى درجة التقييم النهائي)
1.	الواجبات / الأنشطة / التكاليف Homework/Tasks/Assignments	10، 11، 13، 14	20	20%
2.	اختبار منتصف الفصل Midterm Exam	8	20	20%
3.	الاختبار النهائي Final Exam	حسب التقييم الجامعي	60	60%
	المجموع		100	100%

IX. مصادر التعلم:	
المراجع الرئيسية:	
1. (د.محمد سرحان علي المحمودي، (2014م) ،مهارات الاتصال، الأولى ، اليمن)	



المراجع المساعدة (لا تقل عن أربعة):

1. مهارات الاتصال، (2012م)، الجامعة السعودية الالكترونية، الطبعة الأولى
2. د/جمعان سعيد القحطاني، (2009م)، مهارات الاتصال، السنة التحضيرية، جامعة الملك سعود
3. د/ طارق السويدي، (1429هـ)، فن الإلقاء الرائع، شركة الإبداع للنشر والتوزيع، الكويت
4. د/ سعد بن بركي حمدي المسعودي، (2007م)، مهارات الاتصال، الطبعة الأولى، جامعة الملك عبد العزيز، المملكة العربية السعودية.
5. جامعة الملك سعود، فريق تحسين الأداء، (2009م)، مهارات الاتصال 140 علم

مواد إلكترونية وإنترنت: (إن وجدت)
فيلم رقصة النجاح

XI. الضوابط والسياسات المتبعة في المقرر

Course Policies

1.	الحضور والغياب Class Attendance: : تحدد سياسة الحضور ومتى يعتمد الغياب وكيفيته ونسبته، ومتى يعد الطالب محروماً من المقرر
2.	الحضور المتأخر Tardy : يتم تحديد السياسة المتبعة في حالات تكرار تأخر الطالب عن حضور الفعاليات التعليمية
3.	ضوابط الاختبارات والامتحانات Exam Attendance/Punctuality: تحديد السياسات المتبعة في حالات الغياب عن الامتحان و توصيف السياسة المتبعة في حالات تأخر الطالب عن الامتحان، وكذلك السياسات المتبعة في حالة إعادة الامتحان في الظروف المقبولة.
4.	التكاليفات / المهام والمشاريع Assignments & Projects: تحديد السياسات المتبعة في حالات تأخير تسليم التكاليف والمشاريع ومتى يجب أن تسلم إلى الأستاذ.
5.	الغش Cheating: تحدد هنا السياسات المتبعة في حالات الغش إما في الامتحانات أو في التكاليف بأي طريقة من طرائق الغش.
6.	الانتحال (Plagiarism): يحدد تعريف الانتحال وحالاته والإجراءات المتبعة في حالة حدوثه.
7.	سياسات أخرى (Other policies): أي سياسات أخرى مثل استخدام الموبايل أو مواعيد تسليم التكاليفات الخ

4.Course Syllabus Biology 1

خطة مقرر أحياء 1

I. General information about the course:					
1	Course Title :	Biology 1			
2	Course Code and Number :	PHF110			
3	Credit Hours :	Credit Hours			
		Theoretic al	Seminar/Tutorial	Practical	Training
		2	-	1	-
4	Study Level and Semester:	First year- first Semester			
5	Pre-requisites (if any):	Non			
6	Co-requisites (if any):	Non			



7	Program in which the course is offered:	Bachelor of Pharmacy & Bachelor of PharmD
8	Teaching Language:	English
9	Instruction location:	

II. Course Description

This course is important since it provides a brief differences between living and non-living organisms. The topics will cover the cell structure, cell function, cell division including enzymes and material transport. The teaching will include lectures, discussion and assignment. There will be no pre-requisite course needed.

III. Course Aims:

This course aims to:

1. This will deal with the function and chemical composition of macromolecules like carbohydrates, lipids, proteins and nucleic acids.
2. To distinguish the level of organization and function of organelles.
3. To study the enzymes and material transport in and outside the cell.
4. Explain the cell reproduction of mitosis and meiosis emphasizing on their significance to organism breeding.

IV. Course Intended Learning Outcomes (CILOs) :

1. Identify between prokaryote and eukaryote cells.
2. Describe the properties of macromolecules and enzymes.
3. Developed throughout the program by distinguishing between cells , macromolecules and enzymes
4. Demonstrate proper handling of microscope to view the cells, and using chemicals safely.
5. Administer how to analyze the component pf macromolecules.
6. Evaluate the results obtained in the laboratory and compare them with published results
7. Negotiate effectively as a part team work.

V. Course topics and sub-topics (theoretical and practical) with contact hours

No.	Course Topics/Units	Sub-topics	Week due	Contact Hours
1	Introduction	History of evolution	2	1
2	Macromolecules	carbohydrates , lipids , proteins and nucleic aid	3	4
3	Cells	prokaryotes , eukaryotes , cell organelles	2	4
4	Midterm exam.		1	1
5	Transport	active , passive , and bulky	3	4



6	Enzymes	properties , function and composition	2	4
7	Cell division	mitosis and meiosis in animal cell	2	4
8	Final exam.		1	2
Total number of weeks and hours			16	24

Second: Practical/Tutorial/Clinical Aspects :

Write up practical/tutorial/clinical topics

No.	Practical/Tutorial/Clinical topics	Week due	Contact Hours
1	Introduction	2	2
2	Macromolecules	3	4
3	Cells and tissues	2	4
4	Transport	2	4
5	Mid - term exam	1	2
6	Enzyme and Cell division	2	4
7	Animal kingdom	2	4
Total number of weeks and hours		12	24

VI. Teaching Strategies

- 1.Power Point.
- 2.Over head Projector.
- 3.White Board.

VII. Tasks and Assignments

No.	Task/Assignment	Week due	Mark
1	Midterm	8	20%
2	Assignments	10	10%
3	practical	12	30%
4	Final test	16	40%
Total		20	100%

VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	First Test	3 week	10	10%



2	Second Test	6 week	30	30%
3	Midterm Exam	8 week	20	20%
4	Final Exam	12 week	40	40%
	Total		100	100%

IX. Learning Resources

(Author, (Year), Book Title, Edition, Publisher, Country of publishing)

Textbooks-not more than 2

1. Sylvia /S.Mader 2012, Human Biology ,12th Edition (McGraw-Hill)N.Y.USA.
2. E.Solomon ,L.Berg , D.Martin 2008 Biology 8th edition(Thomson Brooks Cole , Belmont .U.S.A College Publishing)

References:

1. Bruce Albert, Alexander Johnson, Peter Walter (2008),Molecular biology of the cell, 5th edition, (Garland Science), New York. U.S.A.
2. Cecie Starr (1997), Basic concept in biology 3rd edition,(International Thomson Publishing Company), Belmont, U.S.A.
3. Shuaa Al-Yousufy (1994),Cell structure and function, (Qatar Publishing Library), Qatar.
4. Aish Zaytoon (1996), Human biology, (National Publishing Library), Jordan.

Electronic Materials and Web Sites

1. 1.Power Point Lectures for Biology , concepts and connections 6th edition by Campbell , Reece , Taylor , Simon and Dickey 2012.

X. Course Policies

1.	(Class Attendance): Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2.	(Tardy) :
3.	(Exam Attendance/Punctuality) : All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4.	(Assignments & Projects) :
5.	(Cheating) : Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.



6.	(Plagiarism) : “To plagiarize is to take ideas or words of another person & pass them off as one’s own”. Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7.	(Other policies) :

5.Course Syllabus Mathematics

خطة مقرر الرياضيات

I. General information about the course:					
1	Course Title :	Mathematics			
2	Course Code and Number :	PHF111			
3	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		2	2	-	-
4	Study Level and Semester:	First year- first Semester			
5	Pre-requisites (if any):	-			
6	Co-requisites (if any):	-			
7	Program in which the course is offered:	All Programs in Faculty			
8	Teaching Language:	English-Arabic			
9	Instruction location:				

II. Course Description

Course discusses the principle of Linear Equations and Applications , Linear Inequalities , Absolute Value in Equations and Inequalities , Quadratic Equations and Applications , Exponential Functions , Logarithmic Functions , Exponential and Logarithmic Equations, Functions ,type of Functions , limited and continuity .

III. Course Aims:

For students undertaking this course, the aims are to :

1. Knowledge of the basic concepts of principles of mathematics .
2. Raise the level of student understanding of the Cognitive skill .
3. Give the student the ability to employ principles of mathematics in practical life .

IV. Course Intended Learning Outcomes (CILOs) :

After completing this program, students would be able to:

1. Understand the principles of mathematics; Linear , Quadratic Equations and Inequalities



Power and Logarithm and it's Applications .

2. Recognize notions of functions ; define , domain ,range , inverse , Increasing , decreasing ,odd, even, implicit ,explicit , limited ,continuity and it's using .
3. Simplify the mathematical concepts as laws, analysis and operations .
4. introduce rigorous mathematical treatments of some fundamental topics in mathematics.
5. Analyze concepts and results in basic algebra and basic calculus and apprehend their applications.
6. Select an appropriate mathematical methods for compute applied problems .
7. Work effectively in groups

V. Course Contents

Theoretical Aspect:

No.	Course Units	Sub-topics	Week due	Contact Hours
1	Equations and Inequalities	<ul style="list-style-type: none"> Linear Equations Quadratic Equations Linear Inequalities Quadratic Inequalities Absolute Value 	4	8
2	Power and Logarithm	<ul style="list-style-type: none"> laws of power and it's problems laws of Logarithm and it's problems power and Logarithm equations 	3	6
3	Real Functions	<ul style="list-style-type: none"> principles of Functions description of Functions Types of Functions 	3	6
4	Limit and Continuity	<ul style="list-style-type: none"> Limited of Functions Continuity of Functions 	4	8
Total number of weeks and hours			14	28

Second: Tutorial

No.	Practical/Tutorial/Clinical topics	Week due	Contact Hours
1	<ul style="list-style-type: none"> Linear Equations Quadratic Equations Linear Inequalities Quadratic Inequalities Absolute Value 	4	8
2	<ul style="list-style-type: none"> laws of power and it's problems laws of Logarithm and it's problems power and Logarithm equations 	3	6
3	<ul style="list-style-type: none"> principles of Functions description of Functions Types of Functions 	3	6
4	<ul style="list-style-type: none"> Limited of Functions 	4	8



	• Continuity of Functions		
Total number of weeks and hours		14	28

VI. Teaching Strategies

1. Lectures
2. Activation
3. micro-report
4. micro- assignments
5. Brainstorming session

VII. Tasks and Assignments :

No.	Task/Assignment	Week due	Mark
1.	micro- assignments (1)	5	3
2.	micro- assignments (2)	12	3
3.	micro-report (1)	3	2
4.	micro-report (2)	10	2

VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Tasks/Assignments	3,5,10,12	10	10%
2	Quiz 1	4	5	5%
3	Midterm Exam	8	20	20%
4	Quiz 2	11	5	5%
5	Final Exam	16	60	60%
Total			100	100%

IX. Learning Resources

Textbooks

1. Almazah and Alameri, (2012) , Basic of Mathematics , first edition , Alameen centre , Yemen .
2. RhondaHuetenmueller , (2005),Pre-calculus , McGraw-Hill Companies ,USA.

Essential References:

1. James Stewart , (2008) , Calculus, Early Transcendental , Thomson, 5th Edition , International Student Edition .
2. Fowzy Danan, (1988) , Analysis of mathematics , Khalid Ben Alwaled , Syria .
3. James Stewart(2002), Calculus: Early Transcendental , 5th ed., Brooks Cole .
4. Keisler, H. J(2000) , Elementary Calculus: An Approach Using Infinitesimals .
5. Stewart ,(2008) , Calculus , second edition , McMASTER UniversityUSA .
6. Howard Anton (1999), Calculus, John Wily & Sons .

Electronic Materials and Web Sites:

1. <http://www.sosmath.com/calculus/calculus.html>



2. <http://www.math.niu.edu/~beachy/aaol/>

X. Course Policies :	
Based on university regulations, the following aspects should be figured out:	
1.	(Class Attendance) : <ul style="list-style-type: none"> Students are required to attend all class lectures, tutorials and labs. Student will not allow attending the final exam if he exceeds the maximum number of absences (15% without excuses and 25% with excuses).
2.	(Tardy) : <ul style="list-style-type: none"> Attendance will be taken every lecture at the first 10 minutes and any student come after that will be considered absent.
3.	(Exam Attendance/Punctuality) : <ul style="list-style-type: none"> Student should be in the examination hall before 15 minutes from the beginning of the exam. Late students are not allowed to get into the examination hall after the first 30 minutes and will be considered absent. Makeup exams will be offered to students who miss a scheduled exam because of illness, death in the family or university-sponsored activity, but written documentation must be provided.
4.	(Assignments & Projects) : <ul style="list-style-type: none"> All assignments must be done on their time. Late assignments will not be accepted. Projects are assumed to be submitted on or before the dead-lines.
5.	(Cheating) : <ul style="list-style-type: none"> Cheating is strictly prohibited behavior. University regulations will be pursued and enforced on any cheating student.
6.	(Plagiarism) : <ul style="list-style-type: none"> Plagiarism is defined as “copying or stealing someone else’s words or ideas and claiming or presenting them as if they were your own.” University regulations will be pursued and enforced on any plagiarism attempt.
7.	(Other policies) : <ul style="list-style-type: none"> Students in class, Lab. are required to turn off all cell phones, iPods,

I. General information about the course:



1.	Course Title :	General Chemistry 1			
2.	Course Code and Number :	PHS112			
3.	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		2		2	
4.	Study Level and Semester:	First year- first Semester			
5.	Pre-requisites (if any):	None			
6.	Co-requisites (if any):	None			
7.	Program in which the course is offered:	Bachelor of Pharmacy & Bachelor of PharmD			
8.	Teaching Language:	English			
9.	Instruction location:				

II. Course Description

This course provides a student with the basic principles and concepts of chemistry and prepare him/her for more advanced courses in chemistry and other related courses via topics within containing matter and energy, atomic theory, periodic table, solutions and chemical reactions. It depends on theoretical lectures and practical experiments. Pharmacy students should master the concepts of General Chemistry to excel in their careers.

III. Course Aims:

1. Give a student knowledge about nature of matter and its properties.
2. Provide a student with the most important concepts in chemistry.
3. Teach a student the periodic table and determination chemical elements.
4. Name common chemical compounds.
5. Enable a student to prepare and do some chemical experiments.
6. Acquire a student with skills requested in chemical laps.

IV. Course Intended Learning Outcomes (CILOs) :

1. Know the nature of matter and its properties.
2. Classify elements according to their electronic structure and understand how that affecting periodic properties.



3. Discriminate types of chemical reactions.
4. Using stoichiometry concept to solve the problems related to chemical calculations.
5. Handle chemicals in their various forms in a safe manner.
6. Solve the problems related to chemical calculations.
7. Performing online computer search to retrieve chemical information from a variety of sources.
8. Acquired skills needed for team-working.

V. Course Contents

Theoretical Aspect:

No.	Course Units	Sub-topics	Week due	Contact Hours
1	Introduction to the course	<ul style="list-style-type: none"> - The study of chemistry - Classification of matter - properties of matter - Unit of measurements - Uncertainty in the measurement - Dimension analysis 	1 st & 2 nd	4
2	Atom, molecule and ion	<ul style="list-style-type: none"> - Atomic theory of matter - Discovery atomic structures - The modern atomic structures - atomic weight- Periodic Table - Molecule and molecular compounds - Ions and ionic compounds - Naming inorganic compounds - Simple organic compounds 	3 rd & 4 th	4
3	Stoichiometry, Calculation with chemical formula and equations	<ul style="list-style-type: none"> - chemical equations - Some simple patterns of chemical reactivity - Formula weight - The mole - Empirical formula from analysis - quantitative information from balanced chemical equation - Limiting reagent 	5, 6, 7 th	6
4	Aqueous Reaction and Solution stoichiometry	<ul style="list-style-type: none"> - general properties of aqueous reactions - Precipitation reaction - Acid base reactions - Oxidation reduction reactions - Concentration of solutions - Solution stoichiometry and chemical analysis 	8, 9 th	4
5		Med-Term	10 th	2
6	Electronic structure of	- the wave nature of light	11 & 12 th	



	atoms	<ul style="list-style-type: none"> - quaatize energy and photons - line spectra and Bohr model - atomic orbitals - representation of orbitals - many electron atoms - Electron configuration - Electron configuration and the periodic Table 		4
7	Periodic properties of the elements	<ul style="list-style-type: none"> - Development of the periodic Table - Effective nuclear charges - size of atoms and ions - ionization energy - electron affinity - metals, nonmetals and metalloids - groups trends of the metals - groups trends of the selected nonmetals 	13,14,15 th	6
8	Final Exam		16 th	2
Total number of weeks and hours			16	32

Second: Practical/Tutorial/Clinical Aspects :

Write up practical/tutorial/clinical topics

No.	Practical/Tutorial/Clinical topics	Week due	Contact Hours
1.	Lab. safety	1 st	2
2.	Laboratory Equipments and uses	2 nd	2
3.	Identification of carbonate and bicarbonate	3 ^{ed}	2
4.	Identification of chloride and Iodide	4 th	2
5.	Identification of sulphate and borate	5 th	2
6.	Scheme for identification of unknown salts	6 th	2
7.	Midterm exam	7 th	2
8.	Identification of silver , mercuric and cupric ions	8 th	2
9.	Flame Tests of Metal Cations (Na ⁺ ,K ⁺ ,Li ⁺ ,Ca ⁺² ,Ba ⁺² ,Cu ⁺²)	9 th	2
10.	Solutions a- Nature of Solute and Solvent b- Effect of Temperature on Solubility c- Super Saturation	10 th	2
11.	Properties of Acids and Bases	11 th	2
12.	Scheme for identification of unknown salts	12 th	2
13.	Final practical Exam	13 th	2



Total number of weeks and hours	13	26
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V. Teaching Strategies
Lectures
Office hours
Practical class
Assignment
Class discussion

VI. Tasks and Assignments			
No.	Task/Assignment	Week due	Mark
1	Report	Weekly	10

VII. Learning Assessment:				
No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Midterm	7 th	20	20%
2	Assignment	12 th	10	10%
3	Practical Part	14 th	30	30%
4	Final Exam	16 th	40	40%
	Total		100	100%

VIII. Learning Resources
Textbooks: <ol style="list-style-type: none"> 1. (Brwon, Lemay, and Bursten, (2002), CHEMISTRY, Ninth Edition, the Central Science, Prentice Hall Inc. U.S.A. 2. (Ebbing, (1996), GENERAL CHEMISTRY, Fifth Edition, Houghton Mifflin Co. U.S.A
Essential References: <ol style="list-style-type: none"> 1. (Bodner Bardue, (1995), CHEMISTRY, Second Edition, John Wiley & Sons, Inc. Canada 2. (James E. Brady, (1990) GENERAL CHEMISTRY, Fifth Edition, John Wiley & Sons, Inc. U 3. (G C Hill J S Holman, (1987), CHEMISTRY IN CONTEXT, Second Edition, Thomas Nelson and Sons Ltd, U.K.
Electronic Materials and Web Sites: http://chem.illinois.edu/

IX. Course Policies
Based on university regulations, the following aspects should be figured out:
1. (Class Attendance):



	Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2.	(Tardy) :
3.	(Exam Attendance/Punctuality) : All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4.	(Assignments & Projects) :
5.	(Cheating) : Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6.	(Plagiarism) : "To plagiarize is to take ideas or words of another person & pass them off as one's own". Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7.	(Other policies) :

Second Semester

الفصل الثاني

1.Course Syllabus Skills of Holy Quran Recitation & Tajweed

خطة مقرر مهارات تلاوة القرآن الكريم وتجويده

General information about the course

I. معلومات عامة عن المقرر:



اسم المقرر: Course Title					1.
رمز المقرر ورقمه: Course Code and Number					2.
المجموع Total	الساعات المعتمدة Credit Hours				3.
	نظري Theoretical	سمنار/تمارين Seminar/Tutorial	عملي Practical	تدريب Training	
1	-	-	2	-	
المستوى والفصل الدراسي: Level and Semester					4.
المتطلبات السابقة لدراسة المقرر (إن وجدت): Pre-requisites (if any)					5.
المتطلبات المصاحبة لدراسة المقرر (إن وجدت): Co-requisites (if any)					6.
البرنامج/ البرامج التي يتم فيها تدريس المقرر: Program in which the course is offered:					7.
لغة تدريس المقرر: Teaching Language					8.
مكان تدريس المقرر: Instruction location:					9.

وصف المقرر الدراسي: Course Description		II.
<p>يعد هذا المقرر من المقررات المهمة؛ كونه متعلق بكلام الله تعالى ثم إنه من متطلبات الجامعة، وهو مقرر نظري وتطبيقي يقوم الطالب فيه بتلاوة وحفظ نصف جزء عم من سورة (الطارق- الناس) ودراسة الأدب التي ينبغي أن يتحلى بها قارئ القرآن، وفهم وتطبيق هذه الأحكام عند قراءة القرآن الكريم، وتستخدم طريقتي الحوار والمناقشة في التدريس، ويتم تقييم الطالب من خلال تلاوته للقرآن أثناء اللقاءات التعليمية، والقيام بالتكليفات المصاحبة – الصفية واللا صفية – مع الامتحانين النصفين والنهائي.</p>		
أهداف المقرر: Course Aims		III.
<p>يهدف هذا المقرر إلى:</p> <ol style="list-style-type: none"> 1- حفظ نصف جزء عم من سورة الطارق إلى سورة الناس. 2- معرفة أحكام التجويد الأساسية. 3- استخراج أحكام التجويد الأساسية أثناء قراءة القرآن الكريم. 4- تطبيق أحكام التجويد الأساسية أثناء قراءة القرآن الكريم. 		

مخرجات التعلم المقصودة للمقرر Course Intended Learning Outcomes (CILOs)		IV.
بعد الانتهاء من هذا المقرر سيكون الطالب قادراً على أن:		



After completing this course, students would be able to:

- يعدد أحكام النون الساكنة والتنوين.
- يتذكر أحكام الميم الساكنة .
- يعدد أحوال التفخيم والترقيق.
- يبين أنواع المدود بسبب الهمز والسكون.
- يفرق بين الأحكام المختلفة نظرياً.
- يربط بين النون الساكنة والميم الساكنة وأحكامهما أثناء قراءته للقرآن الكريم .
- يصنف أحوال الراء تفخيماً وترقيقاً.
- يميز بين أنواع المدود المختلفة .
- يطبق أحكام النون الساكنة والتنوين أثناء قراءته للقرآن الكريم .
- يطبق أحكام الميم الساكنة أثناء قراءته للقرآن الكريم .
- يتقن قراءة الراء قراءة سليمة سواء كانت مفخمة أم مرفقة -
- يطبق أنواع المدود المختلفة أثناء قراءته للقرآن الكريم.
- يستخرج أحكام التجويد من النصوص القرآنية .
- يلتزم بالأداب التي تعلمها خلال دراسته للمقرر
- يستشعر أهمية قراءة القرآن الكريم مجوداً
- يقرأ القرآن قراءة صحيحة خالية من اللحن الجلي والخفي .

V. محتوى المقرر:				
Theoretical Aspect الجانب النظري:				
الرقم No.	وحدات المقرر Course Units	المواضيع التفصيلية Sub-topics	الأسبوع Week due	الساعات الفعلية Contact Hours
1	مقدمة عامة في علم التجويد.	نبذة تعريفية في علوم القرآن.	1 st	2
2		مبادئ في علم التجويد (تعريفه لغة	2 nd	1



		واصطلاحاً، غايته وفائدته، حكم تعلمه.	
1	3 ^{ed}	آداب قراءة القرآن الكريم	3
1	4 th	-أحوال الاستعاذة والبسملة. - أوجه البسملة بين السورتين	4
1	5 th	أحكام النون الساكنة والتنوين. - الإظهار والإدغام-	5
1	6 th	أحكام النون الساكنة والتنوين. الاقلاب والاختفاء	6
1	7 th	أحكام الميم الساكنة (الإدغام المتماثل-الإخفاء الشفوي-الإظهار الشفوي).	7
1	8 th	أحكام النون والميم المشددين(تعريفها، حكمها، مراتبها)	8
2	9 th	شفهي	9
1	10 th	اللامات السواكن (لام الاسم، لام الفعل، لام الحرف).	10
1	11 th	أحكام الراء (حالات التفخيم، حالات الترقيق، جواز الوجهين).	11
1	12 th	المد الطبيعي وأنواعه	12
1	13 th	المد الواجب والجائز	13
1	14 th	اللين والعارض للسكون	14
1	15 th	المد اللازم (الكلمي المثقل والمخفف، الحرفي المثقل والمخفف).	15
3	16 th		16
20 ساعة	أسبوع 16	إجمالي عدد الأسابيع والساعات Total number of weeks and hours	

Second: Practical/Tutorial/Clinical Aspects

الجانب العملي / تمارين / سريري:

كتابة تجارب (مواضيع / مهام) النشاط العملي/ تمارين/ سريري

Write up practical/tutorial/clinical topics

الرقم No.	المهام / التجارب العملية/ تمارين/ سريري Practical/Tutorial/Clinical topics	عدد الأسابيع Week due	الساعات الفعلية Contact Hours
1	تلقين من الناس – الكافرون+ الاستماع لقراءة الطلاب	1	1
2	تلقين من الكوثر – الفارعة+ الاستماع لقراءة الطلاب	1	1
3	تلقين من العاديات – القدر+ الاستماع لقراءة الطلاب	1	1
4	تلقين من العلق – الليل+ الاستماع لقراءة الطلاب+ تكليف تلاوة سورة النبأ واستخراج أحكام النون الساكنة منها (مجموعات)	1	1
5	تسميع المحفوظ السابق	1	1
6	تلقين من الشمس – الفجر+ الاستماع لقراءة الطلاب+تكليف تلاوة سورة النازعات واستخراج أحكام النون الساكنة منها (مجموعات)	1	1



1	1	تلقيين سورة الغاشية+ قراءة سورة عبس مع متابعة التكاليفات السابقة	7
1	1	تلقيت سورة الأعلى +قراءة سورة التكويد	8
1	1	تلقيين سورة الطارق+ تدريب استخراج أحكام المدود من سورة المطففين	9
1	1	قراءة سورتي البروج والانشقاق	10
1	1	تقسيم الطلاب مجموعات وتسميع المحفوظ السابق	11
10 ساعات	10 أسابيع	إجمالي عدد الأسابيع والساعات Total number of weeks and hours	

Teaching Strategies	استراتيجيات التدريس
	اللقاء.
	الطريقة الاستنباطية.
	التعلم الذاتي.
	الحوار والمناقشة.

VII. الأنشطة والتكليفات:			
الدرجة Mark	الأسبوع Week due	النشاط/ التكليف Task/Assignment	الرقم No.
10	16-6	قيام الطالب باستخراج الأحكام الأساسية للتجويد من السور المقررة.	1.
5	11-9	قيام الطالب بتسجيل صوتي لسورة من سور المقرر.	2.
5	15-12	قيام الطالب بعمل بحث مصغر حول أحد موضوعات المقرر.	3.

Learning Assessment				VIII.تقييم التعلم
الوزن النسبي (نسبة الدرجة إلى درجة التقييم النهائي) Weight	الدرجة Mark	موعد التقييم/ اليوم والتاريخ Assessment day & date	أنشطة التقييم Assessment Tasks	الرقم No.
5%	5	5 th	تسميع المحفوظ من الناس - الليل	1
15%	5	6-15 th	تكاليفات	2
20%	20	9 th	امتحان نصفي	3
60%	60	16 th	الاختبار النهائي Final Exam	4
100%	100	المجموع Total		

Learning Resources:	IX. مصادر التعلم
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Textbooks: المراجع الرئيسية:	
1. أ. د. عبد الحق القاضي، ود. هلال حزام سند، أ. عبد الرحمن الفقيه، (2012م-2013م) مهارات تلاوة القرآن وتجويده، الطبعة الأولى، جامعة العلوم والتكنولوجيا، اليمن.	
المراجع المساعدة (لا تقل عن أربعة): Essential References:	
1. محمد بن محمد الجزري (1985)، التمهيد في علم التجويد، ط1، مكتبة المعارف، الرياض.	
2. محمود خليل الحصري (1995)، أحكام قراءة القرآن الكريم، ط5، دار البشائر، لبنان.	
3. د. عبد الحق القاضي، (2007)، العقد الفريد في علم التجويد، مكتبة الجيل الجديد، اليمن.	
4. عبد الفتاح السيد عجمي المرصفي (د.ت)، هداية القاري إلى تجويد كلام الباري، المملكة العربية السعودية.	
مواد إلكترونية وإنترنت: (إن وجدت): Electronic Materials and Web Sites:	
1. عرض باور بوينت	
2. سيدي تعليمي مرفق.	

X. الضوابط والسياسات المتبعة في المقرر	
Course Policies	
1. الحضور والغياب Class Attendance: : تحدد سياسة الحضور ومتى يعتمد الغياب وكيفيته ونسبته، ومتى يعد الطالب محروماً من المقرر	
2. الحضور المتأخر Tardy : يتم تحديد السياسة المتبعة في حالات تكرار تأخر الطالب عن حضور الفعاليات التعليمية	
3. ضوابط الاختبارات والامتحانات Exam Attendance/Punctuality: تحديد السياسات المتبعة في حالات الغياب عن الامتحان وتوصيف السياسة المتبعة في حالات تأخر الطالب عن الامتحان، وكذلك السياسات المتبعة في حالة إعادة الامتحان في الظروف المقبولة.	
4. التكاليفات / المهام والمشاريع Assignments & Projects: تحديد السياسات المتبعة في حالات تأخير تسليم التكاليف والمشاريع ومتى يجب أن تسلم إلى الأستاذ.	
5. الغش Cheating: تحدد هنا السياسات المتبعة في حالات الغش إما في الامتحانات أو في التكاليف بأي طريقة من طرائق الغش.	
6. الانتحال (Plagiarism): يحدد تعريف الانتحال وحالاته والإجراءات المتبعة في حالة حدوثه.	
7. سياسات أخرى (Other policies): أي سياسات أخرى مثل استخدام الموبايل أو مواعيد تسليم التكاليفات..... الخ	

2.Course Syllabus Arabic Language

خطة مقرر اللغة العربية

I. معلومات عامة عن المقرر:					General information about the course
1	اسم المقرر Course Title:	اللغة العربية			
2	رمز المقرر ورقمه: Course Code and Number:	BUST03			
3	الساعات المعتمدة للمقرر: Credit Hours:	الساعات المعتمدة Credit Hours			
		نظري Theoretical	سمينار/تمارين Seminar/Tutorial	عملي Practical	تدريب Training
4	المستوى والفصل الدراسي: Level and Semester:	المستوى الأول - الفصل الثاني			
		2	-	4	-
		4			



لا يوجد	المتطلبات السابقة لدراسة المقرر (إن وجدت): Pre-requisites (if any):	5
لا يوجد	المتطلبات المصاحبة لدراسة المقرر (إن وجدت): Co-requisites (if any):	6
كل برامج الجامعة	البرنامج/ البرامج التي يتم فيها تدريس المقرر: Program in which the course is offered:	7
اللغة العربية	لغة تدريس المقرر Teaching Language:	8
قاعات الجامعة	مكان تدريس المقرر Instruction location:	9

II. وصف المقرر الدراسي:	Course Description
<p>يهتم المقرر بتنمية المهارات اللغوية الأساسية للطالب كونه من متطلبات الجامعة ويتناول جملة من النشاطات الاتصالية والدروس اللغوية والإملائية والتركيبية ويحتوي على معارف ونصوص وتدرجات لغوية، ويتألف من كتابين:</p> <p>الأول يتضمن مهارتي الاستماع والتحدث، والثاني يتضمن مهارتي القراءة والكتابة، مع احتواء كل من الكتابين على أساسيات التركيب النحوي وبعض القواعد الإملائية، ويعتمد المقرر أسلوب التدريبات والتطبيقات العملية لكل طالب، بالإضافة إلى النصوص التطبيقية في CD المرفق بالكتاب مع الامتحان النصفي والنهائي.</p>	
III. أهداف المقرر :	Course Aims
<ol style="list-style-type: none"> 1. إتقان المهارات اللغوية: الاستماع، والتحدث، والكتابة، والقراءة، ومهاراتها الفرعية . 2. تقويم النصوص المكتوبة أو المنطوقة وفق القواعد الأسلوبية والنحوية والإملائية. 3. القدرة على التواصل اللغوي الفعال مع الآخر. 4. توظيف القواعد النحوية والأسلوبية والإملائية في مختلف مجالات الحياة. 	

IV. مخرجات التعلم المقصودة للمقرر	Course Intended Learning Outcomes (CILOs)
1. أن يذكر المبنىات والمعرّبات و صور الممنوع من الصرف.	
2. أن يعدد أركان الجملة الاسمية والفعلية وصور كل ركن فيها.	
3. أن يستنبط مكونات الجملة الاسمية والجملة الفعلية.	
4. أن يربط بين القواعد النحوية والتطبيق العملي.	
5. أن يمارس مهارات اللغة العربية الأربع (الاستماع، والتحدث، والقراءة، والكتابة) بطريقة فاعلة.	
6. أن يستخدم التراكييب النحوية واللغوية في التطبيقات العملية.	
7. أن يتواصل لغويا بشكل فعال مع الآخرين	

محتوى المقرر:	Course Contents
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الرقم No.	وحدات/ موضوعات المقرر Course Topics/Units	المواضيع التفصيلية Sub-topics	عدد الأسابيع Week due	الساعات الفعالية Contact Hours
1	الوحدة الأولى (مهاره الاستماع+المبني والمعرب+الهمزة الابتدائية)	- مقدمة عامة عن المادة -العلاقة بين الفكر واللغة -تعريف القدرة والمهارة -أنواع القدرات -أساسيات مهارة الاستماع -أنواع الاستماع - تطبيقات على مهارة الاستماع	أسبوع	3
2		- تطبيقات على مهارة الاستماع - نص و(ولا تكن للخائنين خصيما) -المبني والمعرب مع التطبيق عليه		3
3		-الهمزة الابتدائية مع التطبيق عليها -حل تدريبات الوحدة الأولى		3
4	الوحدة الثانية (مهاره الاستماع+المبنيات والمعربات+الهمزة المتوسطة والمتطرفة)	-أساسيات مهارة الاستماع التحليلي الناقد -أنواع الأفكار والمدعمات - أنواع رسائل الاستدعاء - نص استماعي (آيات سورة الحشر)	أسبوع	3
5		-المبنيات والمعربات - تطبيقات على المبنيات والمعربات		3
6		-الهمزة المتوسطة والمتطرفة - تطبيقات على الهمزتين المتوسطه والابتدائية - حل تدريبات الوحدة الثانية	أسبوع	3
7	الوحدة الثالثة (مهاره التحدث +الإعراب بالعلامات الأصلية والفرعية)	-مهارة التحدث -أهمية مهارة التحدث -مواطن الضعف في أدائنا التواصل وكيفية المعالجة. - كيف أكون متصلا فاعلا.	أسبوع	3
8		- تطبيقات مهارة التحدث		3
9		- استكمال تطبيقات مهارة التحدث		3
10		- نص الأمثال العربية - الإعراب بالعلامات الأصلية والفرعية مع التطبيق عليها - حل تدريبات الوحدة الثالثة	أسبوع	3



3	أسبوع	<ul style="list-style-type: none"> - نص (أنا والطفل) - علامات الترقيم (1,2) - الإعراب التقديري 	<p>الوحدة الرابعة</p> <p>(مهاره الكتابة+ الإعراب التقديري+ الممنوع من الصرف)</p>	11
3		<ul style="list-style-type: none"> - الممنوع من الصرف - حل تدريبات الوحدة الرابعة 		
			الاختبار النصفى	12
3	أسبوع	<ul style="list-style-type: none"> - أساسيات مهارة القراءة - نص (احترام المرأة) - تدريبات على الأداء القرائي 		13
3	أسبوع	<ul style="list-style-type: none"> - نص (مقطعات من الاستبداد والمجد) - تدريبات على الأداء القرائي - الجملة الاسمية 	<p>الوحدة الأولى</p> <p>(مهارة القراءة+ الجملة الاسمية+ قواعد إملائية)</p>	14
3	أسبوع	<ul style="list-style-type: none"> - تطبيقات على مهارة القراءة - حل تدريبات الوحدة الأولى (نص سنوات الطفولة) 		15
3	أسبوع	<ul style="list-style-type: none"> - نص (الأشعة) - التدرب على مهارة السرعة القرائية - الأفعال الناسخة 	<p>الوحدة الثانية</p> <p>(التدرب على مهارة القراءة في النصوص العلمية + الأفعال والحروف الناسخة+ قواعد كتابية)</p>	16
3	أسبوع	<ul style="list-style-type: none"> - الأحرف المتشابهة في الكتابة - الحروف الناسخة - حل تدريبات الوحدة الثانية 		17
3	أسبوع	<ul style="list-style-type: none"> - نص المتنبي - نص السياب (غريب على الخليج) 	<p>الوحدة الثالثة</p> <p>(التدرب على مهارة القراءة في النصوص الشعرية+ الألف اللينة في الكتابة العربية)</p>	18
3	أسبوع	<ul style="list-style-type: none"> - تطبيقات على مهارة القراءة - الألف اللينة في الكتابة العربية - حل تدريبات الوحدة الثالثة 		19
3	أسبوع	<ul style="list-style-type: none"> - الجملة الفعلية (الفاعل وصوره- المفعول به وصوره- البناء للمجهول) - تدريبات على الجملة الفعلية 		20
3	أسبوع	<ul style="list-style-type: none"> - التدرب على مهارات التحليل القرائي 	<p>الوحدة الرابعة</p> <p>(الجملة الفعلية+ التدرب على مهارات التحليل القرائي+ ما يحذف من الحروف وما يزداد في الكتابة العربية)</p>	21
3	أسبوع	<ul style="list-style-type: none"> - ما يحذف من الحروف وما يزداد في الكتابة العربية - حل تدريبات الوحدة الرابعة 		22
3	أسبوع			23



3		<ul style="list-style-type: none"> أنواع الرسائل تطبيقات على الرسالة الإدارية كيفية إعداد سيرة ذاتية 	الوحدة الخامسة (تطبيقات مهارية مكثفة + أنواع الرسائل + السيرة الذاتية + مهارة التلخيص)	24
3	أسبوع	<ul style="list-style-type: none"> مهارة التلخيص 		25
3		<ul style="list-style-type: none"> مراجعة لما سبق 		26
3		الاختبار النهائي		27
81	إجمالي عدد الأسابيع والساعات Total number of weeks and hours			

Teaching Strategies	V. استراتيجيات التدريس
	<ul style="list-style-type: none"> الإلقاء. حل المشكلات. التعليم التعاوني. التعليم الذاتي. الطريقة الاستنباطية تدريبات تطبيقية لغوية العصف الذهني زيارات وتطبيقات علمية

Tasks and Assignments				VI. الأنشطة
الدرجة Mark	الأسبوع Week due	مخرجات التعلم CILOs	النشاط / التكليف Task/Assignment	الرقم No.
7	2+3	-c1-d1	تطبيقات مهارة الاستماع	1
8	4+5	-c1-d1	تطبيقات مهارة التحدث	2
7	8+7	-c1-d1	تطبيقات مهارة القراءة	3
8	10+9	-c1-d1	تطبيقات مهارة الكتابة الوظيفية	4

Learning Assessment				VII. تقييم التعلم
الرقم No.	أنشطة التقييم Assessment Tasks	الأسبوع Week due	الدرجة Mark	نسبة الدرجة إلى درجة التقويم النهائي Proportion of Final Assessment
1	الواجبات / الأنشطة / التكليف Homework/Tasks/Assignments	3-5 7-10	30	30%
2	اختبار أول (قصير) Quiz 1	---	---	---
3	اختبار منتصف الفصل Midterm Exam	7	30	30%
4	اختبار ثاني (قصير) Quiz 2			
5	الاختبار النهائي Final Exam	16	40	40%
6	أخرى (تحدد) Others			



100%	100	Total المجموع
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Learning Resources	VIII. مصادر التعلم
(محمد عبد الله المحجري، (2010م)، مهارات الاتصال في اللغة العربية، الطبعة، دار الكتاب الجامعي، اليمن). (Author, (Year), Book Title, Edition, Publisher, Country of publishing)	
المراجع الرئيسية: (لا تزيد عن مرجعين) Textbooks-not more than 2	
1. عبد العليم إبراهيم، (1975)، الإملاء والترقيم في الكتابة العربية، د. ط، مكتبة غريب، مصر. 2. بهاء الدين عبد الله بن عقيل العقيلي الهمداني المصري، (2000م)، شرح ابن عقيل على ألفية ابن مالك، المكتبة العصرية، لبنان.	
المراجع المساعدة: (لا تقل عن أربعة) Essential References-not less than 4	
1. د. عبد الله علي مصطفى، (2014م)، مهارات اللغة العربية، د. ط، دار المسيرة، الأردن. 2. أبو الفضل جمال الدين محمد بن مكرم ابن منظور، (1376هـ)، لسان العرب، د. ط، دار صادر، بيروت. 3. د. مهدي المخزومي، (1966م)، في النحو العربي: قواعد وتطبيق، ط1، مكتبة ومطبعة مصطفى البابي الحلبي وأولاده، القاهرة	
مواد إلكترونية وإنترنت: (إن وجدت) Electronic Materials and Web Sites	
1. عرض المحاضرات بالبوربوينت 2. السدي المرفق مع الكتاب 3. شبكة الفصيح، شبكة ويكيديا، ومنتديات أدبية.	

IX. الضوابط والسياسات المتبعة في المقرر	
Course Policies	
1.	الحضور والغياب Class Attendance: : تحدد سياسة الحضور ومتى يعتمد الغياب وكيفيته ونسبته، ومتى يعد الطالب محروماً من المقرر (حسب اللائحة الأكاديمية)
2.	الحضور المتأخر Tardy: يتم تحديد السياسة المتبعة في حالات تكرار تأخر الطالب عن حضور الفعاليات التعليمية (حسب اللائحة الأكاديمية)
3.	ضوابط الاختبارات والامتحانات Exam Attendance/Punctuality: تحديد السياسات المتبعة في حالات الغياب عن الامتحان و توصيف السياسة المتبعة في حالات تأخر الطالب عن الامتحان، وكذلك السياسات المتبعة في حالة إعادة الامتحان في الظروف المقبولة. (حسب اللائحة الأكاديمية)
4.	التكليفات / المهام والمشاريع Assignments & Projects: تحديد السياسات المتبعة في حالات تأخير تسليم التكليف والمشاريع ومتى يجب أن تسلم إلى الأستاذ. (حسب إقرار المدرس)
5.	الغش Cheating: تحدد هنا السياسات المتبعة في حالات الغش إما في الامتحانات أو في التكليف بأي طريقة من طرائق الغش. (حسب اللائحة الأكاديمية)
6.	الانتحال (Plagiarism): يحدد تعريف الانتحال وحالاته والإجراءات المتبعة في حالة حدوثه. (حسب اللائحة الأكاديمية)
7.	سياسات أخرى (Other policies): أي سياسات أخرى مثل استخدام الموبايل أو مواعيد تسليم التكليفات..... الخ

3.Course Syllabus English Language 2

خطة مقرر اللغة الإنجليزية 2

I. General information about the course:



1	Course Title :	English (2)			
2	Course Code and Number :	BUST06			
3	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		-	-	8	-
4	Study Level and Semester:	First year- Second Semester			
5	Pre-requisites (if any):	None			
6	Co-requisites (if any):	Short stories + SRAs (Short Reading Activities)			
7	Program in which the course is offered:	All Programs in University			
8	Teaching Language:	English			
9	Instruction location:	ILC Main building and Girls branch			

II. Course Description

The current course provides students with the language basics of everyday English to help them communicate in different real life situations. The course focuses more on real life conversations and the basic grammars that will help each one in his major.

Moreover the course provides students with plenty of writing and speaking practices. The updates of the book allow students to be posted with the latest language uses and functions that are easy and useable in real life situations.

III. Course Aims:

For students undertaking this course, the aims are to:

1. Introduce students to important concepts and basics in English language.
2. Knowledge of the basic vocabularies and phrases used by native speakers in everyday conversation.
3. Help students to apply the rules and grammars in the book, every students in his major, to present academic presentation and write their assignment reports.
4. Improve the pronunciation of the students in order to get clearer and more understandable.

IV. Course Intended Learning Outcomes (CILOs) :

After completing this program, students would be able to:

1. Identify alphabets, numbers, months colors, dates, family ,people, common adjectives , common verbs and personal information.
2. Recognize present simple tense, pronouns, questions, and the pronunciation of the words.
3. Realize the different uses for the present simple tense, present continues tense, and past simple tense.
4. Classify words to their categories.
5. Apply tenses to form simple correct sentences.



6. use the vocabularies and phrases introduced in the materials to create simple real life conversations..
7. Work in team
8. Give simple formal presentation.

V. Course topics and sub-topics (theoretical and practical) with contact hours

Topics/Units of Course Contents

First: Theoretical Aspects

No.	Course Topics/Units	Sub-topics	Week due	Contact Hours
1	Life at the end of the world	<ul style="list-style-type: none"> Word order in questions Can/can't Common verbs Weekdays and weekends Free time activities Countries and nationalities. 	1	8
2	What are they doing?	<ul style="list-style-type: none"> Present continuous Present simple Verb phrases The weather Writing a letter and an email. 	1	8
3	In the jungle of Guatemala	<ul style="list-style-type: none"> There is /there are There was /there were Hotels language Prepositions of place 1 Prepositions of place 2 Simple past Simple past :regular verbs 	1	8
4	Before they were stars	<ul style="list-style-type: none"> Simple past: irregular verbs Common verbs Daily routine verbs Sentence stress Past events 	1	8
5	It changed my life	<ul style="list-style-type: none"> Object pronouns Simple past :review Common verbs 3 Expressing opinion 	1	8



6	Trip of a lifetime	<ul style="list-style-type: none"> • Strong stress • Talking about music • Future :be going to • Review of the tenses (present, past, future) • Future time expressions • Verb collocations • Future plans 	1	8
7	All over the world	<ul style="list-style-type: none"> • Verb to be (affirmative) • Subject pronouns I, you, etc. • Verb to be (negative and interrogative). • Possessive adjectives. 	1	8
8	What a life	<ul style="list-style-type: none"> • Classroom language • Days of the week, numbers • Greetings in the world • Sentence stress • Classroom language 	1	8
9	Are you the next American idol	<ul style="list-style-type: none"> • Adjectives • Colors, modifiers • Imperatives • Plurals • Expressing feelings • Long and short vowels • Connected speech • American VS British differences. 	1	8
10	Reading in English	<ul style="list-style-type: none"> • Simple present (positive , negative) • Simple present (interrogative) • Word order in questions • Jobs • Verb phrases • Expressing likes and dislikes. 	1	8



11	Sun and the City	<ul style="list-style-type: none"> • Sentence stress. • possessive's • prepositions of time • everyday activities • adverbs and expressions of frequency. • Linking and sentence stress. 	1	8
12	Times we love	<ul style="list-style-type: none"> • Can/can't • Present continuous • Simple present or present continuous? • Verb phrases • The weather and the seasons. • Sentence stress. 	1	8
13	Stars and Strips	<ul style="list-style-type: none"> • Object pronouns • Gerunds • Collocations • Phone language • The date • Ordinal numbers • Consonant clusters 	1	8
14	Final exam		1	8
Total number of weeks and hours			14	112 contact hours 56 credit hours

VI. Teaching Strategies

12- Lectures 13- Games 14- Pair work 15- micro- assignments 16- Brainstorming session 17- Problem solving and language puzzles. 18- Group work	19- Presentations 20- Discussions 21- Debates 22- Competitions
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VII. Tasks and Assignments :

No.	Task/Assignment	Week due	Mark
4.	micro- assignments (1)	1,2,3,4,	2
5.	micro- assignments (2)	1,2,3,4	2
6.	Workbook	1,2,3,4,5	6



VIII. Learning Assessment:				
No.	Assessment Tasks	Week due	Mark	Weight
1	Homework/Tasks/Assignments	2 ,3 ,4 , 5	10	10%
2	Quiz 1	2	5	5%
3	Story quiz 1	2	15	7.5%
4	Quiz 2	4	5	5%
5	Story quiz 2	4	15	7.5%
6	Oral skills	1,2,3,4,5	10	10%
7	Participation	1,2,3,4,5	10	10%
8	Writing assignments	1,2,3,4,5	15	15%
9	Final exam	5	100	30%
Total			100	100%

IX. Learning Resources.
Textbooks <ol style="list-style-type: none"> 1. Oxenden Clive, Koenig Latham, & Boyle Mike,(2013) American English File Starter. Oxford, University Press. 2. Oxenden Clive, Koenig Latham, & Boyle Mike,(2013) American English File 1. Oxford, University Press.
Essential References: (short stories) <ol style="list-style-type: none"> 1. O. henry, (2000)The Gift of the Magi, Pearson Education Limited. 2. Vicary Tim , (1994) Mutiny on the Bounty. Oxford university Press.
Electronic Materials and Web Sites: <ol style="list-style-type: none"> 1. http://education.cambridge.org/mena/learning-stage/teacher 2. https://elt.oup.com/learning_resources/?cc=global&selLanguage=en&mode=hub

X. Course Policies :
Based on university regulations, the following aspects should be figured out:
1 (Class Attendance) : <ul style="list-style-type: none"> • Students are required to attend all class lectures. • A Student is dismissed from the course if she/he exceeds the maximum number of absences (10 hours with or without an excuse)
2 (Tardy) : <ul style="list-style-type: none"> • Attendance will be taken every lecture at the first 10 minutes and any student come after that will be considered absent.
3 (Exam Attendance/Punctuality) : <ul style="list-style-type: none"> • Student should be in the examination hall before 15 minutes from the beginning of the exam.



	<ul style="list-style-type: none"> Late students are not allowed to get into the examination hall after the first 30 minutes and will be considered absent. Makeup exams will be offered to students who miss a scheduled exam because of illness, death in the family or university-sponsored activity, but written documentation must be provided. A Student should present their IDs in the exam hall otherwise he/she is not allowed to take the exam.
4	(Assignments & Projects) : <ul style="list-style-type: none"> All assignments must be done on their time. Late assignments will not be accepted. Projects are assumed to be submitted on or before the dead-lines. Teachers have to check students' workbooks regularly.
5	(Cheating) : <ul style="list-style-type: none"> Cheating is strictly prohibited behavior. ILC regulations will be pursued and enforced on any cheating student.
6	(Plagiarism) : <ul style="list-style-type: none"> Plagiarism is defined as “copying or stealing someone else’s words or ideas and claiming or presenting them as if they were your own.” ILC regulations will be pursued and enforced on any plagiarism attempt.
7	(Other policies) : <ul style="list-style-type: none"> Students in class are required to turn off all cell phones, iPods, Students are not allowed to eat or drink inside the building of ILC. Teachers are not allowed to accept any student who are not in their class list.

4.Course Syllabus Critical Thinking

خطة مقرر التفكير الناقد

General information about the course					I. معلومات عامة عن المقرر
التفكير الناقد					1. اسم المقرر: Course Title
BUST08					2. رمز المقرر ورقمه: Course Code and Number
المجموع	الساعات المعتمدة				3. الساعات المعتمدة للمقرر: Credit Hours
	نظري	سمنار/تمارين	عملي	تدريب	
1	-	-	-	-	
حسب خطة كل برنامج					4. المستوى والفصل الدراسي: Level and Semester
لا يوجد					5. المتطلبات السابقة لدراسة المقرر(إن وجدت): Pre-requisites (if any)
لا يوجد					6. المتطلبات المصاحبة لدراسة المقرر(إن وجدت): Co-requisites (if any)
كل برامج الجامعة					7. البرنامج/ البرامج التي يتم فيها تدريس المقرر:



	Program in which the course is offered:	
اللغة العربية	لغة تدريس المقرر: Teaching Language	8.
قاعات الجامعة	مكان تدريس المقرر: Instruction location:	9.

II. وصف المقرر الدراسي:

التفكير الناقد مادة هدفها الأساسي بناء وتنمية مهارة الطلاب الذهنية في مجال التعامل مع الآراء والأفكار المقروءة أو المسموعة أو المرئية لإبداء الرأي المؤيد أو المعارض استناداً إلى المهارات الذهنية المنظمة ، والمهارات المعرفية والخبرات والتجارب. يتضمن العديد من الموضوعات الرئيسية كمفهوم التفكير الناقد وفائدته العملية والتعليمية و في الفصل الدراسي ، ومعايير ، ومعوقاته ومقوماته الأساسية والمساعدة ، وكيفية بناء حجج مقنعة بالاستناد إلى الاستدلال الناقد ، مع بيان صور المغالطات والخدع البلاغية ، ثم توجت المادة بخاتمة تضمنت تطبيق مهارات التفكير على بعض الظواهر والمجالات الحيوية في الحياة ، والطريقة المثلى لتدريسها تكاد تنحصر في الجانب النظري من خلال المحاضرات والمداخلات والمناقشات المستفيضة ، مع تعزيز ذلك بقدر كبير من الأساليب التدريبية ، كلعب بعض الأدوار ، وعرض مقاطع فيديو بالصوت والصورة ، وإجراء بعض المناظرات ، خصص لتدريسها والتدريب على بعض مفاهيمها 14 ساعة في الفصل الدراسي الواحد ، وتدرس بنظام الساعة (زمن المحاضرة ساعة واحدة).

III. أهداف المقرر:

- 1- رفع كفاءة الطالب الجامعي في التعامل الواعي مع النصوص المكتوبة أو الدروس والمحاضرات التي يتلقاها ، والندوات وبرامج التلفاز وسائر الفعاليات الثقافية المسموعة ، أو حتى في مجال التعامل مع الأحداث المختلفة الحياتية بطريقة أفضل في هذا العالم المعقد المتشابك ، سواء كان في المجال الثقافي النظري أو العملي التطبيقي ، أو في المجال الاجتماعي أو السياسي أو غيرها من المجالات.
- 2- مادة التفكير الناقد تبني شخصاً لديه استقلال فكري ، لا يلغي وجهات النظر الأخرى ، بل يواجهها بالدليل والحجة المقنعة.
3. يتدرب الطالب من خلالها على المنهجية المنطقية عند النظر في أفكار الآخرين ، وذلك من خلال الفهم والتحليل والتفسير والتقييم ثم التقويم بإبداء الرأي المؤيد أو المعارض والمعتمد على الحجة والدليل والبرهان.
- 3- تجعل المقرر الدراسي لطالب الجامعة سهلاً في فهمه واستيعابه ، كما أنها تحسن وتطور من قدرته على فهم محتوى المقرر الدراسي.
- 4- تؤسس الطالب تأسيساً متيناً على كيفية كتابة البحوث والرسائل العلمية مستقبلاً ، من خلال ما يتعلمه من ضرورة تقييم آراء وأفكار الآخرين وإبراز شخصية الباحث من خلال تقويمه النهائي لآراء الغير استناداً إلى الأسباب والمقدمات والبراهين ، كما تمنح الطالب القدرة على كتابة المقالات الهادفة التي تقنع الآخرين ولا تجبرهم على تقبلها جبراً.
- 5- مادة التفكير الناقد تساعد الطالب على أن يكون شخصية محبوبة تألف وتؤلف ، فيتعامل مع الآخرين بعقلية متفتحة ، ويتجنب اتخاذ قرارات شخصية حمقاء مستعجلة يندم عليها لاحقاً وقد يؤدي بها الآخرين.
- 6- من خلال استيعاب مادة التفكير الناقد يتجنب الطالب أن يكون (إمعة) يسير مع آراء الآخرين دون فحص وتمحيص وتحليل واستيثاق ، فالطالب يتدرب من خلالها أن يكون وقافاً تجاه أي رأي أو فكرة ، وبالذات ونحن في عصر تزاومت فيه مصادر المعرفة وتعددت مشاربها وتوجهاتها ، وكل يهدف إلى التأثير على الآخرين ولو استخدم المغالطات والخدع ، ولا ننسى الهجمات الإعلامية المغرضة على عالمنا العربي والإسلامي والتي تستهدف كل فئاته ومكوناته ، وبالذات فئة الشباب ، كما أن المكتبات قد احتوت مؤخرًا على بعض المؤلفات التي تحمل عناوينها ظاهرها الرحمة وباطنها العذاب ، وأيضاً بعض المجالات والمواقع الإلكترونية على شبكة الانترنت التي قد تبث من الأفكار والمفاهيم ما يراد بها غسل وتجيير عقول شبابنا العربي والإسلامي على النحو الذي تهدف إليه.

IV. مخرجات التعلم المقصودة للمقرر:

1. معرفة المقصود بالتفكير الناقد والتمييز بينه وبين الأنواع الأخرى من التفكير ، مع استيعاب المهارات الذهنية المنظمة للتفكير الناقد ، وأيضاً معرفة معايير التفكير الناقد ومقوماته الأساسية والمساعدة.



2. إدراك معوقات التفكير الناقد النظرية والسلوكية بهدف تجنبها أثناء إعمال الفكر في أي رأي أو فكرة، والتعرف على الاستدلال الناقد، والطرق المثلى لبناء الحجج وتصنيفها ، وأيضاً فهم المقصود بالمغالطات والخدع البلاغية والوقوف على أنواعها وصورها الشائعة .
3. مراعاة الضوابط السلوكية عند إبداء رأي في موضوع ما، وتحليل النصوص إلى جزئياتها المكونة لها، وأيضاً تقييم الآراء والأفكار ووزنها استناداً إلى المهارات المعرفية (التغذية الراجعة) .
4. تقويم جزئيات النصوص، من خلال التأمل الواعي بهدف التصحيح والتصويب إن كانت خاطئة، أو التأييد والتأكيد في حال ثبوت صحتها، وإدراك توجهات واتجاهات المتحدث أو الكاتب، وأيضاً بناء الحجج المقنعة أثناء المحاورات والمناقشات سواء في الندوات أو ورش العمل أو المؤتمرات ، أو المقابلات الصحفية والتلفزيونية.
5. القراءة الناقدة القائمة على استيعاب ما يعنيه النص لا ما يقوله النص فقط، وأيضاً القدرة على بناء آراء جديدة في حياته أو الإضافة على الآراء المعروضة عليه أو تعديلها ، أو تنفيذها استناداً إلى معايير التفكير الناقد.
6. مناقشة محتويات المقررات الدراسية مع أساتذته وزملائه استناداً إلى المهارات الذهنية المنظمة، وأن يكون لديه استقلالاً فكرياً مبني على الإطلاع على وجهات النظر الأخرى، لبلورتها وإخراجها بشكل أفضل ، وفي المقابل يتجنب أن يكون إمعه تجاه أفكار الآخرين دون فحص أو تمحيص.
7. التعامل مع محتوى المنهج الدراسي في سني دراسته وتحليله وتقييمه وتقويمه، و إضافة بعض المفاهيم إلى المقرر الدراسي من مصادر أخرى .
8. اتباع الأسلوب الأمثل في التعامل مع مصادر المعرفة المتنوعة والمتجددة وبالذات مع برامج التلفاز وأيضاً الصحف والمجلات ومواقع الانترنت، مع تجنب اتخاذ قرارات سريعة يندم عليها لاحقاً في الظواهر والمشكلات الحياتية دون التفكير في نتائجها، علاوة على اكتشاف المغالطات والخدع البلاغية التي قد يدسها الكتاب أو المتحدثون عمداً أو خطأ عند نشر أفكارهم وآرائهم في موضوع ما.

V. محتوى المقرر:

الجانب النظري:

الرقم	وحدات المقرر	المواضيع التفصيلية	الأسبوع	الساعات الفعلية
1	مدخل إلى التفكير الناقد	قواعد التفكير الناقد السليم ، معايير التفكير الناقد، مهارات التفكير الناقد، التفكير الناقد والعملية التعليمية، أهمية التفكير الناقد وفائدته،	الاسبوع الاول	1
2	معوقات التفكير الناقد	التمحور حول الذات، التفكير بالتمني وخداع النفس، الإيحاء والتوافق وتقدير الخبراء، الكسل والكبرياء، التمحور حول الجماعة، الجهل ، الانحياز، التفكير على أساس إما أو، الإخفاق في إجراء التمييز	الاسبوع الثاني	1



2	الاسبوع الثالث والرابع	1- (مبادئ أساسية للتفكير الناقد) وتشمل: التمييز بين الحقائق والآراء، فحص الحقائق وتمحيص الآراء، تقييم الدليل ، الشجاعة على تغيير الأفكار. 2- التوجهات المساعدة للتفكير الناقد: هناك مجال دائما للتطوير ، للنقد قيمة ، الجهد مفتاح النجاح ، الأشخاص الآخرون مهمو مثلما نحن مهمون . 3- العادات المساعدة على التفكير الناقد: الحذر من الانطباعات الأولى ، الأمانة مع النفس، تجنب الخلط في الفهم ، طرح أفكار كثيرة ، التعرف على وجهات النظر الأخرى ، وضع الأحكام بناء على دليل البحث عن الارتباط بين الموضوعات ، التعرف على وجهات النظر الأخرى ، وضع الأحكام بناء على دليل.	مقومات التفكير الناقد	3
1	الاسبوع الخامس	(مفهومه)، تحليل الحجج، بناء الحجج، تصنيف الحجج، صحة الحجة، اللغة والحجة، تقييم الحجج، كيف تعرض حججا مقنعة.	الاستدلال الناقد	4
1	الاسبوع السادس	أولا : الخدع البلاغية: اللجوء للحداثة، للشفقة ، لما هو شائع ، للجاذبية ، للجنس، الهجوم المباشر. ثانيا: المغالطات : المغالطات الناشئة عن غموض اللغة، المغالطات الناشئة عن الحكم ، مغالطات رد الفعل	الخدع البلاغة و المغالطات	5
1	الاسبوع السابع	مهمل حل المشكلات ، مهارة بناء العلاقات ، مهارة القراءة الناقدة ، مهارة التعامل مع برامج التلفاز .	تطبيق مهارات التفكير الناقد	6
7	7	إجمالي عدد الأسابيع والساعات		

الجانب العملي / تمارين / سريري:			
كتابة تجارب (مواضيع / مهام) النشاط العملي/ تمارين / سريري			
الرقم	المهام / التجارب العملية/ تمارين/ سريري	عدد الأسابيع	الساعات الفعلية
1.	العصف الذهني	1	1
2.	لعب بعض الأدوار	1	1
3.	مجموعة نقاش	2	2
4.	أنشطة منزلية	1	1
5.	المباريات التدريبية	1	1
6.	عرض مقاطع فيديو	1	1
7	إجمالي عدد الأسابيع والساعات	7	7



VI. استراتيجيات التدريس

1. التعليم التفاعلي بين المدرس والطالب والمنهج.
2. التعليم التعاوني في شكل مجموعات.
3. العصف الذهني بإثارة قضية والتفاعل معها.
4. استخدام استراتيجية التقويم.

VII. الأنشطة والتكليفات:

الرقم	النشاط/ التكليف	الأسبوع	الدرجة
1.	أنشطة منزلية مختلفة.	1	5
2.	اختبار نصفي.	1	20
3.	أنشطة فردية صفية.	1	5
4.	انضباط في حضور المحاضرات.	باستمرار	10
المجموع			40

VIII. تقييم التعلم:

الرقم	موضوعات التقييم	موعد التقييم/ اليوم والتاريخ	الدرجة	الوزن النسبي (نسبة الدرجة إلى درجة التقييم النهائي)
1.	معوقات التفكير الناقد	الاسبوع الثاني	5	5%
2.	الاستدلال الناقد	الاسبوع الخامس	20	30%
3.	المغالطات والخدعة البلاغية	الاسبوع السادس	5	5%
المجموع			40	40%

IX. مصادر التعلم:

المراجع الرئيسية:

1. فتحي جروان، (2007م)، تعليم التفكير: مفاهيم وتطبيقات، الطبعة الثالثة، دار الفكر للطباعة والنشر والتوزيع، عمان - الأردن.
2. ادوارد دي بونو، (1989م)، تعليم التفكير، ترجمة عادل عبد الكريم ياسين وآخرون، مؤسسة التقدم العلمي، الكويت.

المراجع المساعدة:

1. محمد جهاد جمل، (2000م)، العمليات الذهنية ومهارات التفكير من خلال عمليتي التعلم والتعليم، دار الكتاب الجامعي، العين - الإمارات.
2. (2001م)، التفكير: مهاراته واستراتيجيات تعليمه، مركز الإسكندرية للكتاب، الإسكندرية.
3. نايفة قطامي، (2001م)، تعليم التفكير للمرحلة الأساسية، دار الفكر، عمان - الأردن.
4. منير حوراني، (2002م)، تعلم مهارات التفكير، مترجم، دار الكتاب الجامعي، العين - الإمارات.

مواد إلكترونية وإنترنت:

- 1- www.criticalthinking.org.
- 2- www.studygs.net/crtth.htm.
- 3- www.kcmetro.cc/mo/us/congviewlctac/point.htm.



X. الضوابط والسياسات المتبعة في المقرر	
1.	الحضور والغياب Class Attendance: : تحدد سياسة الحضور ومتى يعتمد الغياب وكيفية ونسبته، ومتى يعد الطالب محروماً من المقرر
2.	الحضور المتأخر Tardy : يتم تحديد السياسة المتبعة في حالات تكرار تأخر الطالب عن حضور الفعاليات التعليمية
3.	ضوابط الاختبارات والامتحانات Exam Attendance/Punctuality: تحديد السياسات المتبعة في حالات الغياب عن الامتحان و توصيف السياسة المتبعة في حالات تأخر الطالب عن الامتحان، وكذلك السياسات المتبعة في حالة إعادة الامتحان في الظروف المقبولة.
4.	التكليفات / المهام والمشاريع Assignments & Projects: تحديد السياسات المتبعة في حالات تأخير تسليم التكليفات والمشاريع ومتى يجب أن تسلم إلى الأستاذ.
5.	الغش Cheating: تحدد هنا السياسات المتبعة في حالات الغش إما في الامتحانات أو في التكليفات بأي طريقة من طرائق الغش.
6.	الانتحال (Plagiarism): يحدد تعريف الانتحال وحالاته والإجراءات المتبعة في حالة حدوثه.
7.	سياسات أخرى (Other policies): أي سياسات أخرى مثل استخدام الموبايل أو مواعيد تسليم التكليفات..... الخ

5.Course Syllabus Computer Skills

خطة مقرر مهارات الحاسوب

I. General information about the course:					
1.	Course Title:	Computer Skills			
2.	Course Code and Number :	BUST09			
3.	Credit Hours: 3	Lecture	Seminar/Tutorial	Practical	Training
		-	-	6	-
4.	Study Level and Semester:	First year- Second Semester			
5.	Pre-requisites (if any):	None			
6.	Co-requisites (if any):	None			
7.	Program in which the course is offered	All Programs in university			
8.	Teaching Language:	English / Arabic			
9.	Study System :	Semesters			
10.	Prepared by:	Fahd N. Al-Wesabi			
11.	Approval date :				
12.	Approved by:				

I. Course Description :

This course provides a student by basic skills for using computer at studying environment, library, and at home. It presents the knowledge of basic computer and information technology concepts. The course provides the knowledge needed to operate and utilize the operating system and office software package, and to use the computer for Internet access and electronic communication.



II. Course Aims

- Educate the student the basic computer and information technology concepts, fundamental operating system functions, how protect the computer system from viruses.
- Familiarize students with common software applications and understanding of use the computer for Internet access and electronic communication.
- Enable the students to practice install and uninstall software applications.

III. Course Intended Learning Outcomes (CILOs) :

1. Understand the hardware and software components of computer, storage types, computer networks, information and communication technology, and Internet services.
2. List the steps of creating, deleting, renaming, sorting, copying, moving, changing properties, creating shortcuts, and compressing of files and folders.
3. Name the most important software utilities and applications of the operating system, antivirus software and their constant updates, and social networking and communication tools.
4. Differentiate among different computer types, storage devices, operating systems, software applications and communication techniques.
5. Practice the elementary skills of Computer (e.g.: Connect Computer peripherals to CPU, Boot and shut down Computer, open the CPU case to recognize its components).
6. Perform the basic operations of the operating system, and Implement the operations of folders and files (e.g.: Creating, deleting, renaming, sorting, copying, moving, changing properties, creating shortcuts, and compressing).
7. Practice the most important software utilities **and software applications** to create, edit, and format document, spreadsheet files and **to** produce effective multimedia presentations.
8. Navigate the Internet and download a required information, and Carry out the operations of email (e.g.: Create a new email account, Send and receive emails).
9. Utilize computer for different purposes and write reports required for other courses.

IV. Course topics and sub-topics (theoretical and practical) with contact hours

Topics/Units of Course Contents

First: Theoretical Aspects

No.	Course Topics/Units	Sub-topics	Week due	Contact Hours
1	Concepts of Information and Communication Technology (ICT)	- Define Computers – Components of Mother Board – Input and Output Devices – Storage Devices – Size and performance of Storage Devices – Operating Systems – Software Applications – Software Utilities – Computer	1 st & 2 nd	4



		Safety.		
2	Using the Computer and Managing Files	Use Windows – Mouse procedures – Desktop Components and Customize – Start Menu – Taskbar – Shortcuts – Installing and Uninstalling Applications – Operating System Utilities – Installing and Updating Anti virus Applications – Manage Files and Folders (Create, Delete, Copy, Paste, Rename, Arrange, Compress, etc.) – Manage Storage Devices (Partitioning, Formatting, Maintaining)	3 rd & 4,5 th	6
3	Word Processing	Interface: Opening MS Word, The file menu, Ribbon Tabs and Groups, Customize Ribbon, Quick Access toolbar Edit and Format: Arabic and English documents, Font, paragraph, Styles, Cut, Copy, Paste, Format Painter, Find and Replace, Spelling checker, Correcting errors, Grammar checker, Alignment, Bulleted and Numbered Lists Page Layout: Header and Footer, Page Numbering, Page Size, Page Orientation. Printing: preview, Printer Setting, Selecting Printer, Print documents Inserting: Tables, Pictures, Shapes, Smart Art, Word Art	6,7,8,9 th	8
4	Spreadsheets	Interface: Opening MS Excel, Ribbon, Work Sheets. Tables: Rows and Columns, Cells, Cell Data Types, Format Cells, Computations in Cells, Format table, Sorting, Filtering Formulas: Inserting Functions (e.g.: statistical and data time) Charts: Chart types, Visualize data using Charts, Format Charts Printing: preview work sheet, print selected area of work sheet, and print charts.	10,11 th	4



5	Presentation	Interface: Opening MS Power Point, Ribbon, Slides. Slides: Design Theme, Transition Insert and Format: Text Box, Table, WordArt, Audio, Video, Smart Art, and Shapes Animations of the elements inside Slide View Slides: Normal, Outline, Slide Sorter Printing: preview Slide, print selected slides, print multi-slides in a single page.	12,13 th	4
6	Web Browsing and Communication Services	Internet: Internet Browser, Sites, Search engines (e.g.: Google), search for information (using text and images), Download files Email: Create new email account in Google Mail System (Gmail), Send electronic messages, send attachments, Inbox, Sent mail, Drafts, Replay, forward, Carbon copy (Cc), Blind carbon copy (Bcc)	14,15 th	4
7	Final Exam	Final Exam	16 th	2
Total number of weeks and hours			16	32

Second: Practical/Tutorial/Clinical Aspects

Write up practical/tutorial/clinical topics

No .	Practical/Tutorial/Clinical topics	No. of Weeks	Contact Hours
1	Practice the elementary skills of Computer	1	4
2	Perform the basic operations of the operating system and storage devices	1	4
3	Implementthe operations of folders and files	1	4
4	Practice the most important software utilities of the operating system.	1	4
5	Install and uninstall application programs and update anti-virus software	1	4
6	Perform the operations of the storage devices	1	4
7	Operate word processor software to create, edit, and format document files	2	8
8	Apply spreadsheet software to create, edit, and format spreadsheet files, and employ functions and charts in these spreadsheet files	1.5	6
9	Produce effective multimedia presentations	1.5	6
10	Navigate the Internet and download a required information.	1	4
11	Carry out the operations of email (e.g.: Create a new email	1	4



account, Send and receive emails).		
Total number of weeks and hours	13	52

V. Tasks and Assignments :				
No.	Task/Assignment		Week due	Mark
1	Quiz		4th 12 th	5
2	Attendance		All Weeks	5
3	Discussion (Theoretical)		All Weeks	5
4	Observation of Practice (Practical)		All Weeks	5
5	Reports (single)		14 th	10
6	Final Exam (Practical)		15 th	20
7	Midterm Exam (Theoretical)		8 th	10
8	Homework and Presentation (Group)		15 th	10
9	Final Exam (Theoretical)		16 th	30
	Total			100

VI. Learning Resources :	
(Author, (Year), Book Title, Edition, Publisher, Country of publishing)	
Textbooks-not more than 2	
1. UNISCO, ICDL course technology, 2008.	
Essential References-not less than 4	
1. فهد الوصابي، الحاسوب (مبادئ – أنظمة – تطبيقات - إنترنت)، جامعة العلوم والتكنولوجيا، الطبعة الرابعة، 2008. 2. G. Shelly, T. Cashman and M. Vermaat, "Discovering Computers 2008", Brief, Shelly Cashman Series, 2008. 3. E. Turban, R. K. Rainer and R. Potter, "Introduction To Information Technology", 3rd Edition, Wiley, 2004. 4. Course Technology, New Perspectives on Microsoft Office 2007, First Course, Windows Vista Edition, Thomson Course Technology, 2007.	
Electronic Materials and Web Sites	
1. http://www.functionx.com/windows/index.htm 2. http://www.functionx.com/word/index.htm 3. http://www.functionx.com/powerpoint/index.htm 4. http://www.functionx.com/excel/index.htm	



VII. Course Policies:	
1	Class Attendance: <ul style="list-style-type: none"> - Attendance in all lectures and practical classes are required, except in very emergency circumstances, such as serious illness or death in the family with providing an acceptable documentation approved by the university and forwarded by the chairman of the department. Otherwise the absence shall be considered unexcused. - In accordance with the university rules, if the percentage of student's absence exceeds 25 % of the total lectures or practical classes, the student involved shall be disqualified in the final written and practical examination of the course and shall be deemed to have failed in the course.
2	Tardy: <ul style="list-style-type: none"> - Roll will be called in the very beginning of each lecture and practical class. Retardation for more than three weeks without a reasonable cause, the student involved shall not be allowed to attend the class any longer and consequently shall be considered to be absent.
3	Exam Attendance/Punctuality: <ul style="list-style-type: none"> - It is incumbent on student to report at the examination hall for checking in and rolls calling at least 15 minutes before the commencement of examination. - A student is not allowed to submit answer booklet and leave the examination hall only on or after the passage of the half examination duration. - A student who comes late shall not be admitted to the examination hall, only within the first 30 minutes of the examination. After this time, the student will be considered to be missed in the examination and shall be deemed to have failed in the course. - When a student misses the final examination due to a legitimate medical problems or death in the family, an acceptable documentation approved by the university medical unit for the excused absence must be provided no later than three weeks and consequently the student shall be disqualified in the examination but with the excused absence.
4	Assignments & Projects: <p>Assignments and reports are to be submitted in hardcopy in due date in the class, unless otherwise that may be specified by the teacher. Email submissions of assignments are not accepted.</p> <p>Late assignments and reports will be penalized at least 5 % per day (including weekends and holidays). Depending on the circumstances the penalty may be higher, for example, if an assignment is received after the solution has been discussed.</p>
5	Cheating: <p>If a student is found cheating in examination (midterm or final or quizzes) (copying from unauthorized materials and another students' work or allowing other students to copy from his/her own work), the student involved shall be disqualified in the examination and shall be deemed to have failed in the course and also suspended from examinations of two more courses.</p> <p>If a student is found engaging in any unauthorized communications (oral, sign, call, etc.), while the examination is in progress or in possessing of any authorized materials or electronic devices before the distribution of examination papers , the student involved shall be disqualified in the examination and shall be deemed to have failed the course.</p>
6	Plagiarism: <p>Plagiarism is the presentation of any material (text, data or figures) from any other source in preparation of assignments or practical reports without clear and adequate acknowledgement of the source.</p> <p>Plagiarism is also the use or copy of other students' work (with, or without payment) to</p>



	prepare all or part of undertaken assignments or practical reports of work submitted for assessment. All types of plagiarism are unacceptable and are considered dishonest practices. If a student is found plagiarism, the student involved shall be subjected to the same penalties as in the case of cheating as already mentioned above policies.
7	Other policies: Students are expected to be punctual, and, as always, to conduct themselves professionally and courteously: Using electronic devices or speaking with each other is not allowed, the student involved shall be expelled out of the class and shall be considered to be absent

6.Course Syllabus General Chemistry 2

خطة مقرر كيمياء عامة 2

I. General information about the course:					
1	Course Title :	General Chemistry 2			
2	Course Code and Number :	PHS120			
3	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		2		1	
4	Study Level and Semester:	First year- Second Semester			
5	Pre-requisites (if any):	PHS112			
6	Co-requisites (if any):	None			
7	Program in which the course is offered:	Bachelor of Pharmacy & Bachelor of PharmD			
8	Teaching Language:	English			
9	Instruction location:				

II. Course Description

The main objective of this course is to prepare student for further studies as pharmacists. Pharmacy students should master the concepts of general chemistry 2 to excel in his/her future carrier, this will be through learning some topics in chemistry for example chemical bonding, lew's structure, properties of liquids, acid-base equilibrium and the most important concepts in nuclear chemistry

III. Course Aims:

1. Give a student an idea about chemical bonds.
2. Learn a student how draw Lew's structure of molecules, determine geometrical shapes and hybridization.
3. Provide a student with general properties of liquids.
4. Classify states of matter and recognize intermolecular forces
5. Describe the acids-bases and relationship between them.
6. Give the most important concepts about nuclear chemistry.
7. Acquire appropriate computer skills including computer use in pharmacy practice.



IV. Course Intended Learning Outcomes (CILOs) :

1. Determine the molecular structure of molecules and understand the importance of molecular geometry in pharmacy.
2. Identify the relationship between acids, bases and their chemical structures, the importance of acids and bases.
3. Master the mathematical skills to calculate the concentrations and pH of different solutions.
4. Calculate equilibrium constants for various systems and use them to determine the concentrations of reactants and products.
5. Acquire some practical skills in the laboratory related to acid-base equilibrium, colligative properties, cations – anions separation.
6. get a skills in research using computer and internet.
7. Demonstrate critical thinking, problem-solving, and decision making, when dealing with theoretical and practical chemical information in this course.
8. Performing online computer search to retrieve chemical information from a variety of sources.

V. Course Contents

Theoretical Aspect:

No.	Course Units	Sub-topics	Week due	Contact Hours
1	Chemical Bonds	Introduction to the course, course syllabus- Chemical bond review-Lewis theory of chemical bonding- Ionic bond and Ionic crystal- Using Lewis symbols to represents ionic bonding- Energy changes in ionic compounds- Lewis structure of some molecules- polar covalent bonding & electronegativity- strategy for writing Lewis structures- Molecules that do not follow the octet rule.- bond length an bond energy- alkenes and alkynes	1 st & 2 nd	4
2	Bonding Theory and Molecular structure	VSEPR- polar molecules and dipole moment- molecular shape - atomic orbital overlap- Hybridization	3 rd & 4 th	4
3	State of matter and intermolecular forces	Vaporization and vapor pressure- intermolecular forces: van der Waals, hydrogen	5,6,7 th	



		bonding		6
4	Physical properties of solutions	some types of solutions - solution concentrations - Energetic of solution formation - the solubility of gases - vapor pressure of solution - Freezing point, depression, boiling point elevation and osmotic pressure.	8,9 th	4
5		Med-Term	10 th	2
6	Acid-base equilibrium	Bronsted-Lawry theory - - molecular structure and acid-base strength - - Self-ionization of water - -Equilibrium in solution of weak acids and bases- - polyprotic acids and bases - - ions as acids and bases	11,12 th	4
7	Nuclear chemistry	Radioactive and nuclear equations Naturally occurring radioactive Radioactive decay rate- Applications of radioactive nuclides	13,14,15 th	6
8	Final Exam		16 th	2
Total number of weeks and hours			16	32

Second: Practical/Tutorial/Clinical Aspects :

Write up practical/tutorial/clinical topics

No.	Practical/Tutorial/Clinical topics	Week due	Contact Hours
1	Introduction	1	2
2	Preparation of 0.2 M of 100 ml NaOH solution & prepare several dilutions.	1	2
3	Preparation of 0.2 M of 100 ml HCl solution& prepare several dilutions.	1	2
4	Acid – Base Titrations	1	2
5	Antacid Analysis	1	2
6	Aspirin Analysis	1	2
7	Mid-term Exam	1	2
8	Oxidation-Reduction reactions	1	2
9	Identification of alcohols	1	2



10	Density determination of liquids and solids	1	2
11	Heat Of Neutralization determination	1	2
12	Final practical Exam	1	2
Total number of weeks and hours		12	24

VI. Teaching Strategies

Lectures

Class discussion

Office hours

Practical class

Assignment

VII. Tasks and Assignments

No.	Task/Assignment	Week due	Mark
1	Report	Weekly	10

III. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Midterm	10 th	20	20%
2	Assignment	12 th	10	10%
3	Practical Part	14 th	30	30%
4	Final Exam	16 th	40	40%
Total			100	100%

IX. Learning Resources

Textbooks:

1. (Brwon, Lemay, and Bursten, (2002), CHEMISTRY, Ninth Edition, the Central Science, Prentice Hall Inc. U.S.A.
2. (Ebbing, (1996), GENERAL CHEMISTRY, Fifth Edition, Houghton Mifflin Co. U.S.A

Essential References:

1. (Bodner Bardue, (1995), CHEMISTRY, Second Edition, John Wiley & Sons, Inc. Canada
2. (James E. Brady, (1990) GENERAL CHEMISTRY, Fifth Edition, John Wiley & Sons, Inc. U
3. (G C Hill J S Holman, (1987), CHEMISTRY IN CONTEXT, Second Edition, Thomas Nelson and Sons Ltd, U.K.

Electronic Materials and Web Sites:

<http://chem.illinois.edu/>



X. Course Policies	
Based on university regulations, the following aspects should be figured out:	
1.	(Class Attendance): Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2.	(Tardy) :
3.	(Exam Attendance/Punctuality) : All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4.	(Assignments & Projects) :
5.	(Cheating) : Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6.	(Plagiarism) : “To plagiarize is to take ideas or words of another person & pass them off as one’s own”. Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7.	(Other policies) :



7.Course Syllabus Biology 2

خطة مقرر أحياء 2

I. General information about the course:					
1	Course Title :	Biology 2			
2	Course Code and Number :	PHF121			
3	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		2	-	2	-
4	Study Level and Semester:	First year- Second Semester			
5	Pre-requisites (if any):	Non			
6	Co-requisites (if any):	Non			
7	Program in which the course is offered:	Bachelor of Pharmacy & Bachelor of PharmD			
8	Teaching Language:	English			
9	Instruction location:	Sana'a			

II. Course Description

The importance of this course will provide a brief description of plants as living organism. The topics will cover the plant morphology, growth and anatomy of roots, stem and leaves. The course will also deal with the sexual and asexual reproduction of plants. The teaching will be based on lectures, discussion and assignment. No pre-requisites courses needed.

III. Course Aims:

1. To understand the plant kingdom.
2. To give a brief description of plant structure, growth, anatomy and function of roots, stem and leaves.
3. Illustrating the transport of minerals, water and food in plants.
4. Studying growth responses and regulation in flowering plants.

IV. Course Intended Learning Outcomes (CILOs) :

1. Recognize between seed plants and seed less plants and between flowering and non flowering plants.
2. Developed throughout the program by distinguishing between flowering plants morphology ,self and cross pollination and fruits.
3. Demonstrate sections of the roots, stems and leaves and staining to view under microscope.
4. Implement experiments of dye and supply the plant with this dye to see the transport route in plants.



5. The students will evaluate their experimental results with those that are found in computer sources.
6. Cooperate effectively and work as a part of team in order to fulfill a certain project.

V. Course topics and sub-topics (theoretical) with contact hours				
No.	Course Topics/Units	Sub-topics	Week due	Contact Hours
1	The plant kingdom ; seedless plants	There are four major groups of plants	1 st & 2 nd	2
2	Plant structure, growth, and differentiation	Roots, stems, leaves, flowers, and fruits made up the plant body. is composed of cells and tissues	3 rd & 4 th	4
3	Leaf structure and function	The leaf consists of an epidermis, ground tissue, and vascular tissue. leaf structure differs in dicots and monocots .	5, 6 th	4
4	Stems and plant transport	-Water and minerals are transported in xylem, while sugars are transported in phloem.	7, 8 th	4
5	Midterm exam.		9 th	2
5	Roots and mineral nutrition	-There are two basic types of root systems	10, 11 th	4
6	Reproduction in flowering plants	Fertilization is followed by seed and fruit development	12, 13 th	4
7	Growth responses and regulation of growth	External and internal factors affect germination and early growth	14, 15 th	4
8	Final exam.		16 th	2
Total number of weeks and hours			16	32

VI. :Second: Practical/Tutorial/Clinical Aspects			
Write up practical/tutorial/clinical topics			
No.	Practical/Tutorial/Clinical topics	Week due	Contact Hours
1.	The plant kingdom ; seedless plants	2	4
2.	Plant structure, growth, and differentiation	3	4
3.	Leaf structure and function	2	4
4.	Stems and plant transport	2	4
5.	Roots and mineral nutrition	2	4



6.	Reproduction in flowering plants	3	4
Total number of weeks and hours		14	28

VII. Teaching Strategies

- 1.Power Point.
- 2.Over head Projector.
- 3.White Board.

VIII. Tasks and Assignments

No.	Task/Assignment	Week due	Mark
1	Midterm	8	20%
2	Assignments	10	10%
3	practical	12	30%
	Final test	16	40%
Total		20	100%

IX. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	First Test	3 week	10	15%
2	Second Test	6 week	30	15%
3	Midterm Exam	8 week	20	30%
4	Final Exam	12 week	40	40%
Total			100	100%

X. Learning Resources :

(Author, (Year), Book Title, Edition, Publisher, Country of publishing)

Textbooks-not more than 2

1. Sylvia /S.Mader 2012, Human Biology ,12th Edition (McGraw-Hill)N.Y.USA.
2. E.Solomon ,L.Berg , D.Martin 2008 Biology 8th edition(Thomson Brooks Cole , Belmont .U.S.A College Publishing)

References:

1. Bruce Albert, Alexander Johnson, Peter Walter (2008),Molecular biology of the cell, 5th edition, (Garland Science), New York. U.S.A.
2. Cecie Starr (1997), Basic concept in biology 3rd edition,(International Thomson Publishing Company), Belmont, U.S.A.
3. Shuaa Al-Yousufy (1994),Cell structure and function, (Qatar Publishing Library), Qatar.
- 4.Aish Zaytoon (1996), Human biology, (National Publishing Library), Jordan.

Electronic Materials and Web Sites

- 1.Power Point Lectures for Biology , concepts and connections 6th edition by Campbell , Reece , Taylor , Simon and Dickey 2012.



XI. Course Policies	
1.	(Class Attendance): Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2.	(Tardy) :
3.	(Exam Attendance/Punctuality) : All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4.	(Assignments & Projects) :
5.	(Cheating) : Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6.	(Plagiarism) : “To plagiarize is to take ideas or words of another person & pass them off as one’s own”. Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7.	(Other policies) :



Faculty: pharmacy

Department: Clinical pharmacy and pharmacy practice

Program: Bachelor of PharmD

Second Year Courses

مقررات السنة الثانية

First Semester

الفصل الأول

1.Course Syllabus Organic chemistry 1

خطة مقرركيمياء عضوية 1

I. General information about the course:					
1.	Course Title :	Organic chemistry 1			
2.	Course Code and Number :	PHS210			
3.	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		2		2	
4.	Study Level and Semester:	Second Year – first Semester			
5.	Pre-requisites (if any):	PHS120			
6.	Co-requisites (if any):				
7.	Program in which the course is offered:	Bachelor of Pharmacy & Bachelor of PharmD			
8.	Teaching Language:	English			
9.	Instruction location:				

II. Course Description

The general aim of this course is to provide students with organic structures compounds, name culture, synthesis, reaction mechanism of compounds, containing various functional group, selected example of medicinal & pharmaceutical compounds. This course will offer basic information which help students to understand the drug design, synthesis, and mechanism. The courses require general chemistry, as a pre-request.

The students will complete practical course to acquire practical skills.

III. Course Aims

1. Provide the students fundamental principle of organic chemistry.
2. Train the student to naming organic compounds.
3. Enable the student to synthesize new organic compounds.



4.Enable the student to work as member team work skills.

IV. Course Intended Learning Outcomes (CILOs) :

1. Know the rule of nomenclatures, synthesis of organic compound.
2. Discuss various types of reactions with electrophilic, nucleophilic, oxidizing and reducing reagents and the relationship between structure physical and chemical properties..
3. Synthesize of organic compound.
4. Propose the mechanism for reactions and successful way for solving problems of multi step synthesis .
5. Handle chemicals properly and safely.
6. Identify simple unknown of organic compound.
7. Demonstrate critical thinking, synthesis and interpretation of pharmaceutical information, and responsibility.
8. Work effectively as a part of team in order to fulfill a certain project.

V. Course Contents

Theoretical Aspect:

No.	Course Units	Sub-topics	Week due	Contact Hours
1	Introduction	<ul style="list-style-type: none"> • Chemical bonds and shapes of molecules. • Polar and non polar molecules. • Orbital hybridization and Isomerism, Types of reaction, intermolecular force. • Classification of organic compounds, Nucleophilicity and basicity. 	1 st , 2 nd , 3 rd	6
2	Stereochemistry	Stereoisomers.	4,5,6 th	6
3	Alkanes and cycloalkanes	Nomenclature, Synthesis, Physical properties and Chemical Reaction.	7 th	2
4	Midterm		8 th	2
5	Alkenes and polyenes	Nomenclature, Synthesis, Physical properties and Chemical Reaction.	9,10 th	4
6	Alkynes	Nomenclature, Synthesis, Physical properties and	11 th	2



		Chemical Reaction.		
7	Alkyl Halides	Nomenclature, Synthesis, Physical properties and Chemical Reaction.	12 th	2
8	Alcohols and Ethers	Nomenclature, Synthesis, Physical properties and Chemical Reaction.	13 th	2
9	Phenols	Nomenclature, Synthesis, Physical properties and Chemical Reaction.	14 th	2
10	Aldehyde and Ketons	Nomenclature, Synthesis, Physical properties and Chemical Reaction.	15 th	2
11	Final Exam		16 th	2
Total number of weeks and hours			16	32

Second: Practical/Tutorial/Clinical Aspects :

Write up practical/tutorial/clinical topics

No.	Practical/Tutorial/Clinical topics	No. of Weeks	Contact Hours
1.	Introduction	1	2
2.	Identification Of Alcohols	1	2
3.	Identification Of Aldehydes and Ketons	1	2
4.	Identification Of Carboxylic Acid (Liquid)	1	2
5.	Scheme Of Liquid	1	2
6.	Midterm exam	1	2
7.	Identification Of Carboxylic Acid Solid 1 (Aliphatic)	1	2
8.	Identification Of Carboxylic Acid Solid 2 (Aliphatic)	1	2
9.	Identification Of Carboxylic Acid Solid (Aromatic)	1	2
10	Identification Of Aniline Salts	1	2
11	Scheme Of Solid	1	2
12	Final practical Exam	1	2
Total number of weeks and hours		12	24

VI. Teaching Strategies

1. Lectures
2. Interactive class discussions
3. Practical sessions
4. Assignments



VII. Tasks and Assignments

No.	Task/Assignment	Week due	Mark
1	Medterm	8 th	20
2	Assignment	12 th	10
3	Practical Part	14 th	30
4	Final Exam	16 th	40

IX. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Assignment	12 th	10	10%
	Total		10	10%

X. Learning Resources

Textbooks

1. T.W.G. Solomon's, Organic Chemistry.
2. Morrison and Boyd, 2011, Organic Chemistry, Pearson, India.

Essential References:

1. A Guide Book to Mechanism in Organic Chemistry P.Sykes.
2. Robert Atkins and Francis Carey, 2002, Organic Chemistry: A Brief Course, McGraw- Hill, America

Electronic Materials and Web Sites:

WWW.Hinari.com."journal of Organic Chemistry"

XI. Course Policies

1.	Class Attendance : Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2.	Tardy :
3.	Exam Attendance/Punctuality: (Exam Attendance/Punctuality) : All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first



	attempt in the second attempt examinations.
4.	Assignments & Projects:
5.	Cheating: Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6.	Plagiarism: "To plagiarize is to take ideas or words of another person & pass them off as one's own". Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7.	Other policies:



2.Course Syllabus Physiology 1

خطة مقرر علم وظائف الأعضاء 1

I. General information about the course:					
1	Course Title :	Physiology 1			
2	Course Code and Number :	PHF211			
3	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		2	-	-	-
4	Study Level and Semester:	Second Year – first Semester			
5	Pre-requisites (if any):	PHF110			
6	Co-requisites (if any):				
7	Program in which the course is offered:	Bachelor of Pharmacy & Bachelor of PharmD			
8	Teaching Language:	English			
9	Instruction location:				

II. Course Description :
<p>This introductory physiology course introduces basics concepts in physiology of human body. The course familiarizes students with basic definitions and principles related to physiology. This course helps students to understand body fluid and cellular physiology including the functions of cell components. Study blood compositions, nerve fibers and the nerve impulses transporting mechanism as will as, study autonomic nervous system, introduction of muscular system and the digestive system.</p>

III. Course Aims
<p>1- To introduce and familiarize students with basic definitions and principles related to physiology as a study of the living body at molecular, cellular as well as the level of intact organism.</p> <p>2- To describe the principles and mechanisms of membrane transport.</p> <p>3-To describe the electrical and ionic events that underline the excitation of nerves, muscles as well as</p>



the mechanism underlying skeletal muscle contraction.

- 4- To describe synaptic transmission and electrical properties of synaptic potential.
- 5- To cover the general organization and functional aspects of the autonomic nervous system.
- 6- To introduce the motor and sensory functions of nervous system

IV. Course Intended Learning Outcomes (CILOs) :

1. Understand the basic concepts of the physiology
2. Define the physiology and their types, the structure and function of the studied systems.
3. Know more informations about units and medical analysis
4. Apply the new techniques in solving problems.
5. Present data in graphical using IT methods.
6. Communicate effectively with students by discussing results obtained from experimental physiological lab.

V. Course Contents

Theoretical Aspect

No.	Course Units	Sub-topics	Week due	Contact Hours
1	1-Physiology of the cell. 2-Transport across the cell membrane.	Cell compositions Cell membrane Cytoplasmic organelles Nucleus Movements of molecules across membranes Mechanism of particles and water diffusion across cell membrane	1 st	2



2	1-Body fluids, composition, distribution, general functions. 2-Osmosis, tonicity and water balance	Body fluid importance Body fluid compartments Intracellular fluid (ICF) Extracellular fluid (ECF)	2 nd	2
3	1-Composition and functions of the blood. 2- RBCs, Formation and general functions. - Hemoglobin composition, types, function, destruction of RBCs. Blood groups and blood transfusion.	Blood Composition of blood: Plasma Blood elements Red blood corpuscles Most common types of normal and abnormal hemoglobin Anemia: Types of anemia RBCs functions Blood groups: types, Rh and transfusion	3 rd & 4,5 th	4
4	Midterm	—————	6 th	2
5	1- WBCs: structures, classifications and functions 2- Hemostasis and its disorders	White blood cells Types of leucocytes White blood cells functions Platelets Hemostasis and WBCs disorders	7,8 th	4
6	1- Nerve fibers, structures, classifications, functions and properties of nerves. 2- Resting membrane potentials, action potentials and factors affecting them. 3- Conduction of nerve impulse, neuromuscular transmission.	The neuron (Nerve cell) neuron classification, structure and function Resting and action potential Myelin sheath Neuroglia or glial cells General functions of neuroglia Types of neuroglia cells	9,10,11 th	6



7	1-Autonomic nervous system, origin, organization, distribution. 1-Autonomic ganglia, chemical transmitters & functions of ANS.	Autonomic (involuntary or visceral) nervous system (ANS) Types of autonomic nervous system	12 th	2
	Functional anatomy of gastrointestinal tract (GIT), general principles of digestion. Regulation of GIT functions. GIT secretions & their functions. Liver functions	The functions of all parts of alimentary canal and its accessories. The digestive enzyme secreted that convert food substances into the simplest state Salivary glands, liver and pancreas secretions	13,14,15 th	6
8	Final exam		16 th	4
Total number of weeks and hours			16	32

VI. Teaching Strategies	
1- Lectures and presentation	
VII. Learning Resources :	
(Author, (Year), Book Title, Edition, Publisher, Country of publishing)	
Textbooks-not more than 2	
1. Guyton and Hall, 2012, Text book of medical physiology, 24th Ed., Mississippi Medical Center, Jackson, Mississippi, USA 2. Laurie Kelly 2005, Essentials of Human Physiology for Pharmacy. 1st Ed., CRC Press, Pharmacy Education series	
Essential References-not less than 4	
1. Stuart Ira Fox, 2012 Human Physiology, 13th Ed. 2. Thibodeah & patton 1999, Anatomy & Physiology, 5th Ed. 3. Barbara J. Bain and Rajeev Gupta, 2003. A-Z of Haematology 1st Ed. Blackwell Publishing Ltd. London 4. William Arnould-Taylor and Nelson Thornes, 1998, Textbook of Anatomy and Physiology. 5. David Shier 2012, Human Anatomy & Physiology 13th Ed.	
Electronic Materials and Web Sites	
1. www.csun.edu/science/biology/anatomy/anatomy.html	



2. www.cliffsnotes.com
3. www.innerbody.com
4. www.anatomyandphysiology.com/
5. www.mhhe.com/biosci2/anatomyrevealed
6. www.le.ac.uk/pa/teach/va/anatomy

2- Activation

3- micro-report

4- micro- assignments

5- Brainstorming session

VIII. Tasks and Assignments

No.	IV. Assessment Tasks	Week due	Mark	Proportion of Final Assessment
1	Homework/Tasks/Assignments	3ed , 6, 8, 11th	5	10%
2	Quiz	4th	5	5%
3	Midterm Exam	6 th	30	20%
5	Final Exam	16 th	60	60%
Total			100	100%

IX. Course Policies

1.	(Class Attendance): Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2.	(Tardy) : Attendance will be taken every lecture at the first 15 minutes and any student come after that will be considered absent.
3.	(Exam Attendance/Punctuality) : All students registered for the course are required to attend the assigned exams. Dates and



	locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4.	(Assignments & Projects) : All assignments must be done on their time. Late assignments will not be accepted. Projects are assumed to be submitted on or before the dead-lines.
5.	(Cheating) : Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6.	(Plagiarism) : "To plagiarize is to take ideas or words of another person & pass them off as one's own". Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7.	(Other policies) : Students in class are required to turn off all cell phones, iPods or any communication instrument

3.Course Syllabus Biochemistry 1

خطة مقرر الكيمياء الحيوية 1

I. General information about the course :					
1.	Course Title:	Biochemistry 1			
2.	Course Code and Number :	PHF212			
3.	Credit Hours :	Lecture	Seminar/Tutorial	Practical	Training
		2		2	3
4.	Study Level and Semester:	Second Year – first Semester			
5.	Pre-requisites (if any):	NO			
6.	Co-requisites (if any) :	No			
7.	Program in which the course is offered	Bachelor of Pharmacy & Bachelor of PharmD			



8.	Teaching Language:	English
9.	Instruction location:	

II. Course Description

This course provides students with basic knowledge about structure and properties of main biomolecules in human body, such as amino acids, proteins, carbohydrates, lipids, and nucleic acids. The course emphasizes the relationship between protein structure and its biological function. In addition, it discusses the role of phospholipids in determining the properties of biological membranes and their function

III. Course Aims:

1. To enable the student to be oriented with the biochemical importance of biomolecules.
2. To enable the students to be understand structure and classification of carbohydrates, Lipids, proteins, enzymes, vitamins, nucleotides and nucleic acids.
3. To enable the student to be identify carbohydrates, Lipids, enzymes, proteins, nucleotides and nucleic acids.
4. To familiarizes the students with basic principles of molecular biology and protein synthesis.
5. To makes the student oriented with the physio-chemical basis of the biological systems, and related clinical problems.

IV. Course Intended Learning Outcomes (CILOs) :

1. Describe the structure, importance and properties of carbohydrates, lipids, proteins, lipids, enzymes, vitamins and nucleic acid
2. Interpret the observations of chemical tests to identify unknown sugar, lipids or protein solutions.
3. Perform some basic chemical testes to identify different sugars, lipids and proteins.
4. Cooperate and work effectively in a group in lab or during preparation of seminars..

V. Course Contents

Theoretical Aspect:

No.	Course Units	Sub-topics	Week due	Contact Hours
1.	Introduction	Biomolecules	1 st	2
2.	Amino acids	General structure, functions, classification of amino acids (chemical, nutritional, Metabolic) , derived amino acids and Properties of Amino Acids	2 nd	2
3.	Proteins	Peptide formation, Biologically Active Peptides, protein classification according to (function, shape, and chemical classification), protein	3&4 th	4



		denaturation		
4.	Enzymes	Definition and distribution of enzymes, enzyme names, active sites, Cofactors, Zymogens, Lysozymes, factors affecting reaction velocity, inhibition of enzyme activity, regulation of enzyme activity, enzymes and isoenzymes in clinical diagnosis	5&6 th	4
5.	Nucleic acids	Function, nucleotide structure, Structure of DNA, Structure and types of RNA	7 th	2
6.	Carbohydrates	Definition, importance, Classification, derivatives of monosaccharides, disaccharides, polysaccharides	8&9&10 th	6
7.	Lipids	Definition, functions, classification, fatty acids, steroids	11&12&13 th	6
8.	Vitamins	Definition, functions, classification, clinical indications	14&15 th	4
9.	Final Exam		16 th	2
Total number of weeks and hours			16	32

Second: Practical/Tutorial/Clinical Aspects			
Write up practical/tutorial/clinical topics			
No.	Practical/Tutorial/Clinical topics	Week due	Contact Hours
1	Lab safety	1	2
2	Identification of amino acids	1	2
3	Proteins identification	1	2
4	Lipids identification	1	2
5	Enzymes kinetics	1	2
6	Monosaccharides identification	1	2
7	Disaccharides identification	1	2
8	Polysaccharides identification	1	2
9	General scheme	1	2
Total number of weeks and hours		9	18



VI. Teaching Strategies

1. Lectures
2. Seminars
3. Group discussions
4. Practical teaching

VII. Tasks and Assignments

No.	Task/Assignment	Week due	Mark
1	Midterm Exam 1 and 2	5 & 10 th	30
2	Practical exam	14 th	30
3	Final Exam	16 th	40
	Total		100

VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Midterm Exam1	5 th	15	15%
2	Midterm Exam2	10 th	15	15%
3	Practical exam	14 th	30	30%
4	Final Exam	16 th	40	40%
	Total		100	100%

IX. Learning Resources

Textbooks

1. Robert K. et al. 2005, Harper's Biochemistry, 25th edition
2. Victor L. and Donald B. 1994, The national medical series for independent study (NMS), 3rd edition

Essential References

1. Lippincotts, illustrated
2. Stryer biochemistry , By lubert Stryer
3. Devlin biochemistry
4. Lecture notes

Electronic Materials and Web Sites

1. <https://www.biochemistry.org/>
2. www.acb.org.uk/
3. www.asbmb.org.au/
4. www.asbmb.org/
5. <http://www.ncbi.nlm.nih.gov/pmc/journals/1386/>
6. <http://www.biochemj.org/bj/default.htm>
7. <http://journal.chemistrycentral.com/>



X. Course Policies	
1.	(Class Attendance): Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2.	(Tardy) :
3.	(Exam Attendance/Punctuality) : All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4.	(Assignments & Projects) :
5.	(Cheating) : Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6.	(Plagiarism) : “To plagiarize is to take ideas or words of another person & pass them off as one’s own”. Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7.	(Other policies) :



4.Course Syllabus Anatomy

خطة مقرر علم التشريح

I. General information about the course:					
1	Course Title :	Anatomy			
2	Course Code and Number :	PHF213			
3	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		2	-	2	-
4	Study Level and Semester:	Second Year – first Semester			
5	Pre-requisites (if any):	NA			
6	Co-requisites (if any):	NA			
7	Program in which the course is offered:	Bachelor of Pharmacy & Bachelor of PharmD			
8	Teaching Language:	English			
9	Instruction location:				

II. Course Description

This course will prepare the student to utilize, retrieve, interpret and allocate information useful to their practice and in their clinical rotations. The students will be also familiarized with with basic definitions and principles related to normal anatomy of different parts of human body with knowing the relationship between its constituent parts to each other .the This course is taught through lectures, interactive class discussions, demonstration, and revised assignments.

III. Course Aims:

1. To provide student with a basic knowledge and understanding concerning the fundamental basics of human anatomy.
2. understanding the anatomical terms .
3. To provide the student with the knowledge and understanding of normal parts human body .
4. To provide the student with basic principles to know and understand the description of humand body.

IV. Course Intended Learning Outcomes (CILOs) :

- 1- understanding of anatomical terms.
- 2- know and classify the different parts of skeleton, muscles, joints and nervous system .
- 3- know and understand blood and lymphatic circulation
- 4- Describe any given bone , different muscles, organs, and joints .
- 5- Describe any part of the body relative to the other



V. Course Contents				
Theoretical Aspect:				
No.	Course Units	Sub-topics	Week due	Contact Hours
1	Anatomical positions, planes & terms:		1 st	2
2	Skeleton:	Parts. Function & types of bones, parts of long bones. Structure of bones	2 nd , 3 rd	4
3	Skin & glands Fascia: Structure & types.	Structure ,appendages of skin	4 th	2
4	Muscles & its types Joints & its types. Serous membranes.		5 th	2
5	Nervous system:	Brain (Parts), Cranial nerves, Spinal cord (parts) & Spinal nerves.	6 th , 7 th	4
6	Cardiovascular system:	Heart (Position & parts), Blood vessels (Types) & Great vessels (Nomenclature).	9 th , 10 th	4
7	Lymphatic system (Overview)		11 th	2
8	different body system		12 th , 13 th , 14 th	6
Total number of weeks and hours			14	26

VI. Course Contents					
practical Aspect:					
No.	Course Units	Sub-topics	Week due	Contact Hours	
1	Types of bones	Long bones	1 st , 2 nd	4	
		Short bones ,irregular, sesamoid and pneumatic bones			
		Compact and cancellous bones			
2	Skin and fascia	Glands	3rd	2	



		Superficial , deep fascia			
3	Muscles & joints	Skeletal muscle	4 th	2	
		Fleshy and tendinous parts			
		Fibrous ,cartilaginous , synovial joints			
4	Nervous system	Brain	5,6 th	4	
		Spinal cord			
		preipheral nerves			
5	Cardiovascular system	Heart	7 th	2	
		Blood vessels			
6	Respiratory system	larynx	8 th	2	
		Trachea			
		bronchi			
7	Gastrointestinal tract	Lungs	9,10 th	4	
		Oral cavity			
		Esophagus			
		stomach			
		Small intestine			
		Large intestine			
		Anal canal			
		Liver and bleary system			
		Spleen			
		pancreas			
9	Urogenictal system	Kidneys	11,12,13 th	6	
		Ureters			
		Urinary bladder			
		prostate			
		Seminal vesicle			
		Testes and ovary			
Total number of weeks and hours				26	

VII. Teaching Strategies

- 1.Lecture
- 2.Self-learning (homework)
- 3.Small group discussion



VIII. Tasks and Assignments			
No.	Task/Assignment	Week due	Mark
.1	Quizzes	Every 4weeks	10
.2	Midterm	8 th	20
.3	Final term	16 th	40
.4	practical	15 th	30
.5	Total		100

IX. Learning Assessment:				
No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Homework/Tasks/Assignments	3 rd -15 th		
2	Quiz 1	3 rd	5	5%
3	Midterm Exam	8 th	20	20%
4	Quiz 2	6 th	5	5%
5	Final Exam	16 th	40	40%
	Practical	15 th	30	30%
	Total		100	

X. Learning Resources
Textbooks: (Author, (Year), Book Title, Edition, Publisher, Country of publishing)
Essential References: <ol style="list-style-type: none"> 1. Keith L Moore, (2006) , clinical oriented anatomy , 5th edition , Williams and Wilkims, USA, Livingston,London . 2. Standring Susan (2006), Gray's Anatomy, 32th edition, Elsevier Churchill livingstone .
Essential references –not less than 4 <ol style="list-style-type: none"> 1. Chummy S. Sinnatamby, (2011) , Last's anatomy , 12th edition , Churchill , Livingston,London . 2. Romanes G. C. (1995), Cunningham's Textbook of Anatomy , 12th edition , Oxford Newyork Tornto 3. Snell Richard S. , (2012) , Clinical anatomy , 9th edition , Lippincott Williams and Wilkims.
Electronic Materials and Web Sites: <ol style="list-style-type: none"> 1. http://www.Nomina anatomy 2. American society of anatomy. 3. Free medical journals.com



XI. Course Policies	
1.	(Class Attendance): Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2.	(Tardy) :
3.	(Exam Attendance/Punctuality) : All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4.	(Assignments & Projects) :
5.	(Cheating) : Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6.	(Plagiarism) : "To plagiarize is to take ideas or words of another person & pass them off as one's own". Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7.	(Other policies) :



5.Course Syllabus Pharmacognosy 1

خطة مقرر عقاير 1

I. General information about the course:					
1	Course Title :	Pharmacognosy 1			
2	Course Code and Number :	PHS214			
3	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		2	-	2	-
4	Study Level and Semester:	Second Year – first Semester			
5	Pre-requisites (if any):	PHF 121			
6	Co-requisites (if any):				
7	Program in which the course is offered:	Bachelor of Pharmacy & Bachelor of PharmD			
8	Teaching Language:	English			
9	Instruction location:				

II. Course Description

This course deals with the basic concepts of pharmacognosy. The purpose of this course is to provide an overview of the composition, beneficial properties, and potential side effects of the most commonly used herbal products. Topics include identification of some medicinal plants organs such as leaves, bark and subterranean organ. The course requires to study of botany as pre-request for pharmacognosy. Different methods of teaching/learning are used in this course including lectures and seminar.

III. Course Aims:

1. Identification the method of detection of cultivation, collection, drying, storage and preparation of herbal drugs
2. Identification the parts of plants used, macroscopical and microscopical features of different plant organs used.
3. To learn how to identify the active constituents by chemical means to assess the activity and genuineness of the drug.
4. Solving of problems of plant drugs related to their uses and preparation.
5. To acquire skills to identify medicinal and toxic plants.
6. Skill about how to identify adulteration

IV. Course Intended Learning Outcomes (CILOs) :

1. To acquired a knowledge about the meaning of pharmacognosy including herbal drugs and natural products concerning their identification, safety, optimum use as nutrient and in medication and their side effects and contra indication.
2. Identify the parts of plants used, active constituents, method of detection of cultivation, collection, drying, storage and preparation of herbal drugs.
3. Relate the role of these medicinal plants in the treatment of different diseased conditions.
4. Propose groups of plant drugs according to their therapeutic effects.



5. Prescribe the medicinal and toxic plants and demonstrate the adulteration of any supplied natural drugs.
6. Perform different chemical tests for identification of Active constituents of any given plant.
7. Communicate effectively.
8. Assess the adulteration.

V. Course Contents				
Theoretical Aspect:				
No.	Course Units	Sub-topics	Week due	Contact Hours
1	<u>Introduction:</u> <u>Processing of herbal drugs</u>	*Definition *Nomenclature of drugs *Classification of drugs *Cultivation : *Collection *Drying *Preservation and protection of crude drug *Adulteration *Chemistry of the active constituents.	1 st &2 nd &3 ^{ed} &4 th	8
2	<u>Medicinal leaves</u>	Introduction to morphological and anatomical description of the leaves. Study of selected medicinal leaves.	5,6,7 th	6
3	<u>Mid term</u>		8 th	2
4	<u>Medicinal leaves</u>	Study of selected medicinal leaves.	9,10 th	4
5	<u>Medicinal barks</u>	Introduction to morphological and anatomical description of the bark. Study of selected medicinal barks	11, 12 th	4
6	<u>subterranean organs</u>	Introduction to roots, rhizomes, bulbs, corms, stem tubers and root. Study of selected medicinal subterranean organs	13 th	2
7	<u>subterranean organs</u>	Study of selected medicinal subterranean organs	14, 15 th	4
8	<u>Final exam</u>		16 th	2
Total number of weeks and hours			16	32



Second: Practical/Tutorial/Clinical Aspects :			
Write up practical/tutorial/clinical topics			
No.	Practical/Tutorial/Clinical topics	Week due	Contact Hours
1	Preparation of slide, types of starch	1	2
2	Macroscopical and microscopical examination for selected medicinal Leaves	4	8
3	Macroscopical and microscopical examination for selected for medicinal Barks	4	8
4	Macroscopical and microscopical examination for selected for medicinal Subterranean organ	3	6
Total number of weeks and hours		12	24

VI. Teaching Strategies
1. lectures
2. Practical session
3. independent study
4. presentation

VII. Tasks and Assignments			
No.	Task/Assignment	Week due	Mark
1	Assignments	4 & 5 th	5
2	Quiz	7 th	5
3	Midterm Exam	7 & 13 th	20
4	Practical	14 th	30
5	Final Exam	16 th	40

VIII. Learning Assessment:				
No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Assignment and quizzes	7 & 4 & 5 th	10	10%
2	practical	14 th	30	30%
3	Written exam " mid + final"	16 & 7 & 13 th	60	60%
Total				



IX. Learning Resources :	
(Author, (Year), Book Title, Edition, Publisher, Country of publishing)	
Textbooks-not more than 2	
<ol style="list-style-type: none"> 1-Trease G. E. and Evan W. C, 2009, pharmacognosy, 16th edition, Edinburgh ; New York. 2- Wallis, T.A,2005, Text book of pharmacognosy, 5th edition, Cbs. 	
Essential References-not less than 4	
<ol style="list-style-type: none"> 1. Barnes, J., Anderson, A.L. and Philipson, J.D, 2002, Herbal Medicine, 2. Jackson, B.P. and Snawdon, D.W, 1990, Atlas of Microscopy of Medicinal Plants 3. Balbaa,S., et. al,1976, Chemistry of Natural Products, 4. <u>Michael Heinrich</u>, <u>Joanne Barnes</u>, <u>Simon Gibbons</u>, <u>Elizabeth M. Williamson</u>, 2003,fundamental of pharmacognosy and phytotherapy, <u>Churchill Livingstone</u>,United Kingdom. 	
Electronic Materials and Web Sites	
<ol style="list-style-type: none"> 1. <u>WWW.Hinari.com."</u>journal of Phytochemistry, Ethnopharmacology" 2. WWW.PubMed.com. 	

X. Course Policies	
1	(Class Attendance): Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2	(Tardy) :
3	(Exam Attendance/Punctuality) : All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4	(Assignments & Projects) :
5	(Cheating) : Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6	(Plagiarism) : “To plagiarize is to take ideas or words of another person & pass them off as one’s own”. Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7	(Other policies) :



6.Course Syllabus Professional skills 1

خطة مقرر مهارات مهنية 1

I. General information about the course:					
1	Course Title :	Professional skills 1			
2	Course Code and Number :	PHS215			
3	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		1	-	-	--
4	Study Level and Semester:	Second Year – first Semester			
5	Pre-requisites (if any):	NA			
6	Co-requisites (if any):	NA			
7	Program in which the course is offered:	Bachelor of Pharmacy & Bachelor of PharmD			
8	Teaching Language:	English			
9	Instruction location:				

II. Course Description

This course is the study of medical terminology, the language of medicine, focusing on prefixes, suffixes, word roots and their combining forms. The students gain information regarding pharmaceutical and therapeutic terms and abbreviations, anatomy, disease, diagnostic procedures, pharmacology, and medical abbreviations. A basic understanding of the language used in medicine and nursing will enable the student to communicate more effectively and efficiently with other members of the health professions.

III. Course Aims:

1. Learn the basic rules and elements of a medical term.
2. Give knowledge about medical and pharmaceutical terms.
3. Enable use the various terms for weights and measures.
4. Help student to use or interpret the Latin abbreviations and their English meaning.
5. Describe the meaning of some pharmaceutical terminology.

IV. Course Intended Learning Outcomes (CILOs):

1. Explain the purpose and importance of medical and pharmaceutical terminology.



2. Recognition the general meaning of medical and pharmaceutical terms.
3. Identify the word elements used to build medical words.
4. Categorize pharmacy organizations according to practitioner, educational, or other interest.
5. Analyze terms pertaining to the body structure and abbreviations or symbols that contained in the prescription.
6. Apply the basic rules to define and build medical words.
7. Describe diagnostic and therapeutic procedures and other terms associated with body structure.
8. Estimate the necessity of communication effectively with patients and practitioners in health care.
9. Interpret symbols and abbreviations used in diagnosis and treatment using online internet

V. Course Contents

Theoretical Aspect:

No.	Course Units	Week due	Contact Hours
1	Introduction to professional pharmacy	1 st	1
2	Organization of pharmacy	2 nd	1
3	Introduction to medical terminology	3 ^{ed}	1
4	Pharmaceutical terms	4 th	1
5	Therapeutic terms	5 th	1
6	Diseases	6 th	1
7	Pharmacological terms	7 th	1
8	Respiratory system terms	8 th	1
9	Mid-term Exam	9 th	1
10	Cardiovascular System terms	10 th	1
11	Nervous System terms	11 th	1
12	Genitourinary System terms	12 th	1
13	Diagnostic term	13 th	1
14	Anatomical terms	14 th	1
15	Dental terms	15 th	1
16	Final-term Exam	16 th	1
Total number of weeks and hours		16	16

VI. Teaching Strategies

1. Instructor-student interactive lecture
2. Interactive class discussions
3. Micro-assignments
4. Seminars
5. Office hours



VII. Tasks and Assignments			
No.	Task/Assignment	Week due	Mark
1.	Assignment 1	5 th	5
2.	Assignment 2	11 th	5

VIII. Learning Assessment:				
No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Homework/Tasks/Assignments	7,11 th	10	10%
2	Midterm Exam	9 th	30	30%
3	Final Exam	16 th	60	60%
Total			100	100%

IX. Learning Resources	
Textbooks <ol style="list-style-type: none"> Gerhard Nahler, (2009), Dictionary of Pharmaceutical Medicine, 2nd edition, Springer Wien New York Ann Ehrlich and Carol L. Schroeder, (2009), Medical Terminology for Health Professions, Sixth Edition, Delmar Cengage Learning, United States of America. 	
Essential References: <ol style="list-style-type: none"> Barbara A. Gyls, Mary Ellen Wedding., (2009), Medical Terminology Systems A Body Systems Approach, Sixth Edition, F. A. Davis Company Beverly Henderson & Jennifer Dorsey, (2009), Medical Terminology For Dummies, Wiley Publishing, Inc., Indianapolis, Indiana Handout notes of course 	
Electronic Materials and Web Sites: <ol style="list-style-type: none"> Word Document or Portable Data Files (PDF) for Lectures Delivery. http://www.medilexicon.com/medicalabbreviations.php http://www.corexcel.com/html/online.medical.terminology.htm 	

X. Course Policies	
1.	(Class Attendance): Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2.	(Tardy) :
3.	(Exam Attendance/Punctuality) : All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.



4.	(Assignments & Projects) :
5.	(Cheating) : Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6.	(Plagiarism) : "To plagiarize is to take ideas or words of another person & pass them off as one's own". Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7.	(Other policies) :

7.Course Syllabus Leadership Skills Development

خطة مقرر تنمية المهارات القيادية

I. معلومات عامة عن المقرر:				
تنمية المهارات القيادية				1. اسم المقرر:
BUST04				2. رمز المقرر ورقمه:
المجموع	الساعات المعتمدة			3. الساعات المعتمدة للمقرر:
	نظري	سمنار/تمارين	عملي	
1				1
حسب خطة كل برنامج				4. المستوى والفصل الدراسي:
لا يوجد				5. المتطلبات السابقة لدراسة المقرر (إن وجدت):
لا يوجد				6. المتطلبات المصاحبة لدراسة المقرر (إن وجدت):
كل برامج الجامعة				7. البرنامج/ البرامج التي يتم فيها تدريس المقرر:
العربية				8. لغة تدريس المقرر:
قاعات الجامعة				9. مكان تدريس المقرر:

II. وصف المقرر الدراسي:
يهدف المقرر الى تنمية بعض المهارات القيادية والإدارية لدى الدارسين، وتنمية فرص التميز لديهم، من خلال تعريفهم بسمات الشخصية القيادية والإدارية، وأهم طرق واساليب التحول من التبعية الى القيادة، وتعريفهم بأهم استراتيجيات التميز والتفاعل القيادي، إضافة الى تنمية بعض مهارات وأخلاقيات القيادة والإدارة المتعلقة بالتخطيط وإدارة الذات والآخرين، وطرق واساليب اتخاذ القرارات الفعالة، واساليب التحفيز، واساليب التحفيز، ومهارات قيادة التغيير، وأخلاقيات الإدارة والقيادة.
III. أهداف المقرر:
يتوقع من الدارس بعد دراسة هذا المقرر ان يكون قادرا على أن:
1. تحديد مفهوم القيادة مع بيان عناصرها.
2. التمييز بين الانماط النظرية والعلمية للقيادة.
3. تحديد الفرق بين المدير والقائد.
4. التمييز بين مهام القائد الجديد (القائد المطور - القائد الطبيب - القائد المهندس).
5. تحديد مفهوم الإدارة وعناصرها ووظائفها المختلفة.
6. الإلمام ببعض الأخلاقيات الهامة للقيادة والإدارة.



7. الإلمام ببعض المهارات الهامة للقيادة والإدارة.
8. ممارسة دور القيادة والإدارة على الواقع العملي، وتلافي بعض الممارسات المؤثرة على نجاحها.

IV. مخرجات التعلم المقصودة للمقرر:

1. معرفة المقصود بالقيادة والتميز بينها وبين الإدارة ومعرفة وظائف الإدارة.
2. استيعاب أهمية المهارات القيادية للبناء عليها والاستفادة من الخبرات والتجارب.
3. تحليل عمليات القيادة من خلال معرفة المستويات الإدارية والقيادية.
4. إدراك الصفات القيادية للقائد الناجح وأخلاقيات القيادة والإدارة بهدف التحلي بها أثناء القيام بالمهام الوظيفية.
5. التعرف على مصادر وأماكن ومراحل صناعة القائد.
6. معرفة إدارة الذات ومقوماتها واكتشافها وتقييم الذات وتطويرها من خلال تحديد الرؤية.
7. فهم المقصود بالتخطيط الشخصي والاستراتيجي وإدارة الوقت.
8. التعرف على أساليب الاتصال الناجح وعملية تقييم أداء الفرد والمنظمة.
9. تقويم الأخطاء والتدريب على تنفيذ مشاريع والقيام بأنشطة.
10. بناء الحجج المقنعة أثناء المحاورات والمناقشات في مجالات القيادة والإدارة واستيعاب الآخرين ومعرفة أدب الخلاف.

V. محتوى المقرر:

الجانب النظري:

الرقم	وحدات المقرر	المواضيع التفصيلية	الأسبوع	الساعات الفعلية
1	القيادة	- تعريف القيادة. - أهمية دراسة تنمية المهارات القيادية. - عناصر القيادة. - أنماط القيادة ونظرياتها.	1 st	2
2	الإدارة	- تعريف الإدارة. - أهمية الإدارة. - مستويات الإدارة. - وظائف الإدارة. - أنواع الإدارة.	2 nd	2
3	منهجية التغيير في حياة الأفراد والمنظمات	- تعريف التغيير واهدافه. - أهمية التغيير. - أنواع التغيير. - مواجهة مقاومة التغيير. - قواعد التغيير. - خطوات التغيير.	3 ^{ed}	2
4	إدارة الذات وأهميتها في تنمية المهارات القيادية والإدارية	- تعريف إدارة الذات. - أسئلة الذات. - اكتشاف الذات. - تقييم الذات. - تطوير الذات.	4 th	2
5	صناعة القائد	- مصادر صناعة القائد. - أماكن صناعة القائد. - مراحل صناعة القائد.	5 th	2
6	أخلاقيات القيادة والإدارة	- مفهوم أخلاقيات الإدارة. - أهداف أخلاقيات الإدارة. - أخلاقيات القيادة والإدارة في الإسلام. - العناصر والممارسات المؤثرة على أخلاقيات الإدارة.	6 th	2
7	التخطيط وإدارة الأزمات	- التخطيط الشخصي. - التخطيط الاستراتيجي.	7 th	2



		إدارة الأزمات.		
2	8 th	صناعة القرار والتعامل مع المشكلات.	8	
2	9 th	إدارة الوقت	9	
2	10 th	مهارات الاتصال	10	
2	11 th	مهارات وصفات القائد الناجح	11	
2	12 th	تقييم الأداء للأفراد والمنظمات	12	
24	12	إجمالي عدد الأسابيع والساعات		

VI. استراتيجيات التدريس	
1-	المحاضرات
2-	التكليفات افردية
3-	التكليفات الجماعية
4-	التجربة العملية
5-	تحليل المواقف والمعلومات
6-	أي استراتيجيات يمكن استخدامها بحسب الحاجة

VII. الأنشطة والتكليفات:			
الرقم	النشاط/ التكليف	الأسبوع	الدرجة
1.	إعداد وتقديم التكليفات والمشاريع الجماعية والفردية	موزعة على أسابيع الفصل	10
2.	المشاركة والتفاعل والأنضباط، والمساهمة في تقييم التكليفات والمشاريع الجماعية والفردية	موزعة على أسابيع الفصل	10

VIII. تقييم التعلم:				
الرقم	موضوعات التقييم	موعد التقييم/ اليوم والتاريخ	الدرجة	الوزن النسبي (نسبة الدرجة إلى درجة التقييم النهائي)
3.	التكليفات الفردية والجماعية	موزعة على أسابيع الفصل	10	10%
4.	المشاركة والتفاعل والإنضباط	موزعة على أسابيع الفصل	10	10%
5.	أختبار نصف الفصل	منتصف الفصل الدراسي	20	20%
6.	أختبار نهاية الفصل	نهاية الفصل الدراسي	60	60%
	المجموع		100	100%

IX. مصادر التعلم:	
المراجع الرئيسية:	



1. د. مدحت محمد أبو النصر، (2012)، قادة المستقبل، القيادة المتميزة الجديدة، المجموعة العربية للتدريب والنشر، القاهرة.
المراجع المساعدة:
1. د. طارق السويدي، (2011)، صناعة القائد، الطبعة السابعة.
2. د. إبراهيم الفقي (2008)، سحر القيادة، دار اليقين للنشر والتوزيع، مصر.
3. د. فهد سعود عبد العزيز العثيمين، (2008)، أخلاقيات الإدارة في الوظيفة العامة.
4. عبد الشافي محمد أبو العينين، (1996)، القيادة الإدارية في الإسلام، المعهد العالمي للفكر الإسلامي القاهرة.
5. ستيفن آر. كوفي، (2005)، القيادة المرتكزة على مبادئ، مكتبة جرير، الرياض.
6. توني بوزان، (2006) القائد الذكي، مكتبة جرير، الرياض.

X. الضوابط والسياسات المتبعة في المقرر	
1.	الحضور والغياب Class Attendance: : تحدد سياسة الحضور ومتى يعتمد الغياب وكيفيته ونسبته، ومتى يعد الطالب محروماً من المقرر
2.	الحضور المتأخر Tardy : يتم تحديد السياسة المتبعة في حالات تكرار تأخر الطالب عن حضور الفعاليات التعليمية
3.	ضوابط الاختبارات والامتحانات Exam Attendance/Punctuality: تحديد السياسات المتبعة في حالات الغياب عن الامتحان و توصيف السياسة المتبعة في حالات تأخر الطالب عن الامتحان، وكذلك السياسات المتبعة في حالة إعادة الامتحان في الظروف المقبولة.
4.	التكاليف / المهام والمشاريع Assignments & Projects: تحديد السياسات المتبعة في حالات تأخير تسليم التكاليف والمشاريع ومتى يجب أن تسلم إلى الأستاذ.
5.	الغش Cheating: تحدد هنا السياسات المتبعة في حالات الغش إما في الامتحانات أو في التكاليف بأي طريقة من طرائق الغش.
6.	الانتحال (Plagiarism): يحدد تعريف الانتحال وحالاته والإجراءات المتبعة في حالة حدوثه.
7.	سياسات أخرى (Other policies): أي سياسات أخرى مثل استخدام الموبايل أو مواعيد تسليم التكاليف..... الخ



Second Semester

الفصل الثاني

1.Course Syllabus Organic Chemistry 2

خطة مقرر كيمياء عضوية 2

I. General information about the course:						
1.	Course Title :	Organic Chemistry 2				
2.	Course Code and Number :	PHS220				
3.	Credit Hours :	Credit Hours				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		2	-	2	-	
4.	Study Level and Semester:	Second Year – second Semester				
5.	Pre-requisites (if any):	PHS210				
6.	Co-requisites (if any):					
7.	Program in which the course is offered:	Bachelor of Pharmacy & Bachelor of PharmD				
8.	Teaching Language:	English				
9.	Instruction location:					

II. Course Description

This course prepares the students for the different types and preparation of organic compound name culture, synthesis, reaction mechanism of compounds, containing various functional group, selected example of medicinal & pharmaceutical compounds. This course will offer basic information which help students to understand the drug design, synthesis, and mechanism. The courses require general chemistry, as a pre-request.

The students will complete practical course to acquire practical skills.

III. Course Aims:

1. Provide the students fundamental principle of organic chemistry.
2. Train the student to naming organic compounds.
3. Enable the student to synthesize new organic compounds.
4. Enable the student to work as member team work skills



IV. Course Intended Learning Outcomes (CILOs) :

1. Know the rule of nomenclatures of organic compound.
2. Discuss various types of reactions with electrophilic, nucleophilic, oxidizing and reducing reagents and the relationship between structure physical and chemical properties..
3. Synthesize of organic compound.
4. Propose the mechanism for reactions and successful way for solving problems of multi step synthesis
5. Handle chemicals properly and safely.
6. prepare simple organic compound.
7. Demonstrate critical thinking, synthesis and interpretation of pharmaceutical information, and responsibility.
8. Work effectively as a part of team in order to fulfill certain project.

V. Course Contents

Theoretical Aspect:

No.	Course Units	Sub-topics	Week due	Contact Hours
1	carboxylic acids and their derivatives	Naming, physical and chemical properties, preparation and reaction	1 st	3
2	Aromaticity, Nomenclature ,Reactions of Benzene; Electrophilic Substitution.	Naming, physical and chemical properties, preparation and reaction	2 nd & 3 ^{ed}	6
3	Alkyl benzene and aryl benzene	Naming, physical and chemical properties, preparation and reaction	4 th	2
4	First Test		5 th	2
5	Orientation of electrophilic reactions	preparation and reaction	6 th	2
6	Aryl halides and Aromatic nucleophilic substitutions	Naming, physical and chemical properties, preparation and reaction	7 th	2
7	Aromatic and aliphatic amines	Naming, physical and chemical properties, preparation and reaction	8 th	2
8	Aromatic Diazonium salts, Aromatic Nitro-Compounds	Naming, physical and chemical properties, preparation and reaction	9 th	2
9	Aromatic sulphonic acids,	Naming, physical and	10 th	2



	sulphonamides and Aromatic aldehydes and ketones	chemical properties, preparation and reaction		
10	Second exam		11 th	2
11	Aromatic carboxylic acids	Naming, physical and chemical properties, preparation and reaction	12 th	2
12	Heterocyclic chemistry	Naming, physical and chemical properties, preparation and reaction	13 ,14 th	2
13	Polynuclear aromatic compounds	Naming, physical and chemical properties, preparation and reaction	15 th	2
14	Final Exam		16 th	2
Total number of weeks and hours			16	32

Second: Practical/Tutorial/Clinical Aspects :

Write up practical/tutorial/clinical topics

No.	Practical/Tutorial/Clinical topics	Week due	Contact Hours
1.	Introduction	1	3
2.	Preparation of Acetanalide.	1	3
3.	Preparation of p-Nitro Acetanalide.	1	3
4.	Preparation of Aspirin.	1	3
5.	Preparation of Azo-dye.	1	3
6.	Preparation of Soap.	1	3
7.	Isolation of Caffiene	1	3
8.	Hydrolysis of Aspirin	1	3
9.	Preparation of Methyl salysalate.	1	3
10.	Recrystalization	1	3
11.	Final Exam	1	2
Total number of weeks and hours		11	32



VI. Teaching Strategies

Lectures
Interactive class discussions
Practical sessions
Assignments

VII. Tasks and Assignments

No.	Task/Assignment	Week due	Mark
1	Report and work semester	6,12 th	10

VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Midterm exam	6,11 th	20	20%
2	Assignment	6,12 th	10	10%
3	Practical Part	14 th	30	30%
4	Final Exam	16 th	40	40%
Total			100	100%

IX. Learning Resources

Textbooks

- 1-Robert Atkins and Francis Carey, 2002, Organic Chemistry: A Brief Course, McGraw- Hill, North America
- 2-Morrison and Boyd, 2011, Organic Chemistry, Pearson, India

Essential References:

- 1- T.W.G. Solomon's, Organic Chemistry.
- 2-A Guide Book to Mechanism in Organic Chemistry P.Sykes

Electronic Materials and Web Sites:

WWW.Hinari.com."journal of Organic Chemistry"

X. Course Policies

1.	(Class Attendance): Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2.	(Tardy) :



3.	(Exam Attendance/Punctuality) : All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4.	(Assignments & Projects) :
5.	(Cheating) : Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6.	(Plagiarism) : “To plagiarize is to take ideas or words of another person & pass them off as one’s own”. Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7.	(Other policies) :

2.Course Syllabus Physiology 2

خطة مقرر علم وظائف الأعضاء 2

I. General information about the course:					
1.	Course Title :	Physiology 2			
2.	Course Code and Number :	PHF221			
3.	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		2	-	2	-
4.	Study Level and Semester:	Second Year – Second Semester			
5.	Pre-requisites (if any):	PHF211,PHF110			
6.	Co-requisites (if any):				
7.	Program in which the course is offered:	Bachelor of Pharmacy & Bachelor of PharmD			
8.	Teaching Language:	English			
9.	Instruction location:				



II. Course Description

Physiology 2 is a continuation of Physiology I. This course examines the function relationships of the cardiovascular system, lymph and lymphatics, introduction to respiratory system, functional anatomy of the kidneys, introduction to reproductive system, menstrual cycle, introduction to central nervous system, pain physiology.

III. Course Aims:

- 1- Describe and identify the major functions of f the cardiovascular system and the physiological mechanism of ECG.
- 2- Describe the function of each organ of the respiratory system and explain how oxygen and carbon dioxide are transported to and from the tissues of the body.
- 3) Describe the general functions of the lymphatic system and the defense mechanisms of the human body.
- 4) Explain the urination and how water and electrolyte balance is maintained.
- 5) Describe the major glands functions of the endocrine system.
- 6) Describe the general functions of the male and female reproductive systems and the hormones that control oogenesis and spermatogenesis.
- 7) Describe the central nervous system function and the pain physiology.

IV. Course Intended Learning Outcomes (CILOs) :

1. Knowledge the structure and function of the studied systems
2. Knowledge of cell structure and function
3. Know more informations about units and medical analysis
4. Apply the new techniques in solving problems
5. Reform hematological analysis related to units.
6. Choose and classify data obtained from physiological experiments.
7. Present data in graphical using IT methods.
8. Communicate effectively with students by discussing results obtained from experimental physiological lab.



V. Course Contents

Theoretical Aspect:

No .	Course Topics/Units	Sub-topics	Week due	Contact Hours
1	Introduction to cardiovascular system Heart and its properties Blood pressure	<ul style="list-style-type: none"> - Physiological anatomy, pulmonary and systemic circulation - Properties of cardiac muscle, introduction to ECG. - Heart sounds, cardiac cycle and cardiac output. - Blood pressure and factor Determining and maintaining it. 	1 st & 2 nd	4
2	Lymph system	Lymph and lymphatic: formation and functions.	3 ^{ed}	2
3	Introduction to respiratory system.	<ul style="list-style-type: none"> mechanism of respiration and lung compliance. Exchange and transport of gases, regulation of respiration and hypoxia. 	4 th & 5 th	4
4	Midterm	—————	6 th	2
5	The kidney and its units	<ul style="list-style-type: none"> Functional anatomy of the kidneys. Mechanisms of urine formation. renal clearance and glomerular filtration rate (GFR). Regulation of acid-base balance by the kidneys. 	7 th & 8 th	4
6	Endocrine system	Introduction to endocrine system: endocrine glands and their functions.	9 th & 10 th	4



7	Reproductive system	Introduction to reproductive: male and female reproductive system. Menstrual cycle	10 th 12 th	4
	Central nervous system	Introduction to central nervous system. Physiology of pain.	13 th	2
8	Final exam		14 th	2
Total number of weeks and hours			14	28

VI. Teaching Strategies

1. Lectures and presentation
2. Activation
3. micro-report
4. micro- assignments
5. Brainstorming session

VII. Learning Assessment:

No.	Assessment Tasks	Week due	Mark	Proportion of Final Assessment	
1.	Homework/Tasks/Assignments	3 ^{ed} , 6, 8, 11 th	10	10%	
2.	Quiz 1	4 th	5	5%	
3.	Midterm Exam	7 th	20	20%	
4.	Quiz 2	12 th	5	5%	
5.	Practical work	14 th	30	30%	
6.	Final Exam	16 th	40	40%	
Total			100	100%	



VIII. Learning Resources :

(Author, (Year), Book Title, Edition, Publisher, Country of publishing)

Textbooks-not more than 2

- 1- Guyton and Hall, 2012, Text book of medical physiology, 24th Ed., Mississippi Medical Center, Jackson, Mississippi, USA
- 2- Laurie Kelly 2005, Essentials of Human Physiology for Pharmacy. 1st Ed., CRC Press, Pharmacy Education series

Essential References-not less than 4

- 1- Stuart Ira Fox, 2012 Human Physiology, 13th Ed.
Thibodeah & patton 1999, Anatomy & Physiology, 5th Ed.
- 2- Barbara J. Bain and Rajeev Gupta, 2003. A–Z of Haematology 1st Ed. Blackwell Publishing Ltd. Lond
- 3- David Shier 2012, Human Anatomy & Physiology 13th Ed.

Electronic Materials and Web Sites

1. www.csun.edu/science/biology/anatomy/anatomy.html
2. www.cliffsnotes.com
3. www.innerbody.com
4. www.anatomyandphysiology.com/
5. www.mhhe.com/biosci2/anatomyrevealed
6. www.le.ac.uk/pa/teach/va/anatomy

IX. Course Policies

1. (Class Attendance): Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2. (Tardy) : Attendance will be taken every lecture at the first 15 minutes and any student come after that will be considered absent.
3. (Exam Attendance/Punctuality) : All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade.
If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F



	will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4.	(Assignments & Projects) : All assignments must be done on their time. Late assignments will not be accepted. Projects are assumed to be submitted on or before the dead-lines.
5.	(Cheating) : Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6.	(Plagiarism) : “To plagiarize is to take ideas or words of another person & pass them off as one’s own”. Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7.	(Other policies) : Students in class are required to turn off all cell phones, iPods or any communication instrument

3.Course Syllabus Biochemistry 2

خطة مقرر الكيمياء الحيوية 2

I. General information about the course:					
1.	Course Title :	Biochemistry 2			
2.	Course Code and Number :	PHF222			
3.	Credit Hours :	Lecture			
		Theoretical	Seminar/Tutorial	Practical	Training
		2	-	2	-
4.	Study Level and Semester:	Second Year – Second Semester			
5.	Pre-requisites (if any):	PHF212			
6.	Co-requisites (if any):				
7.	Program in which the course is offered:	Bachelor of Pharmacy & Bachelor of PharmD			



8.	Teaching Language:	English
9.	Instruction location:	

II. Course Description

This course provides students with basic knowledge about metabolic pathways and their key steps. It also help student understand generation and storage of metabolic energy. This course also acquaint medical students with some basic biochemical lab techniques, help them to perform some independent lab work and learn to cooperate with their colleagues in a laboratory environment. In the laboratory sessions, students are expected to learn how to use the centrifuge and spectrophotometer. Protein concentration, glucose and cholesterol level in the plasma will be determined using spectrophotometer

III. Course Aims:

1. Enable the student to illustrate and/or describe the metabolic pathways of macronutrients and nucleotides.
2. Enable the students to point-out hereditary and acquired metabolic disturbances and their biochemical laboratory and clinical outcomes.
3. Enable the student to point out the bioenergetics of the concerned metabolic pathways under different physiological circumstances and their integrator regulations with other working metabolic pathways.
4. Enable the student to interpret medical laboratory reports.

IV. Course Intended Learning Outcomes (CILOs) :

1. Define the metabolic pathways of carbohydrates, lipids, proteins, nucleotides and their micro-molecules and determine the site of each.
2. Illustrate the steps and regulatory mechanisms of the metabolic pathways
3. Point out the related metabolic disorders and their clinical prints on biochemical and molecular basis.
4. Calculate the bioenergetics of the concerned metabolic pathways under different physiological circumstances
5. Point out the clinical significance of determination of plasma levels of glucose, total proteins, albumin, cholesterol, creatinine and uric acid and some enzymes.
6. Estimate serum levels of glucose, total proteins, albumin, cholesterol, creatinine and uric acid by colorimetric methods.
7. The student is able to work effectively in a group in lab or during preparation of seminars.

V. Course Contents

Theoretical Aspect:

No.	Course Units	Sub-topics	Week due	Contact Hours
1	Metabolism of	1. Glycolysis 2. Gluconeogenesis	1 st 2 nd	1 2



	carbohydrate	3. Krebs cycle 4. Glycogenesis 5. Glycogenolysis 6. Metabolism of Galactose and fructose 7. Pentosephosphate pathway	3 ^{ed} 4 th 4&5&6 th	2 2 1 1 1
2	Metabolism of Lipids	1. Biosynthesis of fatty acids 2. Biosynthesis of triacylglycerols 3. Lipolysis 4. Oxidation of fatty acids 5. Ketone bodies formation and oxidation 6. Biosynthesis of cholesterol	7&8&9 th	6
3	Metabolism of amino acid	1. Transamination reaction 2. Urea cycle 3. Glucose- alanine cycle 4. Biosynthesis of non-essential amino acids 5. Catabolism of carbon skeleton of amino acids 6. Disorders in amino acid metabolism	10&11&12 th	6
4	Nucleic acid metabolism	1. Biosynthesis of purine nucleotides 2. Biosynthesis of pyrimidines nucleotides 3. Catabolism of Purina and pyrimidines	13&14&15 th	6
Total number of weeks and hours			15	28

Second: Practical/Tutorial/Clinical Aspects :

Write up practical/tutorial/clinical topics

No.	Practical/Tutorial/Clinical topics	Week due	Contact Hours
1.	Instruments in biochemistry lab& lab safety	2	2
2.	Estimation of blood glucose	3	2
3.	Estimation of cholesterol	4	2
4.	Estimation of triglyceride	5	2
5.	Estimation of total protein	6	2
6.	Estimation of total albumin	7	2
7.	Estimation of uric acid	8	2
Total number of weeks and hours		8	14



VI. Teaching Strategies
Lecture Self learning Small group dissection Tutorial Teaching in lab

VII. Tasks and Assignments			
No.	Task/Assignment	Week due	Mark
1	Homework/Tasks/Assignments/ seminar	2,8,10 &12 th	10
2	Quiz 1	3 ^{ed}	5
3	Midterm Exam	6 th	10
4	Quiz 2	9 th	5
5	Practical exam	15 th	20
6	Final Exam	16 th	50
			100

VIII. Learning Assessment:				
No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Homework/Tasks/Assignments/	2,8,10 &12 th	10	10%
2	Quiz 1	3 ^{ed}	5	5%
3	Midterm Exam	6 th	10	10%
4	Quiz 2	9 th	5	5%
5	Practical exam	15 th	20	20%
5	Final Exam	16 th	50	50%
	Total		100	100%

IX. Learning Resources
Textbooks 1. Robert K. et al. 2005, Harper's Biochemistry, 25 th edition 2. Victor L. and Donald B. 1994, The national medical series for independent study (NMS), 3 rd edition
Essential References 1. Lippincotts, illustrated 2. Stryer biochemistry , By lubert Stryer 3. Devlin biochemistry 4. Lecture notes
Electronic Materials and Web Sites



1. <https://www.biochemistry.org/>
2. www.acb.org.uk/
3. www.asbmb.org.au/
4. www.asbmb.org/
5. <http://www.ncbi.nlm.nih.gov/pmc/journals/1386/>
6. <http://www.biochemj.org/bj/default.htm>
7. <http://journal.chemistrycentral.com/>

X. Course Policies	
1.	(Class Attendance): Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2.	(Tardy) :
3.	(Exam Attendance/Punctuality) : All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4.	(Assignments & Projects) :
5.	(Cheating) : Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6.	(Plagiarism) : "To plagiarize is to take ideas or words of another person & pass them off as one's own". Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7.	(Other policies) :



4.Course Syllabus Analytical Chemistry

خطة مقرر كيمياء تحليلية

I. General information about the course:					
1.	Course Title :	Analytical Chemistry			
2.	Course Code and Number :	PHS223			
3.	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		2		2	
4.	Study Level and Semester:	Second Year – Second Semester			
5.	Pre-requisites (if any):	PHS120			
6.	Co-requisites (if any):	NA			
7.	Program in which the course is offered:	Bachelor of Pharmacy & Bachelor of PharmD			
8.	Teaching Language:	English			
9.	Instruction location:				

II. Course Description
Analytical chemistry is more than a large dose of equilibrium or a collection of analytical methods. Thus, the purpose of this course is to provide pharmaceutical students with technical and intellectual skills and help him/her to be an independent thinker who can approach pharmaceutical problems from different directions. The course requires learning the concepts of General chemistry 1& 2 as pre-requisite. Different methods of teaching/learning are used in this course including lectures, seminars and practical skills.
III. Course Aims:
<ol style="list-style-type: none"> 1. Know the special language of analytical chemistry. 2. Develop good experimental protocols to tackle analytical problems in the pharmaceutical area. 3. Interpreting and evaluating analytical results. 4. Comprehend the basic ideas of expressing analytical concentrations. 5. Demonstrate critical thinking, problem-solving, and decision making, when dealing with theoretical and practical chemical information in this course. 6. Work effectively as part of a team to collect data and/or to produce reports and presentations.



IV. Course Intended Learning Outcomes (CILOs) :

1. Explain the various concepts of equilibrium chemistry and how equilibrium in chemical reactions is influenced.
2. Classify the different methods in analytical chemistry.
3. Intellectual Skills:
4. Explore the different methods of Analysis, calibration, standardization and blank correction.
5. Apply and handle properly the chemical compounds in the laboratory and be aware of the rules of good laboratory and storage practice to minimize the errors of an applied analytical method.
6. Solve problems in various analytical areas including, solution concentration, buffer pH, etc.
7. Practice the proper chemical analytical procedures for operation of standard instrumentation. And Solve problems in various analytical areas including, solution concentration, buffer pH, etc.
8. Apply the information technology skills, such as word processing and internet communication and online searches.
9. Estimate the suitable method for analysis of drug substances depending on basic understanding of physic-chemical properties of the chemical compounds.
10. Inspect the time in an analytical work effectively.

V. Course Contents

Theoretical Aspect:

No.	Course Units	Sub-topics	Week due	Contact Hours
1	The nature of analytical chemistry	-Importance of analytical chemistry analytical prospective -Role of analytical chemistry. Quantitative analytical chemistry. -An integral role for analytical chemistry -common analytical problems	1 st	2
2	Basic Tools of Analytical Chemistry	2A Numbers in Analytical Chemistry A.1 Fundamental Units of Measure 2A.2 Significant Figures 2B Units for Expressing Concentration 2B.1 Molarity and Formality 2B.2 Normality 2B.3 Molality 2B.4 Weight, Volume, and Weight-to-Volume Ratios	2 nd & 3 ^{ed}	4



		2B.5 Converting Between Concentration Units 2B.6 p-Functions 2C Stoichiometric Calculations 2C.1 Conservation of Mass 2C.2 Conservation of Charge 2C.3 Conservation of Protons 2C.4 Conservation of Electron Pairs 2C.5 Conservation of Electrons 2C.6 Using Conservation Principles in Stoichiometry Problems		
3	The Language of Analytical Chemistry	3A Analysis, Determination, and Measurement 3B Techniques, Methods, Procedures, and Protocols 3C Classifying Analytical Techniques 3D Selecting an Analytical Method 3D.1 Accuracy 3D.2 Precision 3D.3 Sensitivity 3D.4 Selectivity 3D.5 Robustness and Ruggedness 3D.6 Scale of Operation 3D.7 Equipment, Time, and Cost 3D.8 Making the Final Choice 3E Developing the Procedure 3E.1 Compensating for Interferences 3E.2 Calibration and Standardization 3E.3 Sampling 3E.4 Validation	4&5 th	4
4	MID Exam		6 th	2
5	Calibrations, Standardizations and Blank Corrections	5A Calibrating Signals 5B Standardizing Methods 5B.1 Reagents Used as Standards 5B.2 Single-Point versus Multiple-Point Standardizations 5B.3 External Standards 5B.4 Standard Additions 5B.5 Internal Standards 5C Linear Regression and Calibration Curves 5C.1 Linear Regression of Straight-	7&8 th	4



		Line Calibration Curves		
6	Errors in analytical chemistry	Systematic Errors, their sources unsystematic errors Effect of unsystematic errors on analytical data Q-test	9 th	2
7	Aqueous solution and Chemical Equilibrium	9A-1 Classifying Solutions of Electrolytes 9A-2 Acids and Bases 9A-3 Amphiprotic Species 9A-4 Autoprotolysis 9A-5 Strengths of Acids and Bases 9B- Chemical equilibrium 9B-2 Equilibrium-Constant Expressions 9B-3- types of equilibrium constants encountered in analytical chemistry 9B-4Applying the Ion-Product Constant for Water 98-5 Applying Solubility-Product Constants 9C- Buffer solutions 9C-1 Calculation of the pH of Buffer Solutions The Henderson-Hasselbalch Equation 9C-2 Properties of Buffer Solutions Buffer capacity Buffer preparation	10&11 th	4
8	Effect of Electrolytes on Chemical Equilibrium	- The Effect of Ionic Charges on Equilibrium - The Effect of Ionic Strength -1 Properties of Activity Coefficients -The Debye-Huckel Equation - Equilibrium Calculations Using Activity Coefficients	12&13 th	4
9	Principles of Neutralization titration	-Solutions and indicators for acid/base titrations - Standard Solutions -Acid/Base Indicators -Examples of titrations: strong + strong Strong + weak Weak +weak	14&15 th	4



		Titration curves		
10	Final Exam		16 th	2
Total number of weeks and hours				32

Second: Practical/Tutorial/Clinical Aspects :

Write up practical/tutorial/clinical topics

No.	Practical/Tutorial/Clinical topics	Week due	Contact Hours
1	Introduction to how to use the tools of analytical work	1	3
2	Preparation and standardization of HCl	1	3
3	Application of acid base titration	1	3
4	Application of Mixtures titrations	1	3
5	Application of Redox titration	1	3
6	Application of precipitation titration	1	3
7	Application of Complex titration	1	3
8	Application of nonequeous titration	1	3
9	Determination of Vitamin C	1	3
10	Preparation of Buffer solutions	1	3
11	Titration curves: 1-Strong acid & Strong base 2-Weak acid & Strong base 3-Strong acid & Weak base	1	3
12	Gravimetric Analysis	1	3
13	Final Practical Exam		3
Total number of weeks and hours		16	32

VI. Teaching Strategies

1. Lectures
2. Interactive Class Discussions
3. Research
4. Assignments
- 5-Office Hours (Tutorials)
- 6-Practical Classes

VII. Tasks and Assignments

No.	Task/Assignment	Week due	Mark
1	Assignments(1)	3 rd , 5 th	3
2	Assignments(2)	7, 10 th	3
3	Work Semester	11 th	4



VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Homework/Tasks/Assignments	4,5,6,10 th	10	10%
2	Midterm Exam	5,10 th	20	20%
3	Practical Exam	13 th	30	30%
5	Final Exam	16	40	40%

IX. Learning Resources

(Author, (Year), Book Title, Edition, Publisher, Country of publishing)

Textbooks-not more than 2

3. Modern analytical chemistry, David Harvey, McGraw-Hill Higher Education, 2004.
4. D. A. Skoog and d. M. west, "Fundamentals of Analytical Chemistry", 7th ed CBS Publishing Asia Ltd (2004).

Essential References-not less than 4

1. Analytical Chemistry, Gary D. Christian , 2004.
2. Vogels Textbook of Quantitative Inorganic Analysis, 6th Edition Longman Scientific and Technical, USA
3. Amer M. M., Pharmaceutical Analytical Chemistry Quantitative Analysis, Cairo.
4. Fifield & Keal D., Principles & Practice of Analytical Chemistry.

Electronic Materials and Web Sites

1. The Analyst 2- 3- J.
2. J. Pharm. & Biomed. Anal.
3. Assoc. off Anal. Chem.

X. Course Policies

1.	Class Attendance :Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2.	Tardy :
3.	Exam Attendance/Punctuality : All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first



	attempt in the second attempt examinations.
4.	Assignments & Projects:
5.	Cheating: Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6.	Plagiarism: "To plagiarize is to take ideas or words of another person & pass them off as one's own". Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7.	Other policies:

5.Course Syllabus Pharmacognosy 2

خطة مقرر عقاقير 2

I. General information about the course:					
1.	Course Title :	Pharmacognosy 2			
2.	Course Code and Number :	PHS224			
3.	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		1	-	1	-
4.	Study Level and Semester:	Second Year – Second Semester			
5.	Pre-requisites (if any):	PHS214			
6.	Co-requisites (if any):				
7.	Program in which the course is offered:	Bachelor of Pharmacy & Bachelor of PharmD			
8.	Teaching Language:	English			
9.	Instruction location:				

II. Course Description

This course is a continuation of pharmacognosy I. It is provide an overview of the composition, beneficial properties, and potential side effects of the most commonly used herbal products. Topics include identification of some medicinal plants organs such as flower, fruits, seeds, herbs and unorganized drugs. The course requires to study of basic concepts of pharmacognosy as pre-request for pharmacognosy II. Different methods of teaching/learning are used in this course including lectures and seminar.



III. Course Aims:

1. Identification the method of detection of cultivation, collection, drying, storage and preparation of herbal drugs
2. Identification the parts of plants used, Macroscopical and micro-scopical features of different plant organs used.
3. To learn how to identify the active constituents by chemical means to assess the activity and genuineness of the drug.
4. Solving of problems of plant drugs related to their uses and preparation.
5. To acquire skills to identify medicinal and toxic plants.
6. Skill about how to identify adulteration

IV. Course Intended Learning Outcomes (CILOs) :

1. To acquired a knowledge about the meaning of pharmacognosy including herbal drugs and natural products concerning their identification, safety, optimum use as nutrient and in medication and their side effects and contra indication.
2. Identify the parts of plants used, active constituents, method of detection of cultivation, collection, drying, storage and preparation of herbal drugs.
3. relate the role of these medicinal plants in the treatment of different diseased conditions.
4. propose groups of plant drugs according to their therapeutic effects.
5. prescribe the medicinal and toxic plants and demonstrate the adulteration of any supplied natural drugs.
6. perform different chemical tests for identification of Active constituents of any given plant

V. Course Contents

Theoretical Aspect:

No.	Course Units	Sub-topics	Week due	Contact Hours
1	Flowers	<ul style="list-style-type: none"> • Introduction of flower • Example of medicinal flower 	1 st &2 nd &3 rd &4 th	4
2	Seeds	<ul style="list-style-type: none"> • Introduction of seeds. • Example of medicinal seeds 	5&6 th	2
3	Seeds	<ul style="list-style-type: none"> • Introduction of seeds. • Example of medicinal seeds 	7&8 th	2
4	<u>Mid term 1</u>		9 th	1
5	fruits	<ul style="list-style-type: none"> • Introduction of fruits. • Example of medicinal fruits 	10&11&12&13 th	4
7	herbs	Study of some medicinal herbs	14 th	1
	unorganized drug	Study of some unorganized drug.	15 th	1



8	Final exam		16 th	1
Total number of weeks and hours			16	16

Second: Practical/Tutorial/Clinical Aspects :

Write up practical/tutorial/clinical topics

No.	Practical/Tutorial/Clinical topics	Week due	Contact Hours
1	Macroscopicl and microscopical study of some medicinal flower	3	9
2	Macroscopicl and microscopical study of some medicinal seeds	3	9
3	Macroscopicl and microscopical study of some medicinal fruits	3	9
4	Macroscopicl study and chemical identification of some medicinal unorganized drugs	3	9
Total number of weeks and hours		12	36

VI. Teaching Strategies

1. lectures
2. Practical session
3. independent study
4. presentation

VII. Tasks and Assignments

No.	Task/Assignment	Week due	Mark
1	Assignments	4 & 5	5
2	Quiz	7	5
3	Midterm Exam	7 & 13 th	20
4	Practical	14 th	30
5	Final Exam	16 th	40

VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Assignment and quizzes	4 & 5 & 7 th	10	10%
2	practical	14 th	30	30%
3	Written exam " mid + final"	16 th	60	60%
Total				



IX. Learning Resources :	
(Author, (Year), Book Title, Edition, Publisher, Country of publishing)	
Textbooks-not more than 2	
<ol style="list-style-type: none"> 1. Trease G. E. and Evan W. C, 2009, pharmacognosy, 16th edition, Edinburgh ; New York. 2. Wallis, T.A, 2005, Text book of pharmacognosy, 5th edition, Cbs. 	
Essential References-not less than 4	
<ol style="list-style-type: none"> 1. Barnes, J., Anderson, A.L. and Philipson, J.D, 2002, Herbal Medicine, 2. Jackson, B.P. and Snawdon, D.W, 1990, Atlas of Microscopy of Medicinal Plants 3. Balbaa, S., et. al, 1976, Chemistry of Natural Products, 4. Michael Heinrich, Joanne Barnes, Simon Gibbons, Elizabeth M. Williamson, 2003, fundamental of pharmacognosy and phytotherapy, Churchill Livingstone, United Kingdom. 	
Electronic Materials and Web Sites	
<ol style="list-style-type: none"> 1. WWW.Hinari.com. "journal of Phytochemistry, Ethnopharmacology" 2. WWW.PubMed.com. 	

X. Course Policies	
1.	(Class Attendance): Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2.	(Tardy) :
3.	(Exam Attendance/Punctuality) : All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4.	(Assignments & Projects) :
5.	(Cheating) : Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6.	(Plagiarism) : "To plagiarize is to take ideas or words of another person & pass them off as one's own". Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7.	(Other policies) :



6.Course Syllabus Physical Pharmacy

خطة مقرر صيدلة فيزيائية

I. General information about the course:					
1.	Course Title :	Physical pharmacy			
2.	Course Code and Number :	PHS225			
3.	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		2	-	2	-
4.	Study Level and Semester:	Second Year – Second Semester			
5.	Pre-requisites (if any):	PHS120			
6.	Co-requisites (if any):	NA			
7.	Program in which the course is offered:	Bachelor of Pharmacy & Bachelor of PharmD			
8.	Teaching Language:	English			
9.	Instruction location:				

II. Course Description

This course prepares the students for the different types and preparation of pharmaceutical dosage forms encountered in pharmaceutical industry. Liquid dosage forms, parenteral preparations, ophthalmic preparations, and aerosols will be covered. This course relates the basic scientific background to pharmaceutical practice regarding the dosage forms preparation and quality control through classes and practical experiments. A prior knowledge of the basics of physical pharmacy is essential for this course.

III. Course Aims:

1. Make the students understand those physicochemical properties of drugs and excipients that could affect drug performance and the development of an efficacious dosage form.
2. Provide students with the ability to utilize these principles in the design of active drugs and pharmaceutical dosage forms.
3. Provide the students with the ability to analyze the relationship between the physicochemical principles, pharmaceutical formulations and biological activity of drugs.
4. Equip the students with team-work and problem solving skills

IV. Course Intended Learning Outcomes (CILOs) :

1. Illustrate of physicochemical properties of drugs including solubility, distribution, adsorption, complexation, rheology, surface tension and stability.



2. Explain The effects of drug complexation, solubilization , adsorption, stability and interfacial tension on drug efficacy.
3. Assess the relative important of solubility, stability, adsorption complexation, reology, surface tension on drug formulation
4. Explore the optimum storage condition for different drug products based on shelf- life
5. Predict possible complexation related problems in pharmaceutical systems based on chemical structure
5. Handle chemicals properly and safely.
6. Select appropriate lab material techniques in carrying out experiments of solubility, distribution, adsorption, complexation, rheology, surface tension and stability
8. Manage time effectively and work as a part of team in order to fulfill a certain project.

V. Course Contents

Theoretical Aspect:

No.	Course Units	Sub-topics	Week due	Contact Hours
1	Solubility	<ul style="list-style-type: none"> ▪ Determination of solubility ▪ Techniques of aqueous solubility determination of non-ionized, ionized and unstable drugs ▪ Factors/ parameters affecting solubility ▪ Enhancement of solubility ▪ Solubility of liquid in liquid ▪ Preservative action in oil-water systems ▪ Pharmaceutical applications of solubility 	1 st , 2 nd & 3 ^{ed}	6
2	Rheology	<ul style="list-style-type: none"> ▪ Principles of rheology. ▪ Measuring methods in the rheology. 	4 th	2
3	Surface tension	<ul style="list-style-type: none"> ▪ Surface tension ▪ Measurements of surface tension ▪ surfactants ▪ critical micelle concentration(CMC) ▪ Effect of counter ion and temperature on surface tension and temperature on CMC-values ▪ Determination of the maximum 	5, 6 & 7 th	6



		additive Concentration of solubilizes (MAC) ▪ Pharmaceutical applications of surfactants		
4	Midterm exam		8 th	2
5	Adsorption	<ul style="list-style-type: none"> ▪ Adsorption at solid surfaces ▪ Types of adsorption ▪ adsorption isotherms ▪ factors affecting on adsorption ▪ Pharmaceutical applications of adsorption ▪ Some Formulations problems associated with adsorption 	9 &10 th	4
6	Complexation	<ul style="list-style-type: none"> ▪ Metal complexes ▪ Organic molecular complexes ▪ inclusion compounds ▪ methods of analysis ▪ crystalline structure of complexes, ▪ Identification of comlexation ▪ Pharmaceutical applications of complex 	11 &12 th	4
7	Drug and formulation stability	<ul style="list-style-type: none"> ▪ Chemical kinetics & its application to drug- stability ▪ Arrhenius Equation or plot & Its application in stability testing of Drugs: ▪ Routes of drug degradation & means of minimizing or a voiding them ▪ Physical stability testing ▪ Highlights on accelerated/ ambient/ controlled physical stability testing of solutions, disperse systems, aerosols, coated/ uncoated tablets, gelatin capsules, and sustained release products ▪ Degradation mechanisms. ▪ Pharmaceutical stability problems (hydrolysis, oxidation, photodegradation, ...) 	13 &14 th	4
8	Partition Coefficient	<ul style="list-style-type: none"> • Association of the solute molecules • Dissociation of the solute molecules 	15 th	2
9	Final exam		16 th	2
Total number of weeks and hours			16	32



Second: Practical/Tutorial/Clinical Aspects :

Write up practical/tutorial/clinical topics

No.	Practical/Tutorial/Clinical topics	Week due	Contact Hours
1.	Surface tension	1,2 &3	6
2.	Adsorption	4,5	4
3.	Solubility	6, 7,8	6
4.	Midterm	9	2
5.	Stability	10, 11	4
6.	Rheology	12, 13	2
7.	Partition Coefficient	14	2
8.	Final Exam	15	2
Total number of weeks and hours		14	28

VI. Teaching Strategies

This course is taught through a combination of lectures, practical sessions, and assignments.

Throughout, the learner is encouraged to undertake independent study both to supplement and consolidate what is being taught/ learnt and to broaden their individual knowledge of the subject

I. Tasks and Assignments

No.	Task/Assignment	Week due	Mark
1.	Rheology	13 th	10
2.	Partition Coefficient	14 th	10

II. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Mid Exam	7 th	20	20%
3	Assignment	13-14 th	10	10%
4	Practical Part	14 th	30	30%
5	Final Exam	16 th	40	40%
Total			100	100%



III. Learning Resources

Textbooks

1. A. Martin, J. Swarbrik and A. Camarata, (1993), Physical Pharmacy, 4ed, Philadelphia
2. Loyd V. Allen Jr., Nicholas G. Popovich, Howard C. Ansel, (2011), Ansel's Pharmaceutical Dosage Forms and Drug Delivery Systems, ninth edition. Lippincott Williams & Wilkins, USA.

Essential References:

1. Michael. E. Aulton, (2007), Aulton's Pharmaceutics: The Design and Manufacture of Medicines, third edition, Churchill Livingstone, USA
2. Collett D M And Aulton M E *Pharmaceutical Practice* Churchill Livingstone, 1990
3. Carstensen, J. T., (1998), Pharmaceutical Preformulation, CRC Press, Inc., Florida
4. Carstensen, J. T., Rhodes, C.T., (2000), Drug Stability: Principles and Practices, Drugs Pharm. Sci. Series, Vol. 43, 3rdedn., Marcel Dekker Inc., New York.
5. Loyd V. Allen, Jr., (2005), Remington: The Science and Practice of Pharmacy, twenty first edition. Lippincott Williams & Wilkins, USA.

Electronic Materials and Web Sites:

The Pharmaceutics and Compounding Laboratory, University of North Carolina
(<http://pharmlabs.unc.edu/index.htm>)

IV. Course Policies

Based on university regulations, the following aspects should be figured out:

1.	(Class Attendance): Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2.	(Tardy) :
3.	(Exam Attendance/Punctuality) : All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4.	(Assignments & Projects) :
5.	(Cheating) : Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6.	(Plagiarism) : "To plagiarize is to take ideas or words of another person & pass them off as one's own". Plagiarism or any other form of cheating in examinations, term tests or academic work is



	subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7.	(Other policies) :

7.Course Syllabus Professional Skills 2

خطة مقرر مهارات مهنية 2

I. General information about the course:					
1.	Course Title :	Professional Skills 2			
2.	Course Code and Number :	PHS226			
3.	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		1	-	-	-
4.	Study Level and Semester:	Second Year – Second Semester			
5.	Pre-requisites (if any):	PHS215			
6.	Co-requisites (if any):	NA			
7.	Program in which the course is offered:	Bachelor of Pharmacy & Bachelor of PharmD			
8.	Teaching Language:	English			
9.	Instruction location:				

II. Course Description

This course is designed to help the student comprehend the basic and professional calculations of pharmacy practice. During the semester, students will be exposed to several calculation problems. Although this is primarily a lecture-based course, interaction and participation by each student is highly encouraged. Graded assignments will further consolidate the acquired knowledge and skills.

III. Course Aims:

Introduce the students to the unit systems used in pharmaceutical calculations.
Familiarize students with calculations used in weight, volume, density, and strength.
Disseminate knowledge to the students about calculations needed for dose tailoring, dosage form preparation, parenteral admixtures, and adjusting calculations for specific populations
Envision the vast applications of pharmaceutical calculations in daily practice of pharmacists.



IV. Course Intended Learning Outcomes (CILOs) :

1. List the components of prescriptions and medication orders.
2. Recall basic pharmaceutical calculations.
3. Discuss various dose calculations encountered in pharmacy practice.
4. Differentiate between prescriptions and medication orders.
5. Construct guidelines for the calculation of doses and dose adjustment.
6. Conduct unit conversion, density, strength, dose and parenteral calculations.
7. Value the importance of pharmaceutical calculation in the practice of pharmacy.
8. Assess various methods for dose calculations.

V. Course Contents

Theoretical Aspect:

No.	Course Units	Week due	Contact Hours
1	Interpretation of the prescription and medication orders	1 st	1
2	Introduction and the metric and common systems and formulas conversion	2 nd & 3 ^{ed}	2
3	Pharmaceutical measurements	4 th	1
4	Density and specific gravity	5 & 6 th	2
5	Strength calculations	7 & 8 th	2
6	Midterm	9 th	1
7	Calculations of doses (General considerations)	10 th	1
8	Calculations of doses (patient parameters)	11 & 12 th	2
9	Dilution and Concentration of formulations	13 & 14 th	2
10	Parenteral admixtures	15 th	1
11	Final exam	16 th	1
Total number of weeks and hours		16	16

VI. Teaching Strategies

Lectures
Interactive class discussions
Assignments



VII. Tasks and Assignments			
No.	Task/Assignment	Week due	Mark
.1	Assignments/homework	throughout the course	10

VIII. Learning Assessment:				
No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Midterm	9 th	30	30%
2	Assignment	throughout the course	10	10%
3	Final Exam	16 th	60	60%
	Total		100	100%

IX. Learning Resources:	
(Author, (Year), Book Title, Edition, Publisher, Country of publishing)	
Textbooks-not more than 2	
1. Howard Ansel, (2009), Pharmaceutical Calculations , Thirteenth edition. Lippincott Williams & Wilkins, USA.	
Essential References-not less than 4	
1. Howard Ansel, Mitchell Stoklosa , (2005), Pharmaceutical Calculations , Twelfth edition, Lippincott Williams & Wilkins, USA	
2. Loyd V. Allen, Jr., (2005), Remington: The Science and Practice of Pharmacy , twenty first edition. Lippincott Williams & Wilkins, USA.	
3. Judith Rees, Ian Smith, (2010), Introduction to Pharmaceutical Calculations , Third edition, Pharmaceutical Press, USA.	
4. Joel Zatz , Maria Teixeira, (2005), Pharmaceutical Calculations , Fourth edition, Wiley-Interscience, USA	
Electronic Materials and Web Sites	
An open source math book designed for pharmacy students	
http://pharmaceuticalcalculations.org/index.php	



X. Course Policies	
1.	(Class Attendance): Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2.	(Tardy) :
3.	(Exam Attendance/Punctuality) : All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4.	(Assignments & Projects) :
5.	(Cheating) : Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6.	(Plagiarism) : “To plagiarize is to take ideas or words of another person & pass them off as one’s own”. Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7.	(Other policies) :

انتهى م2



Faculty: pharmacy

Department: Clinical pharmacy and pharmacy practice

Program: Bachelor of PharmD

Third Year Courses

مقررات السنة الثالثة

First Semester

الفصل الأول

1.Course Syllabus Pharmacology 1

خطة مقرر علم الأدوية 1

I. General information about the course:					
1.	Course Title :	Pharmacology 1			
2.	Course Code and Number :	PHS310			
3.	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		2	-	-	-
4.	Study Level and Semester:	Third Year – First Semester			
5.	Pre-requisites (if any):	PHF 213,PHF 221			
6.	Co-requisites (if any):	PHF 315			
7.	Program in which the course is offered:	Bachelor of Pharmacy & Bachelor of PharmD			
8.	Teaching Language:	English			
9.	Instruction location:				

I. Course Description

This course is designed as a basic topic to help the student comprehend the information of general pharmacology, autonomic nervous system (ANS) and cardiovascular (CVS) drugs as well as different groups of autocoids. The course requires learning the concepts of physiology and anatomy as pre-request as well as pathology as co-request. Different methods of teaching/learning are used in this course including lectures, cooperative learning and problem-based learning.

II. Course Aims:

1. Provide student with the information about the actions and uses of a number of pharmacologically active drug classes a of CVS and ANS drugs.
2. Give students knowledge about the pharmacokinetic and pharmacodynamic of drugs.
- 3-Provide the students with the basic information about the uses, adverse drug reactions, side effects and drug-drug interactions
- 4- Enable student to work alone or within team.



III. Course Intended Learning Outcomes (CILOs) :

1. Recall the physico-chemical properties of drugs and their effects on pharmacokinetic and pharmacodynamics.
2. Define the different terms in pharmacology.
3. List the group of drugs used in ANS and CVS diseases
4. Classify the different types of autocooids and drugs acting on them.
5. Construct the proper doses and dosage regimen of drugs that are used in different diseases
6. Design a therapy plan for covered inflammatory diseases based on the types of autocooids.
7. Interpret the rationale for choosing the suitable plan and medication for different diseases based on recent research outcomes.
8. Justify the scientific information that are obtained and used from available sources.

IV. Course topics and sub-topics (theoretical and practical) with contact hours

Topics/Units of Course Contents

First: Theoretical Aspects

N o.	Course Topics/Units	Sub-topics	Week due	Contact Hours
1	Introduction(general pharmacology)	Drug receptors & pharmacodynamics Pharmacokinetics: absorption, distribution, metabolism and excretion, drug-protein binding Adverse drug action, drug interactions	1 st & 2 nd & 3 ^{ed}	6
2	Autonomic Nervous System (A.N.S)	Sympathomimetic agents ,sympatholytic agents, parasympathomimetic agents, parasympatholytic agents, drugs acting on ganglia	4&5&6 th & 7 th	8
3	Midterm Exam.		8 th	2
4	Cardiovascular system (C.V.S)	Diuretic agent, antihypertensive drugs, antianginal agents, drugs for heart failure ,antiarrhythmic agents	9-13 th	10
6	Autocoids	Histamine and antihistamines, serotonin receptors agonist & antagonists Eicosanoids, and their uses, PAF, bradykinin	14&15 th	4
7	Final exam.		16 th	2



	Total	16	32
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V. Teaching Strategies

Lecture
Self-learning (homework)
Assignment
Small group discussion
Cooperative learning

VI. Tasks and Assignments :

No.	Task/Assignment	Week due	Mark
1	Assignment and presentation	10 th	5
2	Reports	Every 2 weeks	5

VII. Learning Assessment:

No.	Assessment Tasks	Assessment day	Mark	Weight
1	Assignment	10 th	5	5%
2	Reports	Every 2 weeks	5	5%
3	Midterm Exam	8 th	30	30%
4	Final Exam	16 th	60	60%
Total		16	100	100%

VIII. Learning Resources :

(Author, (Year), Book Title, Edition, Publisher, Country of publishing)

Textbooks-not more than 2

5. Katzung B G, Masters SMJ and Trevor (2012). Basic and Clinical Pharmacology, 12th ed. Mc Graw Hill. India.

Essential References-not less than 4

- 1.
2. Rang HP, Dale MM and Ritter JM (2012). Pharmacology. 7th ed. CHURCHILL LIVINGSTONE London
3. Laurence DR, Bennett PN and Brown MJ (2010). Clinical pharmacology. Ninth ed. CHURCHILL LIVINGSTONE. London
4. Hardman JG and Limbird LE (2010). Goodman & Gilman's the pharmacological basis of
5. Therapeutics. Tenth ed. McGraw Hill. London
6. Harvey RA. Pharmacology (2012). 5th ed. Lippincott Williams & Wilkins. Republic of China
7. Tripathi KD (2010). Essentials of Pharmacology. 6th ed. JAYPEE. India

Electronic Materials and Web Sites

1. British Journal of Pharmacology (2013)



2. The Lancet infectious diseases (2013).
3. WWWPubMed.com.

XI. Course Policies

1. (Class Attendance):
Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2. (Tardy) :
3. (Exam Attendance/Punctuality) :
All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade.
If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4. (Assignments & Projects) :
5. (Cheating) :
Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6. (Plagiarism) :
"To plagiarize is to take ideas or words of another person & pass them off as one's own".
Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7. (Other policies) :



2.Course Syllabus Pharmaceutical Technology 1

خطة مقررتقنية صيدلانية 1

I. General information about the course:					
1.	Course Title :	Pharmaceutical Technology 1			
2.	Course Code and Number :	PHS311			
3.	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		2	-	2	-
4.	Study Level and Semester:	Third Year – First Semester			
5.	Pre-requisites (if any):	PHS 120			
6.	Co-requisites (if any):	NA			
7.	Program in which the course is offered:	Bachelor of Pharmacy & Bachelor of PharmD			
8.	Teaching Language:	English			
9.	Instruction location:				

II. Course Description

This course prepares the students for the different types and preparation of pharmaceutical dosage forms encountered in pharmaceutical industry. Liquid dosage forms, parenteral preparations, ophthalmic preparations, and aerosols will be covered. This course relates the basic scientific background to pharmaceutical practice regarding the dosage forms preparation and quality control through classes and practical experiments. A prior knowledge of the basics of physical pharmacy is essential for this course.

III. Course Aims:

1. Introduce the students to the different pharmaceutical dosage forms.
2. Train students to formulate covered dosage forms.
3. Provide practical skills for the students in preparation and quality control of covered dosage forms.
4. Equip the students with team-work and problem solving skills.

IV. Course Intended Learning Outcomes (CILOs) :

1. Define the different dosage forms and routes of drug administration
2. Discuss the different aspects of preparation, quality control, and labeling of liquid dosage forms, ophthalmic preparations, parenteral preparations, and disperse systems.
3. Identify the procedures for extemporaneous preparation of dosage forms.



4. Propose the appropriate dosage form and route of administration of a drug.
5. Choose rationally the appropriate dosage form and excipients for a specific therapeutic agent.
6. Exercise professional good laboratory practice (GLP) during practical sessions and operate machinery used properly.
7. Implement proper techniques towards preparing medicines and determining the quality of the prepared products.
8. Demonstrate critical thinking, time-management, teamwork skills, synthesis and interpretation of pharmaceutical information, and responsibility.

V. Course Contents

Theoretical Aspect:

No.	Course Units	Sub-topics	Week due	Contact Hours
1	Introduction	pharmaceutical technology, dosage forms, and routes of administration	1 st	2
2	Pharmaceutical Solutions	Advantages and disadvantages, Choice of solvents, Formulation additives, Types of liquid preparations, , Manufacture of solutions, Filling of solutions	2 nd & 3 rd 4 th	6
3	Pharmaceutical Suspensions	Pharmaceutical applications of suspensions, Formulation and stability of suspensions, Formulation additives, Quality control of suspensions	5&6 th	4
4	Emulsions	Types of emulsions, Formulation of emulsions, HLB value, Emulsifying agents, Stability of emulsions, Manufacture of emulsions	7&8 th	4
5	Midterm		9 th	2
6	Parenteral Preparations	Types, Advantages and disadvantages, Vehicles used, Formulation additives, Sterilization of parenterals, Containers and closures, Formulation issues, Quality control	10&11&12 th	6
7	Ophthalmic Products	Characteristics, Types, Formulation of eye drop, Packaging	13&14 th	4
8	Aerosols	Principle, Pharmaceutical	15 th	2



		applications, Aerosol systems, Metered dose inhalers, Dry powder inhalers, Nebulizers		
9	Final exam		16 th	2
Total number of weeks and hours				32

Second: Practical/Tutorial/Clinical Aspects :

Write up practical/tutorial/clinical topics

No.	Practical/Tutorial/Clinical topics	Week due	Contact Hours
1.	Orientation	1	2
2.	Pharmaceutical Solutions	3	6
3.	Pharmaceutical Suspensions	2	4
4.	Pharmaceutical Emulsions	3	6
5.	Parenteral Preparations	2	4
6.	Ophthalmic Products	1	2
7.	Final Exam	1	2
Total number of weeks and hours		13	26

VI. Teaching Strategies

Lectures
Interactive class discussions
Practical sessions
Assignment

VII. Tasks and Assignments

No.	Task/Assignment	Week due	Mark
1	Report	12 th	10

VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Midterm	9 th	20	20%
2	Assignment	14 th	10	10%
3	Practical Part	10&11&12 th	30	30%
4	Final Exam	16 th	40	40%
Total			100	100%



IX. Learning Resources

Textbooks

Loyd V. Allen Jr., Nicholas G. Popovich, Howard C. Ansel, 2011, Ansel's Pharmaceutical Dosage Forms and Drug Delivery Systems, ninth edition. Lippincott Williams & Wilkins, USA.

Essential References:

1. Michael. E. Aulton, (2007), Aulton's Pharmaceutics: The Design and Manufacture of Medicines, third edition, Churchill Livingstone, USA
2. Leon Lachman, Herbert A. Lieberman, Joseph L. Kanig, (1986), The Theory and Practice of Industrial Pharmacy, third edition, Lea & Febiger, USA.
3. Loyd V. Allen, Jr., (2005), Remington: The Science and Practice of Pharmacy, twenty first edition. Lippincott Williams & Wilkins, USA.
4. A.J. Winfield, J.A, Rees, I. Smith, (2009), Pharmaceutical practice, fourth edition, Churchill Livingstone - Elsevier, USA

Electronic Materials and Web Sites:

1. The Pharmaceutics and Compounding Laboratory, University of North Carolina (<http://pharmlabs.unc.edu/index.htm>)

X. Course Policies

1. (Class Attendance):
Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2. (Tardy) :
3. (Exam Attendance/Punctuality) :
All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade.
If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4. (Assignments & Projects) :
5. (Cheating) :
Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6. (Plagiarism) :
"To plagiarize is to take ideas or words of another person & pass them off as one's own". Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or



	university).
7.	(Other policies) :

3.Course Syllabus Pharmaceutical chemistry 1

خطة مقرر كيمياء صيدلانية 1

I. General information about the course:					
1.	Course Title :	Pharmaceutical chemistry 1			
2.	Course Code and Number :	PHS312			
3.	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		2	-	-	-
4.	Study Level and Semester:	Third Year – First Semester			
5.	Pre-requisites (if any):	PHS220			
6.	Co-requisites (if any):			
7.	Program in which the course is offered:	Bachelor of Pharmacy & Bachelor of PharmD			
8.	Teaching Language:	English			
9.	Instruction location:				

II. Course Description

This course includes basic and specific science in order to well understand of pharmaceutical chemistry. The importance of this course in the field of drug: synthesis , development, discovery, and uses .

It includes Physicochemical properties and drug design, metabolic pathway ,autonomic nervous system drugs, diuretics, local anaesthetics, in which study , chemical structure, classification , metabolism, method of preparations, and the structure activity relationship.

The pre-requisite of this course is organic chemistry, analytical chemistry, the co- requisite course pharamacology1.

III. Course Aims:

- 1.Acquire students basic science about the chemistry of drugs.
2. Provide students basic information about general metabolic pathways of drugs.
3. Educate students chemical synthesis of selected drugs
4. Train students the preliminary skills of research methodology

IV. Course Intended Learning Outcomes (CILOs) :

1. Relate the basic background of the pharmacology and the chemical structures of drugs.
2. Recognize the general metabolic pathways of drugs& chemical synthesis of selected drugs



3. Differentiate between the main metabolic pathways of drugs.
4. discriminate the functional groups and activity
5. Apply health facilities, in the field of new drugs design.
6. Demonstrate good presentation skills
7. Work as member in team

V. Course topics and sub-topics (theoretical) with contact hours					
Topics/Units of Course Contents					
No.	Course Topics/Units	Sub-topics	Week due	Contact Hours	
1	Review of heterocyclic compounds	5-member ring, 6-member ring, fused rings	1 st	2	
2	Introduction to medicinal chemistry	Definition, objective, classification methods	2 nd	2	
3	Physicochemical properties and drug design	partition coefficient, MR, solubility, bonds, Adsorption, Dissociation degree at the PH of the body, others	3 ^{ed}	2	
4	Drug metabolism	Introduction, phase -1 metabolism, oxidation, reduction, Hydrolysis phase -2 metabolism, conjugation Factors affecting drug metabolism	4 th & 5 th & 6 th	6	
5	Sympathomimetic drugs	Definition, SAR, DAS, IDAS, MAS, , synthesis, uses	7 th	2	
6	Midterm		8 th	2	
7	Sympatholytic drugs	α -blockers, β -blockers, $\alpha\beta$ -blocker, SAR, uses, synthesis	9 th	2	
8	Parasympathomimetic drugs	Direct, indirect (reversible irreversible), SAR, synthesis	10 th	2	
9	Parasympatholytic drugs	Natural, semisynthetic, synthetic	11 th	2	
10	Ganglionic & Neuromuscular blockers	Natural, , synthetic	12 th	2	
11	Diuretics, Local	Sulfonamide, high ceiling	13 th	2	



	anesthetics	diuretics, thiazide, potasum sparing diuretic, uses, synthesis factors affecting on LA, benzoic acid and aniline derivative of LA			
12	Histamines and Antihistamines	H1 agonist and antagonist, H2 antagonist, SAR, synthesis, uses	14&15 th	4	
13	Final exam		16 th	2	
Total number of weeks and hours			16	32	

VI. Tasks and Assignments :

No.	Task/Assignment	Week due	Mark
1	Activities	12 th	10

VII. Teaching Strategies

Lectures
Interactive class discussions
Activities

VIII. Learning Assessment:

No.	Assessment Tasks	Week due	Mark	Wight
1	Assignment	10 th	5	5%
2	Reports	Every 2 weeks	5	5%
3	Midterm Exam	8 th	30	30%
4	Final Exam	16 th	60	60%
Total		16	100	100%

IX. Learning Resources

(Author, (Year), Book Title, Edition, Publisher, Country of publishing)

Textbooks-not more than 2

- 1- Wilson and Gisvold's(2011) "Textbook of organic Medicinal and Pharmaceutical chemistry, Twelfth edition", Lippincott Williams and Wilkins USA.



Essential References-not less than 4

1. Foye's(2008) "Principle of Medicinal chemistry", sixth edition, Lippincott Williams and Wilkins USA.
2. Wilson and Gisvold's(2011) "Textbook of organic Medicinal and Pharmaceutical chemistry, Twelfth edition", Lippincott Williams and Wilkins USA.
3. Zuhair Muhi-Eldeen(2005)"Essential Of Medicinal Chemistry" first edition Dar AL-Esra Jordan.
4. Sadik AL-Mikhlaifi (2014)"Medicinal Chemistry" fourth edition, ALmutafawk, Yemen

Electronic Materials and Web Sites:

1. www.pharmchem.ku.edu/

X. Course Policies

1.	(Class Attendance) : Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2.	(Tardy) :
3.	(Exam Attendance/Punctuality) : All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4.	(Assignments & Projects) :
5.	(Cheating) :(Cheating) Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6.	(Plagiarism): "To plagiarize is to take ideas or words of another person & pass them off as one's own". Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7.	(Other policies) :



4.Course Syllabus Phytochemistry 1

خطة مقرر كيمياء عقاقير 1

I. General information about the course :					
1.	Course Title:	Phytochemistry 1			
2.	Course Code and Number :	PHS313			
3.	Credit Hours :	Lecture	Seminar/Tutorial	Practical	Training
		2		-	2
4.	Study Level and Semester:	Third Year – First Semester			
5.	Pre-requisites (if any):	PHS224			
6.	Co-requisites (if any) :	-			
7.	Program in which the course is offered	Bachelor of Pharmacy & Bachelor of PharmD			
8.	Teaching Language:	English			
9.	Study System :	Semester based			
10.	Prepared by :	Dr. Rowaida albadani			
11.	Approval date :				
12.	Approved by:				

II. Course Description :

This course provide an information about the chemistry of some natural products such as glycosides tannin and terpinoids and the suitable methods for characterization, biosynthesis, and isolation by different methods. In addition to study the medicinal plant that contain such groups, their physical and chemical properties, uses, side effect and abuse. The course requires to study of as pre-request for phytochemistryII. Different methods of teaching/learning are used in this course including lectures and seminar.

III. Course Aims

The main aims of these course are:

1. Identification and determination of the main active constituents using different methods including physical, and chemical methods.
2. Classification of the main active constituents according to their structures.
3. To acquire knowledge about the main active constituents present in the herbal drugs and natural products, their actions, side effects and toxicity
4. To acquire the students skills to isolate and identify the different groups of the active constituents.

IV. Course Intended Learning Outcomes (CILOs)

1. Get a knowledge about the suitable methods for characterization, biosynthesis and isolation.
2. Relate the main active constituents present in the herbal drugs and natural products, their physicochemical properties, side effects and toxicity



3. Match the prescription of these ingredients for treatment of different ailments.
4. Get a knowledge about the recent research articles and advanced studies on these compounds concerning their modern uses.
5. The student can hypothesize the active constituents according to their therapeutic uses
6. Differentiate between the different compounds in the same group using different methods.
7. Acquire skills to decrease the side effects of some drugs
8. To perform the isolation and identification the different groups of the active constituents.
9. To prescribe the suitable drugs according to their mode of action.
10. Examine the communication skills of students.
11. Assess the student to writing reports for criticizing natural compounds
12. Estimate the use of different methods for identification of natural drugs

V. Course topics and sub-topics (theoretical and practical) with contact hours

Topics/Units of Course Contents

First: Theoretical Aspects

No.	Course Topics/Units	Sub-topics	Week due	Contact Hours	
1	Glycosinolate glycosides	Definition, hydrolysis, medicinal plants.	1 st	2	
2	Cyanogenetic glycosides	Definition, hydrolysis, medicinal plants	2 nd	2	
3	Anthracen glycosides	distribution, classification, structures, biosynthesis, extraction, chemical and physical properties, characterization, pharmacological properties,	3 ^{ed}	2	
4	Cardioactive glycosides	cardenolides, bufadienolids, sugars, structure- activity-relationship, distribution, extraction, chemical and physical properties, hydrolysis of cardiac glycoside, biogenesis, pharmacological properties, mechanism of action, chemical tests, chief drugs containing cardiac glycosides,	4&5 th	4	
5	Midterm exam 1		6 th	2	
6	Saponin-glycosides	Definition, distribution, classification, structures, biogenesis, extraction, chemical and physical	7 th & 8 th	4	



		properties, Characterization biological and pharmacological properties, drugs as expectorant and antitusive, anti-exudative, Adaptogens and as diuretic			
7	Tannin	Classification, types, plants contain tannins	9 th	2	
8	Terpenoids	Introduction (definition, classification, biosynthesis and distribution, Monoterpenes, Sesquiterpenes, Diterpenes	10&11&12 th	6	
9	Midterm exam 2		13 th	2	
10	Flavonoids	classification, biological activity, plant contain flavonoids	14&15 th	4	
11	Final exam		16 th	2	
Total number of weeks and hours				32	

VI. Tasks and Assignments :

No.	Task/Assignment		Week due	Mark
1	Assignment and presentation		6 th	10
2	Quizzes		4,10 th	10

VII. Learning Assessment:

No.	Assessment Tasks	Week due	Mark	Proportion of Final Assessment
1	Assignments, seminar	6 th	5	5%
2	Quiz 1	4 th	2.5	2.5%
3	Midterm Exam	6,12 th	30	30%
4	Quiz 2	10 th	2.5	2.5%
5	Final Exam	16 th	60	60%
Total		16	100	100%

VIII. Teaching Strategies

lectures
independent study
Seminars and small group discussions



project preparation
presentation

IX. Learning Resources :
(Author, (Year), Book Title, Edition, Publisher, Country of publishing)
Textbooks-not more than 2
1. Trease G. E. and Evan W. C, 2009, pharmacognosy, 16 th edition, Edinburgh ; New York. 2. Wallis, T.A, 2005, Text book of pharmacognosy, 5 th edition, Cbs.
Essential References-not less than 4
1. Barnes, J., Anderson, A.L. and Philipson, J.D, 2002, Herbal Medicine, 2. Jackson, B.P. and Snawdon, D.W, 1990, Atlas of Microscopy of Medicinal Plants 3. Balbaa, S., et. al, 1976, Chemistry of Natural Products, 4. Michael Heinrich , Joanne Barnes , Simon Gibbons , Elizabeth M. Williamson , 2003, fundamental of pharmacognosy and phytotherapy, Churchill Livingstone , United Kingdom.
Electronic Materials and Web Sites
1. WWW.Hinari.com . "journal of Phytochemistry, Ethnopharmacology" 2. WWW.PubMed.com.

X. Course Policies
1. (Class Attendance) : Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2. (Tardy) :
3. (Exam Attendance/Punctuality) : All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4. (Assignments & Projects) :
5. (Cheating) :(Cheating) Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6. (Plagiarism): "To plagiarize is to take ideas or words of another person & pass them off as one's own". Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or



	university).
7.	(Other policies) :

5..Course Syllabus Microbiology & Immunology

خطة مقرر علم الأحياء الدقيقة والمناعة

I. General information about the course:					
1.	Course Title :	Microbiology & Immunology			
2.	Course Code and Number :	PHF314			
3.	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		2	-	2	-
4.	Study Level and Semester:	Third Year – First Semester			
5.	Pre-requisites (if any):	PHF110			
6.	Co-requisites (if any):	NA			
7.	Program in which the course is offered:	Bachelor of Pharmacy & Bachelor of PharmD			
8.	Teaching Language:	English			
9.	Instruction location:				

II. Course Description

This course is designed to help the student identified the name of microorganism and their relationship with human. During the semester, students will be took several organisms cause disease to human. Although this is primarily a lecture-based course, interaction and participation by each student is highly encouraged.

III. Course Aims:

1. Educate students about the basic features of general bacteriology, virology and mycology.
2. Provide students with an understanding of the immune system, its protective functions and its role in the patho-physiology of infectious and non- infectious diseases
3. Familiarize students with the common infections and diseases of medical importance, their microbial causes, as well as laboratory diagnosis. treatment, prevention and control of such diseases.
- 4- Educate students about the basic features of general Parasitology.



IV. Course Intended Learning Outcomes (CILOs) :

1. Identify medically important bacteria based on microscopic examination of stained preparations. Illustrate general bacterial morphology, physiology and genetics
2. Understand the host parasite relationship and microbial pathogenesis
3. Recognize the most important infectious clinical conditions and outline the diagnosis, treatment, prevention and control of the most likely organisms causing such diseases
4. Illustrate general bacterial, fungal, parasitic and viral morphology, physiology and genetics.
5. Perform a Gram stain and a Ziehl-Neelsen stain and identify, according to morphology and characteristics, stained preparations
6. Analyze different problems encountered throughout the course.
7. Explore the ability to work with the different infectious diseases caused by different organisms.
8. Develop the ability to work with equations and learn how to choose the simplest method to carry out different methods for microbial diseases.

V. Course Contents

Theoretical Aspect:

No.	Course Units	Sub-topics	Week due	Contact Hours
1	Introduction to microbiology	Definition, history, type of cells and name of organisms	1 st & 2 nd	4
2	Bacterial Structure	Size of bacteria, morphology, different structures	3 ^{ed}	2
3	Bacterial physiology and growth	Physical and Chemical Properties, Growth and Proliferation Metabolism and Cultivation Method	4 & 5 th	4
4	Bacterial genetics	Definitions, DNA process and RNA	6 th	2
5	Midterm	-	7 th	2
6	An introduction to viruses	Definitions, virus characters, replication, classification diagnosis and treatment	8 & 9 th	4
7	An introduction to fungi	Definitions, fungal characters, replication, classification diagnosis and treatment	10 th	2
8	Host-microbe interaction – introduction to infectious diseases	Definitions, normal flora and infections	11 & 12 th	4
9	Pathogenesis of infections	Definitions, portal of infections entry and type of toxins	13 th	2
10	Introduction to parasitology	Definitions, parasitic characters, replication, classification diagnosis and treatment	14 & 15 th	4



11	Final exam	-	16 th	2
	Total number of weeks and hours	-	16	32

Second: Practical/Tutorial/Clinical Aspects :

Write up practical/tutorial/clinical topics

No.	Practical/Tutorial/Clinical topics	Week due	Contact Hours
1.	Microscopy	1	2
2.	Performing Gram staining	1	2
3.	Morphology and reaction of various bacterial pathogens to Gram stain – ready slides	1	2
4.	Staining of fungi – morphology of common fungal pathogens (ready slides)	1	2
5.	Types of culture media	1	2
6.	Preparation, inoculation and cultivation of media	1	2
7.	Colonies, isolation and pure cultures	1	2
8.	Biochemical tests	1	2
9.	Immunological techniques	1	2
10.	Final Exam	1	2
Total number of weeks and hours		10	20

VI. Teaching Strategies

1. Lectures
2. Interactive class discussions
3. Practical sessions
4. Assignment

VII. Tasks and Assignments

No.	Task/Assignment	Week due	Mark
1	Report	12 th	10

VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Midterm	8 th	20	20%
2	Assignment	12 th	10	10%



3	Practical Part	12 th	30	30%
4	Final Exam	16 th	40	40%
	Total		100	100%

IX. Learning Resources

Textbooks

1. Mim's, 2013 , Medical Microbiology, 5th ed, Elsevier, USA
2. Markell, 1992, Medical Parasitology, 7th ed, Saunder, London.

Essential References:

1. Kathleen, 2002, Foundation in Microbiology, 4th ed, Mc Graw Hill, USA
2. Ragesh, 2008, Essential of medical microbiology, 4th ed, Gaypee, US
3. Arora, 2002, Medical parasitology, 1st ed, CBS, India

Electronic Materials and Web Sites:

1. microbiology.com
2. parasitology.com
3. asm.org

X. Course Policies

Based on university regulations, the following aspects should be figured out:

1.	(Class Attendance): Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2.	(Tardy) :
3.	(Exam Attendance/Punctuality) : All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4.	(Assignments & Projects) :
5.	(Cheating) : Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6.	(Plagiarism) : "To plagiarize is to take ideas or words of another person & pass them off as one's own".



	Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7.	(Other policies) :

6.Course Syllabus Pathology

خطة مقرر علم الأمراض

I. General information about the course:					
1.	Course Title :	Pathology			
2.	Course Code and Number :	PHF315			
3.	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		2	-	-	-
4.	Study Level and Semester:	Third Year – First Semester			
5.	Pre-requisites (if any):	PHF221			
6.	Co-requisites (if any):	NA			
7.	Program in which the course is offered:	Bachelor of Pharmacy & Bachelor of PharmD			
8.	Teaching Language:	English			
9.	Instruction location:				

II. Course Description

The course allows students to learn basic concept of the various disease processes in the body. Cell injury and pathology of inflammation are also discussed. The course also emphasizes neoplasia including classification, epidemiology, and characteristics of benign and malignant tumors. A prior knowledge of the basics of histology and anatomy are essential for this course The lectures will be conducted informally with participation by the student's seminars.

III.Course Aims:

1. To provides the students with the essential basic scientific knowledge required to understand the structure and functional deviations from the normal.
2. To make the students understand the etiology, pathogenesis and pathologic manifestation of disease process.

IV. Course Intended Learning Outcomes (CILOs) :

1. Explain the terms used in general pathology and the principles of inflammation and repair.
2. Identify the etiology and pathogenesis of disease, its effects on the body& the response of the



immune system.

3. Explain basic cellular and tissue reactions to different types of injuries.
4. Describe circulatory dysfunction and different neoplasm
5. Explore the pathology specimen
6. Analyze the pathologic picture of a disorder based on gross or microscopic morphology
7. Interpret the signs and symptoms of a disease with the underlying gross & microscopic tissue bioavailability
8. Evaluate the sources of biomedical information to remain current with the advances in knowledge & practice

V. Course Contents

No.	Course Units	Sub-topics	Week due	Contact Hours
1	Introduction to pathology	Cell injury necrosis Apoptosis	1 st	2
2	Adaptation	Atrophy Hypertrophy Hyperplasia Metaplasia Dysplasia Carcinoma in-situ	2 nd	2
3	Inflammation	Acute inflammation Chronic inflammation Repair	3&4 th	4
4	Circulatory disturbance	Thrombosis Clot Embolism Ischaemia Infarction Congestion Oedema	5&6 th	4
5	Immunology	Hypersensitivity Autoimmune disease.	7 th	2
6	Mid Exam		8 th	2
7	Neoplasia	Classification Benign malignant	9&10 th	4
8	Cardiovascular system	Rheumatic fever Hypertension Ischaemic heart disease	11 th	2
9	Haemopoietic and lymphatic system	Aanaemia Classification of leukaemia and lymphoma	12 th	2



10	Respiratory system	Pneumonia Bronchial asthma COPD	13 th	2
11	Gastrointestinal system	Peptic ulcer	14 th	2
12	Genito-urinary system	UTI Acute renal failure Benign prostatic hyperplasia	15 th	2
13	Final exam		16 th	2
Total number of weeks and hours			16	32

VII. Tasks and Assignment

No	Task/Assignment	Week due	Mark
1.	Seminars	9-10 th	10

VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Mid Exam	8 th	30	30%
2	Assignment & Seminars	10 th	10	5 %
3	Final Exam	16 th	60	65%
Total			100	

IX. Teaching Strategies

Lecture
Seminar & Self-learning (homework)
Assignment
Small group discussion
Demonstration and application

X. Learning Resources

Textbooks

1. Kumar, cotran& Robbins, 2013 .Robbins Basic Pathology. 9Th edition, Elsevier USA.
2. Mari's, 2008. Mari's text book Pathology. 14Th edition, Elsevier USA.

Essential References:

1. Handouts of all lectures will be available at the departments.
2. Harsh Mohan, 2005. Text book of pathology. 5th edition. Jaypee Brothers, India.
3. Manson's, 2009. Manson's tropical diseases. 22nd edition. Elsevier, USA.
4. J.B. Walter, 1996 .Walter and Israel general pathology. 7th edition,. Elsevier Churchill Livingstone, USA.
5. Robin Reid and Fiona Robert, 2008. Pathology Illustrated. 6th edition. Elsevier Churchill Livingstone, USA.

Electronic Materials and Web Sites:

1. <http://www.medicine.cu.edu.eg/beta/en/jcalpro/2428.html>



2. <http://www.kasralainy.edu.eg/elearning/>
3. <http://www.pathmax.com/>
4. <http://www-medlib.med.utah.edu/WebPath/LABS/LABMENU.html#2>
5. <http://www.med.uiuc.edu/PathAtlasf/titlePage.html>

XI. Course Policies	
1.	(Class Attendance): Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2.	(Tardy) :
3.	(Exam Attendance/Punctuality) : All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4.	(Assignments & Projects) :
5.	(Cheating) : Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6.	(Plagiarism) : “To plagiarize is to take ideas or words of another person & pass them off as one’s own”. Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7.	(Other policies) :



7.Course Syllabus Instrumental Analysis

خطة مقرر تحليل آلي

I. General information about the course:					
1.	Course Title :	Instrumental Analysis			
2.	Course Code and Number :	PHS316			
3.	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		2	-	2	-
4.	Study Level and Semester:	Third Year – First Semester			
5.	Pre-requisites (if any):	PHS223			
6.	Co-requisites (if any):	NA			
7.	Program in which the course is offered:	Bachelor of Pharmacy & Bachelor of PharmD			
8.	Teaching Language:	English			
9.	Instruction location:				

II. Course Description

The course will cover a broad range of topics in instrumental analysis including the selection of analytical methods, chromatography in general and HPLC in particular, interaction of electromagnetic radiation with matter, UV-Vis, and IR spectrometry

III. Course Aims:

The main purpose of this course is to give students a broad experience and survey the theories and applications of modern instrumentation techniques that deal with separation and identification of pharmaceutical molecules. Students will be given the opportunity to gain some knowledge of basic principles behind each technique, how it works, what kind of information it provides, how to interpret the data and how to use them to solve pharmaceutical problems. This course contains essential and indispensable analytical tools for pharmacists to identify various functional groups.

IV. Course Intended Learning Outcomes (CILOs) :

1. Understand the spectrometric and chromatographic techniques, the theoretical concepts behind each method, and the type of information it provides.
2. Recognize connectivity between chromatography and other instrumental techniques.
3. Compare between chromatography and other instrumental techniques.
4. Handling and preparing samples for chromatographic and spectrophotometric analysis.
5. Practice the proper procedures for operation of standard instrumentation. And solve pharmaceutical problems by chromatography and spectroscopic method.



6. Apply the information technology skills, Perform online computer search to retrieve chemical information from a variety of sources.
7. Estimate the suitable method for analysis of drug substances depending on basic understanding of physic-chemical properties of the chemical compounds.
8. Critique thinking, problem-solving, and decision making, when dealing with theoretical and practical chemical information in this course.

V. Course topics and sub-topics (theoretical and practical) with contact hours

Topics/Units of Course Contents				
First: Theoretical Aspects				
No.	Course Topics/Units	Sub-topics	Week due	Contact Hours
1	Introduction	Course syllabus and course policy.	1 st	2
2	Analytical Methods	Classification of Analytical Methods Types of Instrumental Methods Instruments for Analysis Selecting an Analytical Method	2 nd	2
3	Introduction to chromatography (Dong Michael)	1.1.1 Introduction to Chromatography 1.1.2 What Is HPLC? / 1.1.3 A Brief History 1.1.4 Advantages and Limitations 1.2 -Modes of HPLC / 1.2.1 Normal-Phase Chromatography (NPC) / 1.2.2 Reversed-Phase Chromatography (RPC) 1.2.3 Ion-Exchange Chromatography (IEC) / 1.2.4 Size-Exclusion Chromatography (SEC) 1.2.5 Other Separation Modes / 1.3 Some Common-Sense Corollaries 1.4 How to Get More Information /	3 ^{ed}	2
3	Basic Terms and Concepts ((Dong Michael	2.1 Scope / 2.2 Basic Terms and Concepts / 2.2.1 Retention Time (tR), Void Time (tM), Peak Height (h), and Peak Width (wb) / 2.2.2 Retention Volume (VR), Void Volume (VM), and Peak Volume 2.2.3 Retention Factor (k) 2.2.4 Separation Factor (α) /	4,5 th	4



		2.2.5 Column Efficiency and Plate Number (N) / 2.2.6 Peak Volume / 2.2.7 Height Equivalent to a Theoretical Plate or Plate Height (HETP or H) / 2.2.8 Resolution (Rs) / 2.2.9 Peak Symmetry: Asymmetry Factor (As) and Tailing Factor (Tf) / 2.3 Mobile Phase / 2.3.1 General Requirements / 2.3.2 Solvent Strength and Selectivity / 2.3.3 Buffers / 2.3.4 Acidic Mobile Phases / 2.3.5 Ion-Pairing Additives / 2.3.6 High pH Mobile Phase / 2.3.7 Other Operating Parameters: Flow Rate (F) and Column Temperature (T) / 2.4 The Resolution Equation / 2.5 The Van Deemter Equation / 2.6 Isocratic vs. Gradient Analysis / 2.6.1 Peak Capacity (n) / 2.6.2 Key Gradient Parameters (Initial and Final Solvent Strength, Gradient Time [tG], and Flow Rate) 2.6.3 The 0.25ΔtG Rule: When Is Isocratic Analysis More Appropriate? / 2.7 Concept of Orthogonality / 2.8 Sample Capacity / 2.9 Glossary of HPLC Terms /		
4	Chapter 1: (Rosaleen et al) Electromagnetic radiation	The interaction of electromagnetic radiation with molecules, Double bond equivalent Note: Ch 1 + handout	6 th	2
	Med term exam		7 th	7
5	Chapter 2: (Rosaleen et al) UV-Vis spectrophotometry	2.1 Instrumentation 2.2 Selection Rules and the Beer-Lambert Law 2.3 Chromophores 2.4 Applications of UV Spectroscopy Note: Ch 2 + animation + hand out	8,9,10 th	6
6	UV-Vis spectrophotometry problem solving		11 th	2
7	IR SPECTROPHOTOMETRY	3 Instrumentation 3.2 Selection Rules and Hooke's Law 3.3 Characteristic Group Vibrations	12,13,14 th	6



		Note: Ch 3 + animation+ hand out		
8	IR problem solving		15 th	2
9	Final Exam		16 th	
Total number of weeks and hours			16	28

Second: Practical/Tutorial/Clinical Aspects			
Write up practical/tutorial/clinical topics			
No.	Practical/Tutorial/Clinical topics	No. of Weeks	Contact Hours
1	Preparation Calculations	1	3
2	Calibration of Equipment's and Using Excel in instrumental analysis	1	3
3	HPLC Operation.	1	3
4	HPLC Concept Calculation.	1	3
5	Analysis of Aspirin by HPLC.	1	3
6	Analysis of Metronidazole by HPLC	1	3
7	Analysis of Caffeine by HPLC	1	3
8	Spectrophotometer Operation.	1	3
9	Analysis of Aspirin by Spectrophotometer.	1	3
10	Analysis of Paracetamol by Spectrophotometer.	1	3
11	IR Operation.	1	3
12	IR Analysis of Solids	1	3
13	IR Analysis of Liquids	1	
14	Final Practical Exam	1	3
		13	39

VI. Teaching Strategies
<ol style="list-style-type: none"> 1. Lectures 2. Interactive Class Discussions 3. Research 4. Assignments 5. Office Hours (Tutorials) 6. Practical Classes



VII. Tasks and Assignments			
No.	Task/Assignment	Week due	Mark
1	Assignments	One week following the completion of each topic (4 assignments)	10

VIII. Learning Assessment:				
No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Homework/Tasks/Assignments	One week following the completion of each topic (4 assignments)	10	10%
2	Midterm Exam	7 th	20	20%
3	Practical Exam	13 th	30	30
5	Final Exam	16th	40	40

IX. Learning Resources	
(Author, (Year), Book Title, Edition, Publisher, Country of publishing)	
Textbooks-not more than 2	
1. Rosaleen J. Anderson, David J. Bendell and Paul W. Paul W. Groundwater, Organic Spectroscopic Analysis, The Royal Society of Chemistry, 2004. (This text is used for the spectroscopic chapters) 2. Modern HPLC for practicing scientists, Michael W. Dong, 2006, John Wiley & Sons.	
Essential References-not less than 4	
1. Skoog et. al Principles of Instrumental Analysis, 7 th ed, International Edition, Saunders College Publishing: Philadelphia, 2007:	
Electronic Materials and Web Sites	
1. The Analyst 2- 3- J. 2. J. Pharm. & Biomed. Anal. 3. Assoc. off Anal. Chem.	

X. Course Policies	
Based on university regulations, the following aspects should be figured out:	
1.	(Class Attendance): Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.



2.	(Tardy) :
3.	(Exam Attendance/Punctuality) : All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4.	(Assignments & Projects) :
5.	(Cheating) : Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6.	(Plagiarism) : "To plagiarize is to take ideas or words of another person & pass them off as one's own". Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7.	(Other policies) :

8.Course Syllabus Professional Skills 3

خطة مقرر مهارات مهنية 3

I. General information about the course:					
1.	Course Title :	Professional Skills 3			
2.	Course Code and Number :	PHS317			
3.	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		1	-	-	-
4.	Study Level and Semester:	Third Year – First Semester			
5.	Pre-requisites (if any):	PHS226			
6.	Co-requisites (if any):	NA			
7.	Program in which the course is offered:	Bachelor of Pharmacy & Bachelor of PharmD			
8.	Teaching Language:	English			
9.	Instruction location:				



II. Course Description

This course will prepare the student to utilize, retrieve, interpret and allocate information useful to their practice and in their clinical rotations. The students will be also familiarized with the drug development process and medication errors and how to prevent them. This course is taught through lectures, interactive class discussions, demonstration, and revised assignments.

III. Course Aims:

1. Introduce the students to the drug development process.
2. Familiarize students with drug information resources and how to use them.
3. Disseminate knowledge to the students about the practice of citation and referencing.
4. Envision the students with the potential sources of medication errors and how to prevent them.

IV. Course Intended Learning Outcomes (CILOs) :

1. Define the different stages of drug development process.
2. Recognize the different resources of drug information and the practice of citation and referencing.
3. Describe the various types of medication errors and strategies of error prevention.
4. Hypothesize potential elements of medication errors.
5. Appraise the validity of information obtained from different resources
6. Implement the available sources of information to optimize a patient-oriented drug therapy.
7. Employ error prevention techniques to improve the efficacy of health care system.
8. Assess literature obtained from information resources.

V. Course Contents

Theoretical Aspect:

No.	Course Units	Sub-topics	Week due	Contact Hours
1	Drug development process	Introduction, Preclinical studies, Clinical trials (Phases I-IV)	1 st &2 nd &3 ^{ed}	3
2	Drug Information	Introduction to drug information, Role of pharmacists, Medical resources: Tertiary literature, Secondary literature, Examples on secondary databases, Primary literature, Types of books, Types of Journals, Types of articles, Performing a PubMed® Search	4,5,6,7,8 th	5
3	Midterm		9 th	1
4	Referencing and	Citation, Compiling a reference	10,11,12 th	3



	citation	list, Plagiarism		
5	Medication errors	Introduction to medication errors, Classifications and types of errors, Why do errors occur, Error prevention	13,14,15 th	3
6	Final exam		16 th	1
Total number of weeks and hours			16	16

VI. Teaching Strategies

Lectures
Interactive class discussions
Assignments

VII. Tasks and Assignments

No.	Task/Assignment	Week due	Mark
1	Assignments	14 th	10

VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Midterm	9 th	30	30%
3	Assignment	14 th	10	10%
4	Final Exam	16 th	60	60%

II. Learning Resources:

(Author, (Year), Book Title, Edition, Publisher, Country of publishing)

Textbooks-not more than 2

1. Patrick Malone, Karen Kier, John Stanovich, (2011), Drug Information: A Guide for Pharmacists, Fourth edition. McGraw-Hill Medical, USA.

Essential References-not less than 4

1. Loyd V. Allen, Jr., (2005), Remington: The Science and Practice of Pharmacy, twenty first edition. Lippincott Williams & Wilkins, USA.
2. A.J. Winfield, J.A, Rees, I. Smith, (2009), Pharmaceutical practice, fourth edition, Churchill Livingston - Elsevier, USA.
3. Michael R. Cohen, (2006), Medication Errors, Second edition. American Pharmacists Association, USA.
4. Michael. E. Aulton, (2007), Aulton's Pharmaceutics: The Design and Manufacture of Medicines, third edition, Churchill Livingston, USA.

Electronic Materials and Web Sites



American pharmacists association
(<http://www.pharmacist.com/>)

III. Course Policies

Based on university regulations, the following aspects should be figured out:

1.	(Class Attendance): Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2.	(Tardy) :
3.	(Exam Attendance/Punctuality) : All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4.	(Assignments & Projects) :
5.	(Cheating) : Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6.	(Plagiarism) : "To plagiarize is to take ideas or words of another person & pass them off as one's own". Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7.	(Other policies) :



1.Course Syllabus Pharmacology 2

خطة مقرر علم الأدوية 2

I. General information about the course:					
1.	Course Title :	Pharmacology 2			
2.	Course Code and Number :	PHS320			
3.	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		3	-	-	-
4.	Study Level and Semester:	Third Year – Second Semester			
5.	Pre-requisites (if any):	PHS 310			
6.	Co-requisites (if any):	-			
7.	Program in which the course is offered:	Bachelor of Pharmacy & Bachelor of PharmD			
8.	Teaching Language:	English			
9.	Instruction location:				

II. Course Description

This course is designed to provide students with the important guidelines in treatment of central nervous system, respiratory and gastrointestinal tract diseases to prepare them for the future pharmacy practice. The concepts of pharmacology should be studied prior this course. Different methods of teaching/learning are used in this course including lectures and problem-based learning.

III. Course Aims:

1. Recognize the important of drug groups used in respiratory and gastrointestinal abnormalities.
2. Differentiate between drugs used in psychosis and neurosis.
3. Choose the suitable medications for different central nervous system disorders
4. Develop the ability to communicate with others in a team

IV. Course Intended Learning Outcomes (CILOs) :

1. Recall the effect of drugs in central nervous system disorders
2. Match the suitable medication with the diagnosed disease
3. Explain the rational use of medications in respiratory and gastrointestinal abnormalities
4. Relate between risk/benefits of medications
5. Design the rational dosage regimens in different diseases.
6. Construct the proper drug doses based on the health situation of patient.



7. Choose the suitable medication plan based on updated research findings.
8. Evaluate required scientific information that is obtained from available sources

V. Course topics and sub-topics (theoretical and practical) with contact hours

Topics/Units of Course Contents

First: Theoretical Aspects

No.	Course Topics/Units	Sub-topics	Week due	Contact Hours
1	Central nervous system (CNS)	Introduction to the pharmacology of CNS drugs, sedatives –hypnotics ,affective disorders, antiepileptic agents, narcotic analgesics, general anesthetic drugs, neurodegenerative disorders, ethanol, - Skeletal muscle relaxant ,Local anaesthetics	1 st & 2 nd 3 rd & 4 th & 5 th & 6 th	18
2	Midterm exam.1		7 th	3
3	Respiratory system	Cough therapy , Bronchial asthma , antimycobacterium agents	8 & 9 th	6
4	Gastrointestinal system	GI secretions & peptic ulceration, antiemetic drugs, liver disease and gallstones	10 & 11 & 12 & 13 & 14 th & 15 th	18
6		Constipation & laxatives , Diarrhea & antidiarrheal agents, inflammatory bowel disease (IBD)		
7	Final exam.		16 th	3
Total number of weeks and hours				48

VI. Tasks and Assignments

No.	Task/Assignment	Week due	Mark
1.	Assignment and presentation	10 th	5
2.	Reports	Every 2 weeks	5

VII. Learning Assessment:

No.	Assessment Tasks	Assessment day	Mark	Weight
1	Assignment	10 th	5	5%
2	Reports	Every 2 weeks	5	5%
3	Midterm Exam	8 th	30	30%
4	Final Exam	16 th	60	60%



Total	16 th	100	100%
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VIII. Teaching Strategies

Lecture
Self-learning (homework)
Assignment
Small group discussion

IX. Learning Resources :

(Author, (Year), Book Title, Edition, Publisher, Country of publishing)

Textbooks-not more than 2

1. Katzung B G, Masters SMJ and Trevor (2012). Basic and Clinical Pharmacology, 12th ed. Mc Graw Hill. India.

Essential References-not less than 4

1. Rang HP, Dale MM and Ritter JM (2012). Pharmacology. 7th ed. CHURCHILL LIVINGSTONE. London
2. Laurence DR, Bennett PN and Brown MJ (2010). Clinical pharmacology. Ninth ed. CHURCHILL LIVINGSTONE. London
3. Hardman JG and Limbird LE (2010). Goodman & Gilman's the pharmacological basis of Therapeutics. Tenth ed. McGraw Hill. London
4. Harvey RA. Pharmacology (2012). 5th ed. Lippincott Williams & Wilkins. Republic of China
5. Tripathi KD (2010). Essentials of Pharmacology. 6th ed. JAYPEE. India

Electronic Materials and Web Sites

1. British Journal of Pharmacology (2013)
2. The Lancet infectious diseases (2013).
3. WWWPubMed.com.

X. Course Policies

1.	(Class Attendance): Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2.	(Tardy) :
3.	(Exam Attendance/Punctuality) : All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4.	(Assignments & Projects) :
5.	(Cheating) : Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones).



	Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6.	(Plagiarism) : “To plagiarize is to take ideas or words of another person & pass them off as one’s own”. Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7.	(Other policies) :

2.Course Syllabus Pharmaceutical Technology 2

خطة مقرر تقنية صيدلانية 2

I. General information about the course:					
1.	Course Title :	Pharmaceutical Technology 2			
2.	Course Code and Number :	PHS321			
3.	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		2	-	2	-
4.	Study Level and Semester:	Third Year – Second Semester			
5.	Pre-requisites (if any):	PHS311			
6.	Co-requisites (if any):	NA			
7.	Program in which the course is offered:	Bachelor of Pharmacy & Bachelor of PharmD			
8.	Teaching Language:	English			
9.	Instruction location:				

II. Course Description

This course builds on what has been taught in BPH27 covering the different types and preparation of pharmaceutical dosage forms encountered in pharmaceutical industry. Solid and semi-solid dosage forms will be covered. This course relates the basic scientific background to pharmaceutical practice regarding the dosage forms preparation and quality control through classes and practical experiments. Completion of Pharmaceutical Technology I course (BPH27) is a pre-requisite for this course.

III. Course Aims

1. Familiarize the students with the different pharmaceutical dosage forms.
2. Train students to formulate solid and semisolid dosage forms.
3. Provide practical skills for the students in preparation and quality control of solid and semisolid dosage forms.
4. Equip the students with team-work and problem solving skills.



IV. Course Intended Learning Outcomes (CILOs) :

1. Discuss the different aspects of preparation, quality control, and labeling of semisolid and solid dosage forms.
2. Identify the procedures for extemporaneous preparation of dosage forms.
3. Choose rationally the appropriate dosage form and excipients for a specific therapeutic agent.
4. Exercise professional good laboratory practice (GLP) during practical sessions and operate machinery used properly.
5. Implement proper techniques towards preparing medicines and determining the quality of the prepared products.
6. Demonstrate critical thinking, time-management, teamwork skills, synthesis and interpretation of pharmaceutical information, and responsibility.

V. Course Contents

Theoretical Aspect:

No.	Course Units	Sub-topics	Week due	Contact Hours
1	Semisolid dosage forms	Ointments, Creams, Gels, Pastes, Suppositories	1 st & 2 nd & 3 rd & 4,5,6,7 th	14
2	Midterm		8 th	2
3	Solid dosage forms	Powders, Granules, Tablets, Capsules	9,10,11,12, 13,14,15 th	14
4	Final Exam		16 th	2
Total number of weeks and hours				32

Second: Practical/Tutorial/Clinical Aspects :

Write up practical/tutorial/clinical topics

No.	Practical/Tutorial/Clinical topics	Week due	Contact Hours
1.	Semisolid dosage forms	5	10
2.	Powders and granules	1	4
3.	Tablets	3	6
4.	Coating of tablets	1	4
5.	Capsules	2	4
6.	Final Exam	1	2
Total number of weeks and hours		13	26



VI. Teaching Strategies

Lectures
Interactive class discussions
Practical sessions
Assignments

VII. Tasks and Assignments

No.	Task/Assignment	Week due	Mark
1	Project	12 th	10

VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Midterm	8 th	20	20%
2	Assignment	12 th	10	10%
3	Practical Part	14 th	30	30%
4	Final Exam	16 th	40	40%
Total			100	100%

IX. Learning Resources

Textbooks

Lloyd V. Allen Jr., Nicholas G. Popovich, Howard C. Ansel, (2011), Ansel's Pharmaceutical Dosage Forms and Drug Delivery Systems, ninth edition. Lippincott Williams & Wilkins, USA.

Essential References:

1. Michael. E. Aulton, (2007), Aulton's Pharmaceutics: The Design and Manufacture of Medicines, 10th edition, Churchill Livingstone, USA
2. Leon Lachman, Herbert A. Lieberman, Joseph L. Kanig, (1986), The Theory and Practice of Industrial Pharmacy, third edition, Lea & Febiger, USA.
3. Lloyd V. Allen, Jr., (2005), Remington: The Science and Practice of Pharmacy, twenty first edition. Lippincott Williams & Wilkins, USA.
4. A.J. Winfield, J.A, Rees, I. Smith, (2009), Pharmaceutical practice, fourth edition, Churchill Livingstone - Elsevier, USA

Electronic Materials and Web Sites:

The Pharmaceutics and Compounding Laboratory, University of North Carolina
(<http://pharmlabs.unc.edu/index.htm>)



X. Course Policies	
1.	(Class Attendance): Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2.	(Tardy) :
3.	(Exam Attendance/Punctuality) : All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4.	(Assignments & Projects) :
5.	(Cheating) : Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6.	(Plagiarism) : "To plagiarize is to take ideas or words of another person & pass them off as one's own". Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7.	(Other policies) :



2.Course Syllabus Pharmaceutical chemistry 2

خطة مقرر كيمياء صيدلانية 2

I. General information about the course:					
1.	Course Title :	Pharmaceutical chemistry 2			
2.	Course Code and Number :	PHS322			
3.	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		2	-	-	-
4.	Study Level and Semester:	Third Year – Second Semester			
5.	Pre-requisites (if any):	PHS312			
6.	Co-requisites (if any):				
7.	Program in which the course is offered:	Bachelor of Pharmacy & Bachelor of PharmD			
8.	Teaching Language:	English			
9.	Instruction location:				

II. Course Description

This course includes basic and specific science in order to well understand of pharmaceutical chemistry. The importance of this course in the field of drug: synthesis, development, discovery, and uses. It includes Physicochemical properties and drug design, metabolic pathway, autonomic nervous system drugs, diuretics, local anaesthetics, in which study, chemical structure, classification, metabolism, method of preparations, and the structure activity relationship.

The pre-requisite of this course is organic chemistry, analytical chemistry, the co-requisite course pharmacology1.

III. Course Aims:

1. Acquire students basic science about the chemistry of drugs.
2. Provide students basic information about general metabolic pathways of drugs.
3. Educate students chemical synthesis of selected drugs
4. Train students the preliminary skills of research methodology

IV. Course Intended Learning Outcomes (CILOs)

1. translate chemical structures of drugs to pharmacological action.
2. discuss the chemical synthesis, uses, adverse reaction of drugs.
3. construct the basic structures of therapeutic groups depended on SAR
4. illustrate the chemical synthesis of selected drugs
5. Apply health facilities, in the field of new drugs design
6. analyze drug information



7. Plan good presentation skills

V. Course topics and sub-topics (theoretical) with contact hours					
Topics/Units of Course Contents					
No.	Course Topics/Units	Sub-topics	Week due	Contact Hours	
1.	Cardiovascular drugs	Angina, nitrates Arrhythmia, calcium channel blockers Hypertension, ACEI, vasodilators Hyperlipidemia, resins, fib rates, statins Anticoagulants, coumarins, Cardiac glycosides	1 st & 2 nd & 3 rd & 4 th & 5 th	10	
2.	Oral Hypoglycemic agents	sulfonylureas, biguanides	6 th	2	
3.	Sulfonamides Quinolones	Classification, SAR, chemical synthesis, Ph affecting, Uses	7 th	2	
4.	Midterm exam		8 th	2	
5.	β -lactam antibiotics	Introduction , definition, spectrum, stability resistance , allergency of penicillin, cephalosporins	9 & 10 & 11 th	6	
6.	Tetracyclines, Macrolides	spectrum ,MOA, resistance chemical modification, SAR, uses	12 th	2	
7.	Antiprotozoal , Antiviral	Properties, classification ,chem synthesis, types of protozoa & treatment	13 th	2	
8.	Anticancer	Introduction Alkylating agents antimetabolites natural products hormones	14 & 15 th	4	
9.	Final exam		16 th	2	
Total number of weeks and hours			16	32	

VI. Tasks and Assignments:

No.	Task/Assignment	Week due	Mark
1	Activities	12 th	10



VII. Learning Assessment:

No.	Assessment Tasks	Week due	Mark	Wight
1	Assignment	10 th	5	5%
2	Reports	Every 2 weeks	5	5%
3	Midterm Exam	8 th	30	30%
4	Final Exam	16 th	60	60%
Total		16 th	100	100%

VIII. Teaching Strategies

Lectures

Interactive class discussions

Activities

IX. Learning Resources :

(Author, (Year), Book Title, Edition, Publisher, Country of publishing)

Textbooks-not more than 2

1. Wilson and Gisvold's(2011) "Textbook of organic Medicinal and Pharmaceutical chemistry, Twelfth edition" ,Lippincott Williams and Wilkins USA.

Essential References-not less than 4

1. Foye's(2008) "Principle of Medicinal chemistry", sixth edition, Lippincott Williams and a. Wilkins USA.
2. Wilson and Gisvold's(2011) "Textbook of organic Medicinal and
3. Pharmaceutical chemistry, Twelfth edition" ,Lippincott Williams and Wilkins USA.
4. Zuhair Muhi-Eldeen(2005)"Essential Of Medicinal Chemistry" first edition Dar AL-
5. Esra Jordan.
6. 4. Sadik AL-Mikhlaifi (2014)"Medicinal Chemistry" fourth edition,ALmutafawk,Yemen

Electronic Materials and Web Sites:

1. www.pharmchem.ku.edu/

X. Course Policies

1.	(Class Attendance) : Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2.	(Tardy) :
3.	(Exam Attendance/Punctuality) : All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date.



	No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4.	(Assignments & Projects) :
5.	(Cheating) :(Cheating) Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6.	(Plagiarism): “To plagiarize is to take ideas or words of another person & pass them off as one’s own”. Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7.	(Other policies) :

4.Course Syllabus Phytochemistry 2

خطة مقرر كيمياء عقاقير 2

I. General information about the course:					
1.	Course Title :	Phytochemistry 2			
2.	Course Code and Number :	PHS323			
3.	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		2		2	
4.	Study Level and Semester:	Third Year – Second Semester			
5.	Pre-requisites (if any):	PHS313			
6.	Co-requisites (if any):				
7.	Program in which the course is offered:	Bachelor of Pharmacy & Bachelor of PharmD			
8.	Teaching Language:	English			
9.	Instruction location:				



II. Course Description :

This course provide an information about the physical ,chemical properties, uses, side effect and abuse of volatile oil and alkaloids and the suitable methods for characterization, biosynthesis, and isolation by different methods. In addition to study the principle of chromatography and different chromatographic methods like TLC, column, paper, gas chromatography and HPLC. The course requires to study of different official medicinal parts as pre-request for phytochemistry II. Different methods of teaching/learning are used in this course including lectures and seminar.

III. Course Aims:

- 1- Giving knowledge about the main active constituents present in medicinal plants and responsible for the therapeutic actions.
- 2- Classification of the main active constituents according to their structures.
- 3- Giving an idea about different methods used for isolation of the different groups of the active constituents.
- 4- Identification and determination of the main active constituents using different methods including physical, chemical and chromatographical methods.
- 5- Giving an idea about the main uses of different group of compounds, abuses, side effects and toxic effects.

IV. Course Intended Learning Outcomes (CILOs)

1. Relate the main active constituents present in the herbal drugs and natural products, their physicochemical properties, side effects and toxicity
2. Match the prescription of these ingredients for treatment of different ailments.
3. Get a knowledge about the recent research articles and advanced studies on these compounds concerning their modern uses.
4. Get a knowledge about the suitable methods for characterization, biosynthesis and isolation.
5. The student can hypothesize the active constituents according to their therapeutic uses
6. Differentiate between the different compounds in the same group using different methods.
7. The student can choose the best methods for isolation and identification of the different group of compounds according to their chemical character
8. To acquire skills to isolate and identify the different groups of the active constituents.
9. Skill to prescribe the suitable drugs according to their mode of action.
10. Acquire skills to decrease the side effects of some drugs.
11. Examine the communication skills of students
12. Assess the student to writing reports for criticizing natural compounds
13. Estimate the use of different methods for identification of natural drugs



V. Course topics and sub-topics (theoretical and practical) with contact hours					
Topics/Units of Course Contents					
First: Theoretical Aspects					
No.	Course Topics/Units	Sub-topics	Week due	Contact Hours	
1	Volatile oils	Properties, classification and preparation of volatile oils and Study of medicinal plant that contain volatile oils.	2	4	
2	Alkaloids	Definition, nomenclature, classification, properties, and purification of alkaloids.	4	8	
3	Mid tem 1		1	2	
4	Alkaloids	Study all groups of alkaloids.	2	4	
5	Chromatography	Principle of chromatography, adsorption, partition, ion exchange,	3	6	
6	Mid tem 2		1	2	
7	Chromatography	Gas chromatography and HPLC.	1	2	
Total number of weeks and hours				28	

Second: Practical/Tutorial/Clinical Aspects				
Write up practical/tutorial/clinical topics				
No.	Practical/Tutorial/Clinical topics	No. of Weeks	Contact Hours	
1	Volatile oils	2 nd	4	
2	Alkaloids	5 th	10	
3	Chromatography	5 th	10	
Total number of weeks and hours		12	24	

VI. Teaching Strategies
lectures
Practical session
independent study
Seminars and small group discussions
presentation



VII. Learning Assessment:

No.	Assessment Tasks	Week due	Mark	Proportion of Final Assessment
1	Assignments, seminar	6 th	3	3 %
2	Quiz 1	4 th	1	1 %
3	Practical evaluation	12 th	30	30 %
4	Midterm Exam	6,12 th	30	30 %
5	Quiz 2	10 th	1	1 %
6	Final Exam	16 th	35	35 %
Total			100	100 %

VIII. Tasks and Assignments :

No.	Task/Assignment	Week due	Mark
1	Assignment and presentation	6 th	10
2	Quizzes	4,10 th	10

IX. Learning Resources :

(Author, (Year), Book Title, Edition, Publisher, Country of publishing)

Textbooks-not more than 2

- 1- Balbaa,S., et. al. "Chemistry of Natural Products", 1976
- 2- Trease G. E. and Evan W. C. " Pharmacognosy", 2002.

Essential References-not less than 4

1. Balbaa,S., et. al. Practical Notebook in "Chemistry of Natural Products", 1976.
2. Wallis, T.A. "Textbook in Pharmacognosy", 1967.
3. Barnes, J., Anderson, A.L. and Philipson, J.D. " Herbal Medicine", 2002.
4. Jackson, B.P. and Snawdon, D.W. " Atlas of Microscopy of Medicinal Plants", 1990.

Electronic Materials and Web Sites

1. WWW.Hinari.com."journal of Phytochemistry, Ethnopharmacology"
2. WWW.PubMed.com.

X. Course Policies

1.	(Class Attendance): Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2.	(Tardy) :
3.	(Exam Attendance/Punctuality) : All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was



	accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4.	(Assignments & Projects) :
5.	(Cheating) : Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6.	(Plagiarism) : “To plagiarize is to take ideas or words of another person & pass them off as one’s own”. Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7.	(Other policies) :

5.Course Syllabus Pharmaceutical Microbiology

خطة مقرر علم الأحياء الدقيقة الصيدلانية

I. General information about the course:					
1.	Course Title :	Pharmaceutical Microbiology			
2.	Course Code and Number :	PHF324			
3.	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		2	-	2	-
4.	Study Level and Semester:	Third Year – second Semester			
5.	Pre-requisites (if any):	PHF314			
6.	Co-requisites (if any):	NA			
7.	Program in which the course is offered:	Bachelor of Pharmacy & Bachelor of PharmD			
8.	Teaching Language:	English			
9.	Instruction location:				

II. Course Description

This course is designed to help the student identified the name of microorganism and their relationship with human. During the semester, students will be took several organisms cause disease to human. Although this is primarily a lecture-based course, interaction and participation by each student is highly encouraged.



III. Course Aims:

1. Educate students about the basic features of general bacteriology, virology and mycology.
2. Provide students with an understanding of the immune system, its protective functions and its role in the patho-physiology of infectious and non- infectious diseases
3. Familiarize students with the common infections and diseases of medical importance, their microbial causes, as well as laboratory diagnosis. treatment, prevention and control of such diseases.
- 4- Provide students with an understanding of the hypersensitivity, its protective functions and its role in the patho-physiology of infectious and non- infectious diseases.

IV. Course Intended Learning Outcomes (CILOs) :

1. Identify medically important organisms based on microscopic examination, culture methods and serological tests.
2. Explain the different types of hypersensitivity
3. Recognize the most important infectious clinical conditions and outline the diagnosis, treatment, prevention and control of the most likely organisms causing such diseases
4. Analyze different problems encountered throughout the course.
5. Explore the ability to work with the different infectious diseases caused by different organisms.
6. Illustrate specific bacterial, fungal, parasitic and viral organisms cause different diseases.
7. Diagnose haemomicrobes detectable in blood using serological methods
8. Develop the ability to work with equations and learn how to choose the simplest method to carry out different methods for microbial diseases.

V. Course Contents

Theoretical Aspect:

No.	Course Units	Sub-topics	Week due	Contact Hours
1	Introduction to immunology	Definition, history, type of immunity and type of immune cells	1 st & 2 nd	4
2	Antibodies	Definition, Size, morphology and structures, different types	3 ^{ed}	2
3	Hypersensitivity	Definition, types and diseases	4&5 th	4
4	Viral Hepatitis	Definitions, types and diseases	6&7 th	4
5	Midterm	-	8 th	2
6	Respiratory tract infections	Definitions, causes, diagnosis and treatment	29&10 th	4
7	Gastrointestinal tract	Definitions, causes, diagnosis	11 th	2



	infections	and treatment		
8	Disinfection and sterilizations	Definitions , different methods use and type of disinfections	12&13 th	4
9	Vaccines	Definitions,history and type of vaccines	14 th	2
10	Retroviral infection	Definitions, and different causes	15 th	2
11	Final exam	-	16 th	2
	Total number of weeks and hours		16	32

Second: Practical/Tutorial/Clinical Aspects :

Write up practical/tutorial/clinical topics

No.	Practical/Tutorial/Clinical topics	No. of Weeks	Contact Hours
1.	Microscopy	1	2
2.	Performing serological tests	1	2
3.	Morphology and reaction of various viruses	1	2
4.	Different Techniques use in serology	1	2
5.	Types of sterilization and disinfections methods	1	2
6.	Immunological techniques	1	2
7.	Final Exam	1	2
Total number of weeks and hours		7	14

VI. Teaching Strategies

1. Lectures
2. Interactive class discussions
3. Practical sessions
4. Assignment

VII. Tasks and Assignments

No.	Task/Assignment	Week due	Mark
1.	Report	12 th	10



VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Midterm	8 th	20	20%
2	Assignment	12 th	10	10%
3	Practical Part	12 th	30	30%
4	Final Exam	16 th	40	40%
Total			100	100%

IX. Learning Resources

Textbooks

- Mim's, 2013 , Medical Microbiology, 5th ed, Elsevier, USA
- Markell, 1992, Medical Parasitology, 7th ed, Saunder, London.

Essential References:

- Kathleen, 2002, Foundation in Microbiology, 4th ed, Mc Graw Hill, USA
- Ragesh, 2008, Essential of medical microbiology, 4th ed, Gaypee, US
- Arora, 2002, Medical parasitology, 1st ed, CBS, India

Electronic Materials and Web Sites:

- microbiology.com
- parasitology.com
- asm.org

X. Course Policies

Based on university regulations, the following aspects should be figured out:

1.	(Class Attendance): Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2.	(Tardy) :
3.	(Exam Attendance/Punctuality) : All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4.	(Assignments & Projects) :
5.	(Cheating) : Cheating in examinations or tests may take the form of copying from another student or



	bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6.	(Plagiarism) : “To plagiarize is to take ideas or words of another person & pass them off as one’s own”. Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7.	(Other policies) :

6.Course Syllabus Pathophysiology 1

خطة مقرر علم وظائف الأعضاء المرضي 1

I. General information about the course:					
1.	Course Title :	Pathophysiology 1			
2.	Course Code and Number :	PHF325			
3.	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		2			2
4.	Study Level and Semester:	Third Year – Second Semester			
5.	Pre-requisites (if any):	PHF315			
6.	Co-requisites (if any):				
7.	Program in which the course is offered:	Bachelor of Pharmacy & Bachelor of PharmD			
8.	Teaching Language:	English			
9.	Instruction location:	Lecture room 4			

II. Course Description

This course serves to prepare students for consequent therapeutics courses through introducing the pharmacy students to mechanisms of diseases in several human body systems. It will help them to understand the underlying pathogenesis and how they can stop it through proper intervention.

III. Course Aims:

- 1) It provides pharmacy students with the knowledge of the pathogenesis of various symptoms & diseases affecting the inflammatory process, GIT, CVS, endocrine and skin..
- 2) It explain them the altered physiological functions of human organs in term on molecular,



cellular, organ & systemic levels.

IV. Course Intended Learning Outcomes (CILOs) :

1. Identify the etiology and risk factors of different body systems
2. Describe the pathogenesis and pathological changes of different body systems
3. Correlate the mechanism of disease (pathogenesis) with alteration of body systems during its occurrence
4. Apply the principles of pathophysiology in managing, preparing and prescribing effective drugs for patients
5. Communicate with patients effectively and scientifically to explain the underlying pathophysiology of their diseases

V. Course Contents

Theoretical Aspect:				
No.	Course Units	Sub-topics	Week due	Contact Hours
1	Inflammatory process	Mechanisms of Disease I & II	1 st & 2 nd	4
2		Tissue Adaptation and Injury and inflammation I & II	3 rd & 4 th	4
3	GIT system	Gastrointestinal diseases I & II	5 th & 6 th	4
	Mid Term Exam		7 th	2
5	CVS system	i-Alterations in Blood Pressure	8 th	2
6		ii-Alteration in cardiac function -Coronary Heart Disease -Myocardial and Endocardial Disease	9 th to 11 th	6
7	Endocrine system Skin	Alterations in the Endocrine System i-Alterations in Pituitary, Thyroid, Parathyroid, and Adrenal Function	12 th	2
8		ii-Diabetes Mellitus	13 th	2
9		Alterations in Skin Function and Integrity I & II	14 th & 15 th	4
FINAL EXAM			16 th	2
Total number of weeks and hours			15	32



VI. Teaching Strategies	
1. Lectures	
2. Demonstration	
3. Group Discussion	
4. Role Play	

VII. Tasks and Assignments :			
No.	Task/Assignment	Week due	Mark
1	Discuss the mechanism of hypertension and how drugs can interfere it.	3 rd	5
2	Discuss the changes of different body system in diabetic patients	9 th	5

VIII. Learning Assessment:					
No.	Assessment Tasks	Week due	Mark	Proportion of Final Assessment	
1	Homework/Tasks/Assignments	3rd & 9 th	10	10%	
3	Midterm Exam	7 th	20	20%	
5	Final Exam	16 th	70	70%	
Total			100	100%	

IX. Learning Resources :	
(Author, (Year), Book Title, Edition, Publisher, Country of publishing)	
Textbooks-not more than 2	
1. Vinay Kumar , Abul K. Abbas , Jon C. Aster, Nelson Fausto, (2010), Robbins & Cotran Pathologic Basis of Disease, 8 th edition, Saunder, USA 2. Charles Simon Herrington, 2014, Muir's Textbook of Pathology, 6 th edition, Wiley, UK	
Essential References-not less than 4	
1. Kathryn L. McCance, Sue E. Huether (2010), Pathophysiology: The Biologic Basis for Disease in Adults and Children, 6th edition, Mosby Elsevier, USA 2. Vinay Kumar, Abul K. Abbas, Jon C. Aster, (2012), Robbins Basic Pathology. 9th edition, Saunder, USA 3. Joseph DiPiro, Robert L. Talbert, Gary Yee, Barbara Wells (2008), Pharmacotherapy Pathophysiologic Approach, 9th edition, Mc Graw Hill, USA 4. Robin Reid, Fiona Roberts, (2011), Pathology Illustrated, 7th edition, Churchill Livingstone, U	
Electronic Materials and Web Sites	
1. http://www.mednotes.net/notes/pathophysiology/ 2. http://www.pathophysiologyjournal.com/	



X. Course Policies	
1.	(Class Attendance): Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2.	(Tardy) :
3.	(Exam Attendance/Punctuality): All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4.	(Assignments & Projects):
5.	(Cheating): Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6.	(Plagiarism): "To plagiarize is to take ideas or words of another person & pass them off as one's own". Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7.	(Other policies) :

7.Course Syllabus Nutrition

خطة مقرر التغذية

I. General information about the course:					
1.	:Course Title	Nutrition			
2.	Course Code and :Number	PHF326			
3.	:Credit Hours	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		2	-	-	-
4.	Study Level and :Semester	Third Year – Second Semester			



5.	Pre-requisites (if any)	PHF222
6.	Co-requisites (if any):	
7.	Program in which the course is offered:	Bachelor of Pharmacy & Bachelor of PharmD
8.	Teaching Language	English
9.	Instruction location:	

II. Course Description

This is a comprehensive course developed for health care professionals to enable them to understand the relationship between nutrition and human body. Understanding of human nutrition provides an integrated overview of the physiological requirements and functions of, proteins, carbohydrates, fats, and the major vitamins and minerals that are determinants of health and disease. The course also help the student to integrate both the clinical & basic scientific knowledge of pharmacy practice with nutrition issues that will be faced in the clinical setting, through providing information about the interaction of food nutrition and drugs.

III. Course Aims:

1. By the end of this course the student will be able to:
2. Have a good command of the basic concepts, function and inter-relationship between nutrients as they are related to human good health and well being
3. Understand nutritional balance, emphasizing chronic under nutrition, chronic disease, micronutrient deficiencies and toxicity.
4. Understand the concept of nutrient bioavailability and the factors that affect it.
5. Become knowledgeable of significant food sources of the nutrients and their recommendation for healthy individuals and patients.
6. Accurately assess a client's response to food and drug interactions.
7. Provide specific instructions to clients regarding their diet and drug therapy.



IV. Course Intended Learning Outcomes (CILOs) :

1. Define the basic information about the kinds, function and amounts of macro- and micronutrients needed for maintaining health.
2. Describe the effect of Drugs on food intake absorption, metabolism, and excretion of nutrients
and effect of Foods and nutrients in absorption, metabolism and excretion of drugs
3. Describe the role of pharmacist in the nutrition practice to promote health and prevent diseases
4. Examine the nutritional -related problems for diseased individuals
5. Appraise the Effects of drug on Pregnancy and Lactation and elderly
6. Cooperate effectively both independently and within a group.
7. Select appropriate instructions to the clients regarding their diet and drug therapy

V. Course Contents

Theoretical Aspect:

No.	Course Units	Sub-topics	Week due	Contact Hours
1	Over view of nutrition	Definition of nutrition and food Factor affecting food choice Role of pharmacist in nutrition practice	1 st	2
2	Energy balance	Energy in: the calories food provides Energy out: the calorie the body spends Components of energy expenditure (BMR), which equals sleeping metabolic rate (SMR) .The thermogenic effect of food .Exercise, or daily physical activity and spontaneous physical activity	2 nd & 3 rd	4



		((SPA Estimation of energy requirements			
3	Carbohydrates	Carbohydrates in foods ((nutritive value and source Health effects and diseases associated Recommended intakes of sugars, starch and fiber Definition and calculation of Glycemic index Glycemic load Glycemic index in different types of food	4&5 th	4	
4	Lipids	Lipids in foods (source and nutritive value) Health effects and disease associated Recommended intakes of lipids	6&7 th	4	
5	Proteins	Protein in the body Protein in foods (source and (nutritive value Health effect and diseases associated Recommended intakes of protein	8 th	2	
6	Midterm		9 th	2	
7	Vitamins Water soluble vitamins	:Water soluble vitamins The B vitamins: names and their role in human body Food sources, deficiency, toxicity and recommendations	th 10&11	4	



		Vitamin C and its roles in human body, food source, Deficiency and recommendation			
8	Fat soluble vitamins	fat soluble vitamins Names and their role in human body Food sources, deficiency, toxicity and recommendations	12 th	2	
9	Major minerals Trace elements	Names and their role in human body Food sources, deficiencies. Toxicity and recommendation	13 th	2	
10	Drugs and Nutrition	Food and Drug Interactions Effects of Food on Drugs Effects of Drugs on Food Food and Drug Incompatibilities Clinical Implications	14 th	2	
11	Drugs and the Life Cycle	Effects on Pregnancy and Lactation Effects on Adults Effects on the Elderly An Example of Side Effects from Medications for Hyperactivity	15 th	2	
12	Final exam		16 th	2	
Total number of weeks and hours			16	32	



XI. Teaching Strategies

1. Lectures
2. Assignment
3. group discussion

VI. Tasks and Assignments

No.	Task/Assignment	Week due	Mark
.1	Quizzes	Every 2 weeks	5
.2	Assignments,	8 th	5

VII. Learning Assessment:

No.	Assessment Tasks	Assessment day	Mark	Weight
1	Assignments Group report Midterm Exam Final Exam Final Exam	8 th	5	5%
2	Quizzes	every 2 weeks	5	5%
3	Mid term	6 th	30	30%
4	Final exam	16 th	60	60%
	Total		100	100%

VIII. Learning Resources

Textbooks

- 1-Whitney, Ellie&Rolfes, Sharon.R.(2008). Understanding Nutrition.11TH ed. Canada, Thomason Wadsworth. *Executive Editor:* Peter Adams, publisher Thomson Higher Education 10 Davis Drivenm Belmont, CA 94002-3098 ,USA
- 2-L.K athleen Mahan, M, S,R D,C DE,SylviaEscott- StumpMA, ,R D, CDE,(2008)KRAUSE'S Food ,&Nutrition therapy, International Edition, 12e ISBN: 978-0-8089-2378- SAUNDERS EI-SEVIEI1830 Wesdine Industrial Drive St. Louis, Missouri 63146,Printed in Canada



Essential References:

- 1-Peggy S. Stanfield (2010) Nutrition And Diet Therapy: Self-Instructional Approaches
Jones and Bartlett Publishers International Barb House, Barb Mews London W6 7PA United Kingdom
Copyright © 2010 by Jones and Bartlett Publishers, LLC ,Publisher: Kevin Sullivan,Acquisitions Editor: Amy Sibley.
- 2-Michael J. Gibney (Editor), Susan A. Lanham-New (Editor), Aedin Cassidy (Editor), Hester H. Vorster (Editor) (2009), Introduction to Human Nutrition, 2nd Edition, Norwich, UK.

IX. Course Policies

Based on university regulations, the following aspects should be figured out:

1.	(Class Attendance): Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2.	(Tardy) :
3.	(Exam Attendance/Punctuality): All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4.	(Assignments & Projects):
5.	(Cheating): Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6.	(Plagiarism): “To plagiarize is to take ideas or words of another person & pass them off as one’s own”.



	Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7.	(Other policies) :

8.Course Syllabus Professional Skills 4

خطة مقررمهارات مهنية 4

I. General information about the course:					
1.	Course Title :	Professional Skills 4			
2.	Course Code and Number :	PHS327			
3.	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		1	-	-	-
4.	Study Level and Semester:	Third Year – Second Semester			
5.	Pre-requisites (if any):	BUST07			
6.	Co-requisites (if any):	NA			
7.	Program in which the course is offered:	Bachelor of Pharmacy & Bachelor of PharmD			
8.	Teaching Language:	English			
9.	Instruction location:				

II. Course Description

This course present an overview of communication skills in pharmacy practice that will enhance the pharmacist's ability to develop professional relationships with their patients, co-workers and other healthcare providers to optimize health care. This course emphasizes specific tools and techniques for improving listening skills, delivering effective messages and bridging different communication styles. Through interactive lectures, tutorial and simulations students work in small or large groups to apply communication tools and strategies required in patient interview, assessment, education and counseling related to patient self-care.

III. Course Aims:

1. Conduct patient interviews, counsel patients on medications, and respond empathically to patient concerns within the framework of shared decision-making.
2. Recognize the emotional/psychological aspects of illness that patients often experience and the communication techniques that contribute to building a therapeutic relationship with patients.
3. Examine and critique their own communication with role-playing patients and to provide fellow students with constructive, specific feedback on how their communication with patients could be improved.



IV. Course Intended Learning Outcomes (CILOs) :

1. Identify relevant information that must be understood by patients if they are to make informed decisions about medication use and be able to use medications appropriately.
2. Compare appropriate strategies for conducting the major types of interviews in organizations, such as employment interviews, performance evaluation interviews, disciplinary and counseling interviews, and exit interview.
3. Formulate and produce responses to given statements and situations that communicate accurate, empathic listening.
4. Demonstrate interactive communication techniques including open-ended questions, reflective responses, nonverbal communication, active listening and verifying understanding.
5. Apply patient education techniques to help ensure that information is provided in an understandable way.
6. Examine and critique their own communication with role-playing patients and to provide fellow students with constructive, specific feedback on how their communication with patients could be improved.
- 7.

V. Course Contents

Theoretical Aspect:

No.	Course Units	Sub-topics	Week due	Contact Hours
1	Introduction	What is communications. why communications skills are so important. Role of the pharmacist and communications skills.	1 st	1
2	Patient-centered communication pharmacy practice	Patient-centered theory. Importance of communication in meeting patient care responsibilities. Dimensions of patient-centered communication (PCC).	2 nd	1
3	The basics of interpersonal communication	Tools and types of communication. Standard model of communications ,and components of the model(i.e. sender, message, receiver, barriers and feedback) definitions.	3 rd	1
4	Nonverbal communication in pharmacy	Verbal vs. non-verbal communication. Components of non-verbal communication. Dimensions of Nonverbal Communication	4 th	1
5	Barriers in Communication	Common barriers to communication. Type of barriers. How to overcome barriers	5 th	1
6	Listening and	Styles of listening and the listening skills.	6 th	1



	Empathic Responding	Empathy aspect and define		
7	Midterm exam.		7 th	1
8	Evaluation of information	Collection, organization and presentation of drug information to patient	8&9 th	2
9	Patient interview and Assessment	Component of an effective interview Skills in effective interviewing	10&11 th	2
10	Patient education and counseling	Patient counseling , Definition, Methods. Outcome of patient counseling. Communication during drug therapy. Interactive communication skills	12 &13 th	2
11	Effective presentation skills.	Preparation Skills, Design Concepts, Visual Aids , Verbal & Nonverbal Presentation Skills	14 &15 th	2
12	Final exam		16 th	1
Total number of weeks and hours			16	16

VI. Teaching Strategies

1. Lectures
2. Interactive class discussions
3. Practical sessions (role playing exercise and video critique)
4. Assignments

VII. Tasks and Assignments

No.	Task/Assignment	Week due	Mark
1	role playing exercise	7,9,11 th	10
2	video critique	6 th	5
3	Patient interviewing	7,9,11 th	5
4	Patient counseling	7,9,11 th	5
5	Patient education	10,12&13 th	5

VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Midterm	7 th	10	10%
2	Assignments	8 th	30	30%
3	Final test	16 th	60	60%
Total			100	100%



IX. Learning Resources

Textbooks

Beardsley, R. S., et al. (2012). Communication skills in pharmacy practice: a practical guide for students and practitioners, Lippincott Williams & Wilkins.

Essential References:

1. Rantucci, M. J. (2007). Pharmacists Talking with Patients: A guide to patient counseling, Lippincott Williams & Wilkins.
2. Berger, B. A. (2005). Communication skills for pharmacists: building relationships, improving patient care, American Pharmacists Association.
3. Hargie, O. D., et al. (2000). "Pharmacists' evaluation of key communication skills in practice." Patient education and counseling 39(1): 61-70.

X. Course Policies

Based on university regulations, the following aspects should be figured out:

1.	(Class Attendance): Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2.	(Tardy) :
3.	(Exam Attendance/Punctuality) : All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4.	(Assignments & Projects) :
5.	(Cheating) : Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6.	(Plagiarism) : "To plagiarize is to take ideas or words of another person & pass them off as one's own". Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7.	(Other policies) :

انتهى م 3



Faculty: pharmacy

Department: Clinical pharmacy and pharmacy practice

Program: Bachelor of PharmD

Fourth year

First semester

1.Course Syllabus Pharmacology 3

خطة مقرر علم الأدوية 3

I. General information about the course :					
1.	Course Title:	Pharmacology 3			
2.	Course Code and Number :	PHS410			
3.	Credit Hours :	Lecture	Seminar/Tutorial	Practical	Training
		2	-	1	-
4.	Study Level and Semester:	Fourth Year – First Semester			
5.	Pre-requisites (if any):	PHS320			
6.	Co-requisites (if any) :	NA			
7.	Program in which the course is offered	Bachelor of Pharmacy & Bachelor of PharmD			
8.	Teaching Language:	English			
9.	Instruction location:				

II. Course Description

The aim of this course is to provide students with the important guidelines in treatment of blood and endocrine disorders as well as different infectious diseases to prepare them for the future pharmacy practice. The basic fundamentals of pharmacology should be studied prior this course. Different methods of teaching/learning are used in this course including lectures ,problem-based learning and practical scission

III. Course Aims:

This course aims to make students able to:

1. Recognize the important drug groups used in blood and endocrine disorders.
2. Differentiate between mild and severe infectious diseases affecting body.
3. Enable student to choose suitable antibiotics for the diagnosed infections.
4. Develop the ability to communicate with others in a team

IV. Course Intended Learning Outcomes (CILOs) :

1. Classify the different group of drugs used in blood and endocrine disorders Define the different terms in pharmacology.
2. List different infectious diseases and the best antibiotic used
3. Match the suitable medication with the diagnosed disease
4. Design the rational regimens in disease's treatment according to drug doses and patient's situation.



5. Employ the gotten information in the way of animal and chemicals handling
6. Apply the suitable method in identification of unknown drugs based on GLP
7. Choose the suitable medication for different diseases
8. Evaluate required scientific information from available sources.

V. Course topics and sub-topics (theoretical and practical) with contact hours

Topics/Units of Course Contents

First: Theoretical Aspects

No .	Course Topics/Units	Sub-topics	Week due	Contact Hours
1	Blood	Agents used in anemia , antiprotozoal drugs , drugs used in disorders of coagulations , agents used in hyperlipidemia , anticancer drugs	1 nd -4 th	8
2	Endocrine	Endocrine system: Hypothalamic & pituitary Hormones, Thyroid & antithyroid drugs Parathyroid & regulation of calcium metabolism,	5-7 th	6
3	Midterm Exam.		8 th	2
4	Endocrine	Pancreatic hormones & antidiabetic drugs , Adrenocorticosteroids & adrenocortical antagonists, The gonadal hormones & inhibitors Contraceptive agents	9-11 th	6
5	Chemotherapeutic agents	Introduction, Antibacterial agents, antifungal and antiviral	12-15 th	8
6	Final exam.		16 th	2
Total number of weeks and hours			16	32

Second: Practical/Tutorial/Clinical Aspects

Write up practical/tutorial/clinical topics

No.	Practical/Tutorial/Clinical topics	Week due	Contact Hours
1	Animal handling	1 st	3
2	Study of drug absorption and excretion in man	2 nd	3
3	Study the action of drugs on the rabbit's eye	3 ^{ed}	3



4	Allergy test	4 th	3
5	Effect of saline purgative on animal intestine and the use of oral rehydration solution	5 th	3
6	Study the effect of different diuretic groups on human	6 th	3
7	Midterm exam	7 th	3
8	Study the effect of anticoagulants on animals	8 th	3
9	Study the side effects of anticancer drugs	9 th	3
10	Study the effect of oral antidiabetic agents on animals	10 th	3
11	Study the effect of analgesics on animals	11 th	3
12	Study the effects of unknown drugs on isolated animal organs 1	12 th	3
13	Study the effects of unknown drugs on isolated animal organs 2	13 th	3
14	Study the effects of unknown drugs on isolated animal organs 3	14 th	3
15	Study the effects of unknown drugs on isolated animal organs 4	15 th	3
16	Final exam	16 th	3
Total number of weeks and hours		16	48

VI. Teaching Strategies

Lecture

Self-learning (homework)

Small group discussion

Practical classes

Assignment and presentation

VII. Tasks and Assignments :

No.	Task/Assignment	Week due	Mark
1	Assignment and presentation	10 th	10
2	Practical reports	weekly	10

VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Midterm Exam	8 th	20	20%



2	Assignment and presentation	10 th	10	10%
3	Practical reports	weekly	10	10%
4	Practical midterm exam.	7 th	10	10%
5	Practical exam.	15 th	10	10%
6	Final written Exam	16	40	40%
Total		16	100	100%

IX. Learning Resources :

(Author, (Year), Book Title, Edition, Publisher, Country of publishing)

Textbooks-not more than 2

2. Katzung B G, Masters SMJ and Trevor (2012). Basic and Clinical Pharmacology, 12th ed. Mc Graw Hill. India.
3. Jaju BP (1989). Pharmacology practical exercise book. JAYPEE BROTHERS. India

Essential References-not less than 4

5. Rang HP, Dale MM and Ritter JM (2012). Pharmacology. 7th ed. CHURCHILL LIVINGSTONE. London
6. Laurence DR, Bennett PN and Brown MJ (2010). Clinical pharmacology. Ninth ed. CHURCHILL LIVINGSTONE. London
7. Hardman JG and Limbird LE (2010). Goodman & Gilman's the pharmacological basis of Therapeutics. Tenth ed. McGraw Hill. London
4. Harvey RA. Pharmacology (2012). 5th ed. Lippincott Williams & Wilkins. Republic of China
5. Tripathi KD (2010). Essentials of Pharmacology. 6th ed. JAYPEE. India

Electronic Materials and Web Sites

1. British Journal of Pharmacology (2013)
2. The Lancet infectious diseases (2013).
3. WWWPubMed.com.

X. Course Policies

Based on university regulations, the following aspects should be figured out:

1	(Class Attendance): Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2	(Tardy) :
3	(Exam Attendance/Punctuality) : All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F



	will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4	(Assignments & Projects) :
5	(Cheating) : Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6	(Plagiarism) : “To plagiarize is to take ideas or words of another person & pass them off as one’s own”. Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7	(Other policies) :

2.Course Syllabus Therapeutics -cardiovascular diseases (خطة معالجة دوائية (أمراض القلب والشرابين)

I. General information about the course:					
1.	Course Title :	Therapeutics -cardiovascular diseases			
2.	Course Code and Number:	PHD 411			
3.	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		2			
4.	Study Level and Semester:	Fourth Year – First Semester			
5.	Pre-requisites (if any):	PHF325			
6.	Co-requisites (if any):	NA			
7.	Program in which the course is offered:	Bachelor of PharmD			
8.	Teaching Language:	English			
9.	Instruction location:	Semester-based			

II. Course Description

The course deals essentially with cardiovascular related diseases, particularly in the medication treatment approaches. The topics that will be covered through this course are cardiovascular related disorders, including hypertension, heart failure, dyslipidemias, acute coronary syndrome, stroke, Venous thromboembolism. The concepts of normal & abnormal body functions as well as different drug groups should be studied before this course. This course is primarily taught through series of instructor-student interactive lectures and interactive class discussions.



III. Course Aims:

This course aims to:

1. Provide student knowledge about the etiology and pathophysiology of cardiovascular diseases.
2. Enable student to explain the signs, symptoms and complications of cardiovascular related diseases.
3. Equip student with the skills to identify treatment aims and algorithms, drug interactions, dose calculations, and side effects of drugs as well as optimization of drug therapy.
4. Help student to focus on the life style modifications, disease prevention and risk reduction as well as recognize the safety of drugs in special groups like children, elderly and pregnancy.

IV. Course Intended Learning Outcomes (CILOs) :

After completing this course, students would be able to:

1. Recognize the drugs and their therapeutic uses, safety, optimum use in medication and contraindications.
2. Describe the principals of, pathophysiology, lifestyle habits, underlying causes contributing factors, and clinical manifestations that relevant to cardiovascular diseases.
3. Establish the principles of pharmaceutical care when designing a treatment plan for different cardiovascular disease to ensure effectiveness of therapy and prevent drug-related problems.
4. Formulate special dosage schedule to meet patient individualization therapy.
5. Contrast clinical data in the patient record with the normal range values.
6. Practice suitable advises for the patients and others on the safe and effective use of cardiovascular drugs.
7. Implement recent guidelines to design an appropriate treatment plan for different cardiovascular diseases.
8. Assess the scientific information about cardiovascular diseases and drugs that obtained from several online sources.

V. Course Contents

First: Theoretical Aspect

No.	Course Units	Sub-topics	Week due	Contact Hours
1	Therapeutic- Cardiology	Orientation and introduction, Hypertension (HTN), Heart Failure (HF)	1st to 4th	8
2		Acute Coronary Syndromes(ACS), Ischemic Heart Disease(IHD)	5th to 6th	10
3		Mid-term Exam	7th	2
4		Arrhythmias-focus on atrial fibrillation , Venous Thromboembolism, Stroke, Dyslipidemias, Hypovolemic	8th to 15th	10



		Shock		
5		Final-term Exam	16th	2
Total number of weeks and hours			16	32

Second: Tutorial Aspects			
No.	Tutorial topics	Week due	Contact Hours
1	NA		
Total number of weeks and hours			

Third: Practical Aspects			
No.	Practical topics	Week due	Contact Hours
1	NA		
Total number of weeks and hours			

VI. Teaching Strategies	
<ol style="list-style-type: none"> 1. Instructor-student interactive lectures 2. Micro-assignments 3. Interactive class discussions 4. Office hours (Tutorials) 5. report 	

VII. Tasks and Assignments			
No.	Task/Assignment	Week due	Mark
1	Assignment 1/quiz	5th week	5
2	Assignment 2/quiz	11th week	5

VIII. Learning Assessment:				
No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Homework/Tasks/Assignments/quiz	2 nd , 3 rd	10	10 %
2	Midterm Exam	8 th	30	30 %
3	Final Exam	16 th	60	60 %
Total			100	100%

IX. Learning Resources	
1. Textbooks: <ul style="list-style-type: none"> Marie Chisholm-Burns. (2022). Pharmacotherapy: principle and practice, 6th edition, New York: McGraw-Hill Medical, United States of America. Koda-Kimble, M. A., & Young, L. Y. (2018). Applied therapeutics: The clinical use of drugs, 11th edition. Baltimore, Md: Lippincott Williams & Wilkins, United States of America. 	



2. Essential References:

- Lexicomp, (2020). Drug Information Handbook, 29th edition, Lexi-Comp, U.S.A
- DiPiro, J. T. (2021). Pharmacotherapy: Handbook, 11th edition, New York: McGraw-Hill Medical, United States of America.
- British national formulary (BNF), last edition, Pharmaceutical Press.
- Philip Wiffen & els, (2017), Oxford Handbook of Clinical Pharmacy, 3rd edition.
- Marie Chisholm-Burns (January 3, 2019), Pharmacotherapy Principles and Practice, 5th Edition, McGraw-Hill Education / Medical, United States of America.

3. Electronic Materials and Web Sites:

1. www.uptodate.com
2. www.medscape.com
3. www.ncbi.nlm.nih.gov/pubmed
4. <http://www.accp.com/>

X. Course Policies:

Based on university regulations, the following aspects should be figured out:

1.	(Class Attendance) : <ul style="list-style-type: none"> • Students are required to attend all class lectures, tutorials and labs. • Student will not allow attending the final exam if he exceeds the maximum number of absences (15% without excuses and 25% with excuses).
2.	(Tardy) : <ul style="list-style-type: none"> • Attendance will be taken every lecture at the first 10 minutes and any student comes after that will be considered absent.
3.	(Exam Attendance/Punctuality) : <ul style="list-style-type: none"> • Student should be in the examination hall before 15 minutes from the beginning of the exam. • Late students are not allowed to get into the examination hall after the first 30 minutes and will be considered absent. • Makeup exams will be offered to students who miss a scheduled exam because of illness, death in the family or university-sponsored activity, but written documentation must be provided.
4.	(Assignments & Projects) : <ul style="list-style-type: none"> • All assignments must be done on their time. Late assignments will not be accepted. • Projects are assumed to be submitted on or before the dead-lines.
5.	(Cheating) : <ul style="list-style-type: none"> • Cheating is strictly prohibited behavior. • University regulations will be pursued and enforced on any cheating student.
6.	(Plagiarism) : <ul style="list-style-type: none"> • Plagiarism is defined as “copying or stealing someone else’s words or ideas and claiming or presenting them as if they were your own.” • University regulations will be pursued and enforced on any plagiarism attempt.
7.	(Other policies) : <ul style="list-style-type: none"> • Students in class, Lab. are required to turn off all cell phones, iPods,



3.Syllabus of Pharmaceutical chemistry 3

خطة مقرر كيمياء صيدلانية 3

I. General information about the course:						
1	Course Title :	Pharmaceutical chemistry 3				
2	Course Code and Number :	PHS 412				
3	Credit Hours :	Credit Hours				Total
		Theoretica 1	Seminar/ Tutorial	Practical	Training	
		2	-	1	-	
4	Study Level and Semester:	Fourth Year – First Semester				
5	Pre-requisites (if any):	PHS322				
6	Co-requisites (if any):					
7	Program in which the course is offered:	Bachelor of Pharmacy & Bachelor of PharmD				
8	Teaching Language:	English				
9	Instruction location:					

II. Course Description

This course provides students advance pharmaceutical science. The importance of this course in the field of drug: chemistry , design, synthesis, uses, and SAR . It includes CNS stimulant drugs, CNS depressant drugs, NSAID drugs , vitamins, Steroids, Opioid analgesics, drug design that involves study of chemical structure, metabolism, method of synthesis, uses, and the structure activity relationship. The pre-requisite of this course is pharmaceutical chemistry-1 and II.

III. Course Aims

1. Provide students knowledge about the chemistry of drugs.
2. Educate students chemical synthesis of some drugs



3. Train students practical and professional skills .
4. Educate the students skills in drug design by using SAR

IV. Course Intended Learning Outcomes (CILOs) :

1. illustrate metabolism and its effects on drug-drug interactions.
2. discuss the uses and adverse reaction of drugs.
3. propose the suitable method for synthesis of new drug.
4. evaluate the suitable method for analysis of drugs.
5. Practice in quality control laboratory , and pharmaceutical companies
6. perform quantitative and qualitative determination of drugs
7. Control time effectively.
8. Work effectively as a member in team to perform required project

V. Course Contents

First: Theoretical Aspect

No	Course Topics/Units	Sub-topics	Week due	Contact Hours	
.1	CNS stimulant Drugs	sympathomimetic agents , analeptic agents TCA depressant, SSRI , MAOI , hallucinogens	1-3 ^{ed}	6	
.2	CNS Depressant drugs	General anesthetics sedative & hypnotics anxiolytic antipsychotic Antiepileptic drugs	4-6 th	6	
.3	Midterm exam		7 th	2	
.4	Vitamins	Lipids soluble vitamins Water soluble vitamins	8 th	2	
.5	Steroids	Classification Sex hormones Glucocorticoids Mineralocorticoids Modification,SAR,use	9&10 th	4	
.6	NSAIDS	Classification,SAR,chemical synthesis	11 th	2	
.7	Opioid analgesics	Classification Uses,synthesis,metabolism	12-13 th	4	
.8	Drug design	Introduction ,Methods of drug design Types of drug design	14-15 th	4	



9	Final exam		16 th	2	
	Total number of weeks and hours		16	32	

VI. Teaching Strategies

Lectures
Interactive class discussions
Practical sessions
Activities

VII. Tasks and Assignments

No.	Task/Assignment	Week due	Mark
1	Assignment	12 th	10

VIII. Learning Assessment:

No.	Assessment Tasks	Week due	Mark	Proportion of Final Assessment
1	Midterm	7	20	20%
2	Assignments	12	10	10%
3	Final exam	12	40	40%
4	Practical part	13	30	30%
Total			100	100%

IX. Learning Resources :

Textbooks-not more than 2

- 2- Wilson and Gisvold's(2011) "Textbook of organic Medicinal and Pharmaceutical chemistry, Twelfth edition", Lippincott Williams and Wilkins USA.

Essential References-not less than 4

1. Foye's(2008) "Principle of Medicinal chemistry", sixth edition, Lippincott Williams and Wilkins USA.
- 3- Wilson and Gisvold's(2011) "Textbook of organic Medicinal and Pharmaceutical chemistry, Twelfth edition", Lippincott Williams and Wilkins USA.
4. Zuhair Muhi-Eldeen(2005)"Essential Of Medicinal Chemistry" first edition Dar AL-Esra Jordan.
4. Sadik AL-Mikhlaifi (2014)"Medicinal Chemistry" fourth edition,ALmutafawk,Yemen

Electronic Materials and Web Sites

- 1.www.pharmchem.ku.edu/



VII. Course Policies:	
Based on university regulations, the following aspects should be figured out:	
1.	(Class Attendance) : Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2.	(Tardy) :
3.	(Exam Attendance/Punctuality) : All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4.	(Assignments & Projects) :
5.	(Cheating) :(Cheating) Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6.	(Plagiarism): “To plagiarize is to take ideas or words of another person & pass them off as one’s own”. Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7.	(Other policies) :



4.Course Syllabus of Pathophysiology 2

خطة مقرر علم وظائف الأعضاء المرضي 2

1. General information about the course:					
1	Course Title :	Pathophysiology 2			
2	Course Code and Number :	PHF 413			
3	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		2			2
4	Study Level and Semester:	Fourth Year – First Semester			
5	Pre-requisites (if any):	PHF325			
6	Co-requisites (if any):				
7	Program in which the course is offered:	Bachelor of Pharmacy & Bachelor of PharmD			
8	Teaching Language:	English			
9	Instruction location:				

I. Course Description

This course serves to prepare students for consequent therapeutics courses through introducing the pharmacy students to mechanisms of diseases in several human body systems. It will help them to understand the underlying pathogenesis and how they can stop it through proper intervention.

II. Course Aims:

- 1) It provides pharmacy students with the knowledge of the pathogenesis of various symptoms & diseases affecting the CNS, RT, UT and hematologic system.
- 2) It explain them the altered physiological functions of human organs in term on molecular, cellular, organ & systemic levels.

III. Course Intended Learning Outcomes (CILOs) :

1. Identify the etiology and risk factors of different body systems including the common infections
2. Describe the pathogenesis and pathological changes of different body systems
3. Correlate the mechanism of disease (pathogenesis) with alteration of body systems during its occurrence
4. Apply the principles of pathophysiology in managing, preparing and prescribing effective drugs for patients



5. Communicate with patients effectively and scientifically to explain the underlying pathophysiology of their diseases

IV. Course Contents

Theoretical Aspect:

No.	Course Units	Sub-topics	Week due	Contact Hours
1	Blood and Hematopoietic System	Alterations in Hemostasis and Blood Coagulation	1 st week	2
2		Neoplastic Disorders of Hematopoietic and Lymphoid Origin	2 nd week	2
3	Respiratory System	Alterations in the Respiratory System during Infectious Disorders and Neoplasia	3 rd week	2
4		Alterations in the Respiratory System during Obstructive Airway Disorders	4 th week	2
5	Urinary System	Alterations in the Urinary System during Acute Renal Failure	5 th week	2
6		Alterations in the Urinary System during Chronic Renal Failure	6 th week	2
7	Nervous System	Alterations in the Nervous System during Seizure Disorders	7 th week	2
8		Mid Term Exam	8th week	2
9		Alteration in The Organization and Control of Motor Function	9 th week	2
10		Alteration in Dementias	10 th & 11 th week	4
11	Infections	Viral Infection	12 th week	
12		Bacterial Infection	13 th week	2
13		Protozoa Infection	14 th week	2
14		Helminthes Infection	15th week	2
15		Final Exam	16th	2



			week	
Total number of weeks and hours			16	32

V. Teaching Strategies	
1. Lectures 2. Demonstration 3. Group Discussion 4. Role Play	

VI. Tasks and Assignments			
No.	Task/Assignment	Week due	Mark
1	Discuss the mechanism of neoplasia by explaining the therapeutic methods to limit it	3rd week	5
2	Discuss the changes of urine formation during acute renal failure and how to consider these changes if there is any drug taken by patient	7th week	5

VII. Learning Assessment:				
No.	Assessment Tasks	Week due	Mark	Proportion of Final Assessment
1	Homework/Tasks/Assignments	3rd & 7 th weeks	10	10%
3	Midterm Exam	8 th wee	20	20%
5	Final Exam	15 th week	70	70%
Total			100	100%

VIII. Learning Resources :	
(Author, (Year), Book Title, Edition, Publisher, Country of publishing)	
Textbooks-not more than 2	
1. Vinay Kumar , Abul K. Abbas , Jon C. Aster, Nelson Fausto, (2010), Robbins & Cotran Pathologic Basis of Disease, 8 th edition, Saunder, USA 2. Charles Simon Herrington, 2014, Muir's Textbook of Pathology, 6 th edition, Wiley, UK	
Essential References-not less than 4	
1. Kathryn L. McCance, Sue E. Huether (2010), Pathophysiology: The Biologic Basis for Disease in Adults and Children, 6th edition, Mosby Elsevier, USA 2. Vinay Kumar, Abul K. Abbas, Jon C. Aster, (2012), Robbins Basic Pathology. 9th edition, Saunder, USA 3. Joseph DiPiro, Robert L. Talbert, Gary Yee, Barbara Wells (2008), Pharmacotherapy A Pathophysiologic Approach, 9th edition, Mc Graw Well, USA	



4. Robin Reid, Fiona Roberts, (2011), Pathology Illustrated, 7th edition, Churchill Livingstone, USA

Electronic Materials and Web Sites

1. <http://www.mednotes.net/notes/pathophysiology/>
2. <http://www.pathophysiologyjournal.com/>

IX. Course Policies

1.	(Class Attendance): Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2.	(Tardy) :
3.	(Exam Attendance/Punctuality) : All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4.	(Assignments & Projects) :
5.	(Cheating) : Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6.	(Plagiarism) : "To plagiarize is to take ideas or words of another person & pass them off as one's own". Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7.	(Other policies) : Students in class, Lab. are required to turn off all cell phones, iPods,



5. Course Syllabus Integrated Case-Based Learning 1

خطة مقرر التعلم القائم على الحالات 1

I. General information about the course:					
1.	Course Title :	Integrated Case-Based Learning 1			
2.	Course Code and Number:	PHD 414			
3.	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
			2		
4.	Study Level and Semester:	Fourth Year – First Semester			
5.	Pre-requisites :	NA			
6.	Co-requisites:	PHD 411			
7.	Program in which the course is offered:	Bachelor of PharmD			
8.	Teaching Language:	English			
9.	Instruction location:				

II. Course Description

This course involves simulated case studies and other activities aimed at integrating scientific and clinical concepts from across all courses in a problem-based learning environment. This course will emphasize on the comprehensive delivery of pharmaceutical care to patient with cardiovascular related disorders. Studying therapeutic-cardiovascular disorder is Co-requisite. This course will be taught through PBL and group discussion; students are allowed to spend time for self-directed learning and brainstorming with teachers and classmates.

III. Course Aims:

This course aims to:

1. Provide student with knowledge about the pathophysiology of cardiovascular diseases.
2. Enable student to explain the signs, symptoms and complications of cardiovascular related disorders.
3. Equip student with the critical thinking skills regarding the treatment aims and algorithms, drug interactions, dose calculations, and side effects of drugs as well as dose optimization.
4. Help student to focus on the life style modifications, disease prevention and risk reduction as well as recognize the safety of drugs in special groups like children, elderly and pregnancy.

IV. Course Intended Learning Outcomes (CILOs) :

After completing this course, students would be able to:

1. Recognize the drugs and their therapeutic uses, safety profile, optimum use for a particular cardiovascular case.
2. Describe the principles of, pathophysiology, lifestyle habits, underlying causes contributing factors, and clinical manifestations that relevant to cardiovascular diseases.
3. Establish treatment plan principles and take special considerations when designing therapeutic plan



for specific populations with cardiovascular diseases.

4. Formulate special dosage schedule to meet patient individualization therapy.
5. Contrast clinical data in the patient record with the normal range values
6. Practice suitable advice for the patients and other healthcare professionals on the safe and effective use of medicines.
7. Implement recent guidelines to design treatment plan for each patient with cardiovascular diseases.
8. Assess the scientific information about cardiovascular diseases and drugs that obtained from different sources.

V. Course Contents

First: Theoretical Aspect

No.	Course Units	Sub-topics	Week due	Contact Hours
1	Integrated Case-Based Learning I	Orientation and introduction, Hypertension(HTN) Cases , Heart Failure (HF) Cases,	1 st to 4 th	8
2		Ischemic Heart Disease(IHD) Cases, Acute Coronary Syndromes(ACS) Cases	5 th to 7 th	6
3		Mid-term Exam	8 th	2
4		Venous Thromboembolism Cases, Stroke Cases, Dyslipidemias Cases, Arrhythmias-focus on atrial fibrillation Cases, Hypovolemic Shock Cases	9 th to 15 th	14
5		Final-term Exam	16 th	2
Total number of weeks and hours			16	32

Second: Tutorial Aspects

No.	Tutorial topics	Week due	Contact Hours
1	NA		
Total number of weeks and hours			

Third: Practical Aspects

No.	Practical topics	Week due	Contact Hours
1	NA		
Total number of weeks and hours			



VI. Teaching Strategies

1. Instructor-student interactive lectures
2. Micro-assignments
3. Interactive class discussions
4. Office hours (Tutorials)
5. report

VII. Tasks and Assignments

No.	Task/Assignment	Week due	Mark
1	Assignment 1/quiz	5 th week	5
2	Assignment 2/quiz	11 th week	5

VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Homework/Tasks/Assignments/quiz	5 th , 11 th	10	10 %
2	Midterm Exam	8 th	30	30 %
3	Final Exam	16 th	60	60 %
Total			100	100%

IX. Learning Resources

1. Textbooks:

- Marie Chisholm-Burns. (2022). Pharmacotherapy: principle and practice, 6th edition, New York: McGraw-Hill Medical, United States of America.
- Koda-Kimble, M. A., & Young, L. Y. (2018). Applied therapeutics: The clinical use of drugs, 11th edition. Baltimore, Md: Lippincott Williams & Wilkins, United States of America.

2. Essential References:

- Lexicomp, (2020). Drug Information Handbook, 29th edition, Lexi-Comp, U.S.A
- DiPiro, J. T. (2021). Pharmacotherapy: Handbook, 11th edition, New York: McGraw-Hill Medical, United States of America.
- British national formulary (BNF), last edition, Pharmaceutical Press.
- Philip Wiffen & els, (2017), Oxford Handbook of Clinical Pharmacy, 3rd edition.
- Marie Chisholm-Burns (January 3, 2019), Pharmacotherapy Principles and Practice, 5th Edition, McGraw-Hill Education / Medical, United States of America.

3. Electronic Materials and Web Sites:

1. www.uptodate.com
2. www.medscape.com
3. www.ncbi.nlm.nih.gov/pubmed
4. <http://www.accp.com/>



X. Course Policies

Based on university regulations, the following aspects should be figured out:

1.	(Class Attendance) : <ul style="list-style-type: none"> Students are required to attend all class lectures, tutorials and labs. Student will not allow attending the final exam if he exceeds the maximum number of absences (15% without excuses and 25% with excuses).
2.	(Tardy) : <ul style="list-style-type: none"> Attendance will be taken every lecture at the first 10 minutes and any student comes after that will be considered absent.
3.	(Exam Attendance/Punctuality) : <ul style="list-style-type: none"> Student should be in the examination hall before 15 minutes from the beginning of the exam. Late students are not allowed to get into the examination hall after the first 30 minutes and will be considered absent. Makeup exams will be offered to students who miss a scheduled exam because of illness, death in the family or university-sponsored activity, but written documentation must be provided.
4.	(Assignments & Projects) : <ul style="list-style-type: none"> All assignments must be done on their time. Late assignments will not be accepted. Projects are assumed to be submitted on or before the dead-lines.
5.	(Cheating) : <ul style="list-style-type: none"> Cheating is strictly prohibited behavior. University regulations will be pursued and enforced on any cheating student.
6.	(Plagiarism) : <ul style="list-style-type: none"> Plagiarism is defined as “copying or stealing someone else’s words or ideas and claiming or presenting them as if they were your own.” University regulations will be pursued and enforced on any plagiarism attempt.
7.	(Other policies) : <ul style="list-style-type: none"> Students in class, Lab. are required to turn off all cell phones, iPods,



6.Course Syllabus Bio pharmaceuticals

خطة مقرر صيدلة حيوية

I. General information about the course:					
1.	Course Title :	Bio pharmaceuticals			
2.	Course Code and Number :	PHS 415			
3.	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		2	-	-	-
4.	Study Level and Semester:	Fourth Year – First Semester			
5.	Pre-requisites (if any):	PHS225			
6.	Co-requisites (if any):	NA			
7.	Program in which the course is offered:	Bachelor of Pharmacy & Bachelor of PharmD			
8.	Teaching Language:	English			
9.	Instruction location:				

II. Course Description

The course objective is to cover principles and applications of biopharmaceutics including physico-chemical, physiological, formulation factors affecting drug bioavailability. This course is also planned to cover Pathological conditions affecting absorption as well as bioavailability and bioequivalence of drugs. A prior knowledge of the basics of physical pharmacy, pharmaceutical technology, anatomy, physiology and pathology are essential for this course. The lectures will be conducted informally with participation by the student's seminars.

III. Course Aims:

1. Make students identify and understand the relationship between the physicochemical, physiological and dosage form design on the drug bioavailability
2. Make students identify the concept of biopharmaceutics, bioequivalence, bioavailability and the parameters involved
3. Enable the students to describe the mechanisms and factors involved in drug absorption
4. Provide the students with essential principles how drug absorption can be optimized
5. Introduce the students to design bioavailability and bioequivalent studies
6. Equip the students with team-work and problem solving skills.



IV. Course Intended Learning Outcomes (CILOs) :

1. Define and discuss biopharmaceutics, absorption and the different mechanisms of GIT drug absorption
2. Explain the different physicochemical, physiological, dosage form, and routes of drug administration on absorption and pathological factors affect on absorption
3. Discusses the various aspects of bioavailability and bioequivalence studies
4. investigate the effect of different formulation, different pathological factors affecting on absorption
5. Explore the appropriate dosage form for a specific absorption
6. Advice patients and other health care professionals about safe and effective use of drugs and medicines.
7. Choose rationally the appropriate dosage form and route of drug administration for specific bioavailability
8. Demonstrate critical thinking, synthesis and interpretation of pharmaceutical information, and responsibility.
9. Work effectively as a part of team in order to fulfill a certain project

V. Course Contents

Theoretical Aspect:

No.	Course Units	Sub-topics	Week due	Contact Hours
1	Introduction	terminology, and basics of biopharmaceutics	1 st	2
2	Mechanisms of GIT drug absorption	Mechanisms of GIT drug absorption	2 nd	2
3	Physiological factors affecting drug absorption:	1. GIT anatomy 2. GI components	3 ^{ed}	2
4	Physiological factors affecting drug absorption:	<ul style="list-style-type: none"> • Consistency • pH • gastric emptying 	4 ^{ed}	2
5	Physico-chemical factors affecting absorption:	<ul style="list-style-type: none"> • chemical form • partition coefficient • pKa • Crystal form 	5 th	2
6	Physico-chemical factors affecting	<ul style="list-style-type: none"> - Particle size - Solvation - Complexation 	6 th	2



		- Adsorption - Stability		
7	Mid term		7 th	2
8	Pathological conditions affecting absorption	-malabsorption -partial or total gastroenteritis	8 th	2
9	Pathological conditions affecting absorption	- thyroid disorders - liver and renal diseases	9 th	2
10	Influence of various dosage forms and their excipients on the bioavailability of drugs	- solution - suspension - emulsion - tablet - capsules	10 th 11 th &12 th	6
11	Influence of various routes of administration on the bioavailability of drugs	- oral - nasal - parenteral - skin - rectal	13 th & 14 th	4
12	Bioavailability	- definitions - methods of determination of bioavailability using blood and urine - protocol design of bioavailability assessment - methods of bioequivalence determination	15 th	2
13	Final exam		16 th	2
Total number of weeks and hours				32

VI. Teaching Strategies

Assignment and presentation

VII. Tasks and Assignments

No.	Task/Assignment	Week due	Mark
1	Seminars	9-14	10



VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	First Test	5 th	20	20%
2	Second Test	10 th	20	20%
3	Assignment	12 th	10	10%
5	Final Exam	16 th	50	50%
	Total		100	100%

IX. Learning Resources

Textbooks

Shargel L and Yu, ABC, 2005, Applied Biopharmaceutics and pharmacokinetics. MCGRW. Hill

Essential References:

1. MiloGibaldi . 1991.Biopharmaceutics and ClinicalPharmacokinetics. By– 4rd edition. Lea and Febiger
2. Ashutosh k. 2011, Essential of Biopharmaceutics and pharmacokinetics. Elsevier. India
3. Michael. E. Aulton, 2007, **Aulton's Pharmaceutics: The Design and Manufacture of Medicines**, third edition, Churchill Livingstone, USA
4. Loyd V. Allen Jr., Nicholas G. Popovich, Howard C. Ansel, 2011, **Ansel's Pharmaceutical Dosage Forms and Drug Delivery Systems**, ninth edition. Lippincott Williams & Wilkins, USA.
5. Loyd V. Allen, Jr., 2005, **Remington: The Science and Practice of Pharmacy**, twenty first edition. Lippincott Williams & Wilkins, USA.

Electronic Materials and Web Sites:

www.com/Ansel-s-Pharmaceutical-Dosage-Forms-and-Drug-Delivery-Systems/p/9781975171773

X. Course Policies

Based on university regulations, the following aspects should be figured out:

1.	(Class Attendance): Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2.	(Tardy) :
3.	(Exam Attendance/Punctuality) : All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4.	(Assignments & Projects) :



5.	(Cheating) : Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6.	(Plagiarism) : “To plagiarize is to take ideas or words of another person & pass them off as one’s own”. Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7.	(Other policies) :

7. Course Syllabus of Public Health

خطة مقرر الصحة العامة

1. General information about the course:					
1	Course Title :	Public Health			
2	Course Code and Number :	PHF 416			
3	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		1			
4	Study Level and Semester:	Fourth Year – First Semester			
5	Pre-requisites (if any):	NA			
6	Co-requisites (if any):	NA			
7	Program in which the course is offered:	Bachelor of Pharmacy & Bachelor of PharmD			
8	Teaching Language:	English			
9	Instruction location:				

II. Course Description

This course introduces students to the concepts and issues of public health pharmacy. This includes the opportunities for pharmacists in a broad range of public health activities encompassing vaccination programs, disease prevention, health promotion, chronic disease management, and compliance programs. It will also present an overview of the pharmaceutical country profile, pricing situation, patent, and generic issues and the important of national drug policy to improve the health of the population.



III. Course Aims:

1. To provide the student with an overview of public health
2. To enable students to understand the important contributions pharmacists can make to improve the health of the public.
3. To provides student with the opportunity to participate in specified public health activities with an identified public health partner.
4. To develop an appreciation for the interplay between pharmacy and public health in the health care system.

IV. Course Intended Learning Outcomes (CILOs) :

1. Identify behavioral and social variables impacting health and disease.
2. Explain how the organization, financing, policy context, and political economy of health systems have an impact on pharmaceutical care and the role of the pharmacist.
3. Explain the link between public health and pharmacy, providing example of various activities a pharmacist could do as part of public health effort.
4. Critique the current issues in public health pharmacy in order to develop frameworks for developing problem-solving strategies
5. Demonstrate practical application of public health terminology in communications and work with non-pharmacist stakeholders and partners to promote and assure public health and safety.
6. Apply patient education models in community-service settings.
7. Review the different health education methods and materials, stating their characteristics, utilities, and limitations.

V. Course Contents

Theoretical Aspect:

No.	Course Units	Sub-topics	Week due	Contact Hours
1	introduction and overview of pharmacy and public health	Definition of health, public health. Dimension, indicators & determinant of health Natural history of diseases & level of prevention Public health versus clinical prevention and clinical treatment. Core function of public health. The link between public health and pharmacy.	1 st	2
2	Trends and Epidemiology of Chronic and Infectious Diseases	Host-Agent-Environment Concept Multifactor etiology of disease Natural history of diseases & level of prevention Spectrum of disease Iceberg phenomena Herd Immunity	2 nd & 3 ^{ed}	4
3	Healthcare system in Yemen	Health systems profile- Yemen	4 th	2



		National health strategy. Public sector health care delivery network. Pharmacy profession in healthcare system and patient Management.		
4	Social determinants of health and illness	Social factors that influence health, local health inequalities. Knowledge of health inequalities facilitates and effective pharmaceutical service delivery.	5 th	2
5	Socio-behavioral aspects of healthcare & drug use.	Preventive health, illness, and treatment behavior. Types of consumer behavior in health care. Factors affecting and influencing patient behavior and patient outcome. Medication-use process from the patient perspective.	6 th	2
6	The pharmacist role in disease prevention and health promotion.	Role of pharmacist in health promotion, health protection, health prevention, services, and surveillance. Implications of pharmacy education in public health context.	7&8 th	4
7	Midterm Exam.		9 th	2
8	Roles and responsibilities of public health pharmacist	Pharmacists' role in various public health activities/Primary health care programs. Micro- and macro-roles of the public health pharmacist.	10 th	2
9	Medicine access and affordability	Drug prices, WHO/HAI study on medicine prices, Yemen pricing situation, patent, and generic issues.	11 th	2
10	Essential drug concept	International drug trading system and drug patents, parallel import, generic medicines. Who's essential drug list, essential drug list - Yemen. Advantages of essential drugs.	12 th	2
11	Rationale drug use	National and international quality use of medicines programme. Components of rationale drug use. Role of different key stakeholders	13 th	2
12	Health education strategies for medication use in community	Concept of "Healthy Settings" "Health Belief Models" and "Illness Behavior" in Drug Use Practices. Drug use process and appropriate use of medication in community. Prioritizing community drug use problems. Role of different stakeholders in drug use process.	14 th	2



13	Evaluation of pharmacy practice	The evaluation cycle need assessment process evaluation, outcome and impact evaluation implication for pharmacists and pharmacy practice	15 th	2
14	Final exam		16	2
Total number of weeks and hours			16	32

VI. Teaching Strategies

1. Lectures
2. Interactive class discussions
3. Practical sessions (group work)
4. Assignments

VII. Tasks and Assignments

No.	Task/Assignment	Week due	Mark
1	Patient education	8-14 th	5
	Evaluation of pharmacy practice	8-14 th	5

VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Tasks/Assignments	8-14 th	10	10%
2	Midterm Exam	9 th	30	30%
3	Final Exam	16 th	60	60%
Total			100	100%

IX. Learning Resources

Textbooks

1. Levin, B. L., et al. (2008). Introduction to Public Health in Pharmacy, Jones & Bartlett Learning.

Essential References:

1. Truong, H. A., et al. (2010). The Pharmacist in Public Health: Education, Applications, and Opportunities, American Pharmacists Association.
2. Carter, J., et al. (2010). Pharmacy in Public Health: Basics and Beyond, American Society of Health-System Pharmacists.
3. Kraska, J. (2010). Pharmacy in Public Health, Pharmaceutical Press
4. Blenkinsopp, A., et al. (2000). Health promotion for pharmacists, Oxford University Press
5. McCarthy, R. L., et al. (2011). Introduction to Health Care Delivery, Jones & Bartlett



Learning.

Electronic Materials and Web Sites:

WWW. CDC and WHO sites

X. Course Policies

Based on university regulations, the following aspects should be figured out:

1.	(Class Attendance): Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2.	(Tardy) :
3.	(Exam Attendance/Punctuality) : All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4.	(Assignments & Projects) :
5.	(Cheating) : Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6.	(Plagiarism) : “To plagiarize is to take ideas or words of another person & pass them off as one’s own”. Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7.	(Other policies) :



8.Course Syllabus -Pharmacy Practice 1

خطة مقرر ممارسة صيدلة 1

1. General information about the course:

1	Course Title :	Pharmacy Practice 1				
2	Course Code and Number :	PHD417				
3	Credit Hours :	Credit Hours				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		1	-	-	-	1
4	Study Level and Semester:	Fourth Year – First Semester				
5	Pre-requisites (if any):	PHS327				
6	Co-requisites (if any):	NA				
7	Program in which the course is offered:	Bachelor of Pharm D				
8	Teaching Language:	English				
9	Instruction location:					

2. Course Description

This course objective to enhance student knowledge of the many aspects of pharmacy practice. This course is also planned to cover the activities of the pharmacist in pharmaceutical care, processing prescription, monitoring and utilization, responding to symptoms of minor ailments (OTC drug), and the rational drug use. The prerequisite for this course is PHS327. The lectures will be conducted in formally with participation by the student's seminars.

3. Course Aims:

1. Provide the student with roles of objective of pharmacy practice
2. Explain to the student the importance of pharmaceutical care in pharmacy practice setting.
3. Describe to the student the activities carried out by a Pharmacist in pharmacy practice setting.
4. Enable students to define and describe the social aspects of pharmacy
5. Equip the students with team work



IV. Course Intended Learning Outcomes (CILOs) :

- 1- Describe the roles of pharmacist in pharmacy practice, and classification of drug safety during pregnancy
- 2- Identify dispensing of prescriptions or non prescriptions with patient counseling as well as identify, and solve — drug related problems
- 3- Examine patient and clinical data, including patients records held within practice settings.
- 4- integrate in practice setting the knowledge and understanding required to meet the needs of patient and other health professionals.
- 5- Dispense medicines, advice patients on correct and rational use of medicines and cosmetics.
- 6- Advice patients and other health care professionals about safe and effective use of drugs and medicines.
- 7 - Communicate efficiently and effectively with patients and other healthcare professionals.
- 8- Work effectively as a part of team in order to fulfill a certain project.

V. Course Contents

Theoretical Aspect:

No.	Course Units		Week due	Contact Hours
1	Introduction to pharmacy practice	<ul style="list-style-type: none"> Objectives of pharmacy practice The pharmacist and patient's behavior relationship. Activities of a pharmacy practice 	1 st & 2 nd	2
2	Patient care in pharmacy practice	<ul style="list-style-type: none"> Patient's Drug-Related Needs Drug therapy problem How to practice pharmaceutical care Quality assurance of pharmaceutical care 	3 rd , 4 th & 5 th	3
3	Non-prescription drugs	<ul style="list-style-type: none"> Introduction, OTC drugs and self-care Over-the-Counter Medications and Pregnancy Misuse of over-the-counter medicines 	6 th & 7 th	2
	Mid term		8 th	1
4	Brand drugs	<ul style="list-style-type: none"> Definition what is the difference between brand name and generic prescription drugs Standard of generic drugs Advantages AND Disadvantages 	9 th	1
5	Promoting the rational use of	<ul style="list-style-type: none"> National and international quality 	10 th	1



	medicines	use of medicines programme. Components of rationale drug use. Role of different key stakeholders		
6	Responding to symptoms	<ul style="list-style-type: none"> Gastrointestinal and respiratory problem Skin conditions 	11 th , 12 th , 13 th & 14 th	4
7	Evaluation of pharmacy practice	The evaluation cycle need assessment process evaluation, outcome and impact evaluation implication for pharmacists and pharmacy practice	15 th	1
8	Final exam		16 th	1
Total number of weeks and hours				16

VI. Teaching Strategies

Lectures
Small group discussion
Report
Interactive class discussion
Assignment

VII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Mid Test	8 th	30	30%
2	Assignment	5-6-7-8-9-10-11 th	10	10%
3	Final Exam	16 th	60	60%
	Total		100	

VII.Tasks and Assignments :

No.	Assessment Tasks	Mark	Weight
1	First test	20	5
2	Second test	20	10
3	Assignments	10	12
4	Final test	50	16
	Total	100	100%



VIII. Learning Resources

Textbooks

1. A.J. Winfield, J.A, Rees, I. Smith, (2009), Pharmaceutical practice, fourth edition, Churchill Livingstone - Elsevier, USA

Essential References:

1. V. Loyd, J.r., Allen, (2005), Remington: The Science and Practice of Pharmacy, twenty first edition. Lippincott Williams & Wilkins, USA.
2. A.J. Winfield, J.A, Rees, I. Smith, (2009), Pharmaceutical practice, fourth edition, Churchill Livingstone - Elsevier, USA
3. J. Waterfield, (2008), Community Pharmacy Hand Book . Pharmaceutical Press, London
4. M.A. Khan, (2000), pharmaceutical and clinical calculation, 2th edition by CRC Press LLC, USA

IX. Course Policies :

Based on university regulations, the following aspects should be figured out:

1.	(Class Attendance): Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2.	(Tardy) :
3.	(Exam Attendance/Punctuality) : All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4.	(Assignments & Projects) :
5.	(Cheating) : Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6.	(Plagiarism) : "To plagiarize is to take ideas or words of another person & pass them off as one's own". Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7.	(Other policies) :



Fourth year

second semester

1. Course Syllabus of Pharmacology 4

خطة مقرر علم الادوية 4

I. General information about the course :					
1.	Course Title:	Pharmacology 4			
2.	Course Code and Number :	PHS420			
3.	Credit Hours :	Lecture	Seminar/Tutorial	Practical	Training
		2	-	-	-
4.	Study Level and Semester:	Fourth Year/Second Semester			
5.	Pre-requisites (if any):	PHS410			
6.	Co-requisites (if any) :	-			
7.	Program in which the course is offered	Bachelor of Pharmacy& PharmD- Bachelor Program			
8.	Teaching Language:	English			
9.	Study System :				

II. Course Description

The aim of this course is to provide students with the important guidelines in treatment of blood and endocrine disorders as well as different infectious diseases to prepare them for the future pharmacy practice. The basic fundamentals of pharmacology should be studied prior this course. Different methods of teaching/learning are used in this course including lectures, problem-based learning and practical session.

III. Course Aims:

1. Recognize the important drug groups used in blood and endocrine disorders.
2. Differentiate between mild and severe infectious diseases affecting body.
3. Enable student to choose suitable antibiotics for the diagnosed infections.
4. Develop the ability to communicate with others in a team

IV. Course Intended Learning Outcomes (CILOs) :

1. Recall the different antibiotic groups used List different infectious diseases and the best antibiotic used
2. List the different infectious diseases and the best antibiotic used
3. Sort the suitable chemotherapy with the diagnosed cancer.
4. Construct the rational regimens in disease's treatment according to drug doses and patient's situation.
5. Choose the antimicrobial agent for detected infectious diseases.
6. Prescribe the suitable cytotoxic agent to the diagnosed cancer.
7. Evaluate required scientific information from available sources.



V. Course topics					
Topics/Units of Course Contents					
First: Theoretical Aspects					
No.	Course Topics/Units	Sub-topics	Week due	Contact Hours	
1	Chemotherapeutic drugs	Basic principles of antimicrobial chemotherapy Beta-Lactam & Other Cell Wall- & Membrane-Active Antibiotics, Tetracycline Macrolides, Clindamycin, Chloramphenicol, Streptogramins, & Oxazolidinones, Aminoglycosides & Spectinomycin, Sulfonamides, Trimethoprim, & Quinolones	1 st -5 th	10	
2	Chemotherapeutic drugs	Antimycobacterial Drugs, Antifungal Agents, Antiviral Agents, Miscellaneous Antimicrobial Agents; Disinfectants, Antiseptics, & Sterilants,	6-8 th	6	
3	Midterm Exam.		9 th	2	
	Chemotherapeutic drugs	Clinical Use of Antimicrobial Agents Antiprotozoal Drugs, Clinical Pharmacology of the Anthelmintic Drugs, Cancer Chemotherapy, immunosuppressant agents	10-15 th	12	
4	Final exam.		16 th	2	
Total number of weeks and hours			16	32	

VI. Teaching Strategies
Lecture
Self-learning (homework)
Small group discussion
Assignment and presentation

VII. Tasks and Assignments :			
No.	Task/Assignment	Week due	Mark
1	Assignment and presentation	10	10



VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Midterm Exam	8 th	30	30%
2	Assignment and presentation	10 th	10	10%
6	Final written Exam	16 th	60	60%
Total		16 th	100	100%

IX. Learning Resources :

(Author, (Year), Book Title, Edition, Publisher, Country of publishing)

Textbooks-not more than 2

1. Katzung B G, Masters SMJ and Trevor (2014). Basic and Clinical Pharmacology, 12th ed. Mc Graw Hill. India.

Essential References-not less than 4

2. Rang HP, Dale MM and Ritter JM (2014). Pharmacology. 7th ed. CHURCHILL LIVINGSTONE. London
3. Laurence DR, Bennett PN and Brown MJ (2014). Clinical pharmacology. Ninth ed. CHURCHILL LIVINGSTONE. London
4. Hardman JG and Limbird LE (2014). Goodman & Gilman's the pharmacological basis of Therapeutics. Tenth ed. McGraw Hill. London
4. Harvey RA. Pharmacology (2014). 6th ed. Lippincott Williams & Wilkins. Republic of China
5. Tripathi KD (2014). Essentials of Pharmacology. 7th ed. JAYPEE. India

Electronic Materials and Web Sites

1. British Journal of Pharmacology (2017)
- 2-The Lancet infectious diseases (2017).
- 3.WWWPubMed.com.

X. Course Policies :

Based on university regulations, the following aspects should be figured out:

1.	(Class Attendance): Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2.	(Tardy) :
3.	(Exam Attendance/Punctuality) : All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of



	F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4.	(Assignments & Projects) :
5.	(Cheating) : Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6.	(Plagiarism) : "To plagiarize is to take ideas or words of another person & pass them off as one's own". Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7.	(Other policies) :

2. Course Syllabus Therapeutics - Endocrine and Renal diseases

خطة مقرر معالجة دوائية (أمراض الغدد الصما والجهاز البولي)

I. General information about the course:					
1	Course Title :	Therapeutics - Endocrine and Renal diseases			
2	Course Code and Number:	PHD421			
3	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		2			
4	Study Level and Semester:	fourth year/second Semester			
5	Pre-requisites (if any):	NA			
6	Co-requisites (if any):	PHD 422			
7	Program in which the course is offered:	Bachelor of PharmD			
8	Teaching Language:	English			
9	Instruction location:	Semester-based			

II. Course Description
The course deals essentially with the chronic diseases related to endocrine and renal systems and their pharmacotherapeutic approaches and treatment algorithm. The diseases that will be covered are endocrine disorders and renal diseases. The concepts of normal & abnormal body functions as well as different drug groups are required before this course. This course is taught through series of instructor-student interactive lectures and interactive class discussions.



III. Course Aims:

This course aims to:

1. Give student knowledge about the pathophysiology of endocrine and renal disorders.
2. Enable student to explain the signs, symptoms and complications of endocrine and renal diseases.
3. Equip student with the analysis of treatment aims and algorithms, drug interactions, dose calculations and optimization, and side effects of drugs.
4. Help student to recognize the safety of drugs in special groups like children, elderly, pregnancy, and end-stage renal disease as well as lifestyle modifications and health promotions.

IV. Course Intended Learning Outcomes (CILOs) :

After completing this course, students would be able to:

1. Recognize the drugs and their therapeutic uses, safety, optimum use and their adverse effects and contraindications among patient with endocrine and renal diseases.
2. Describe the principals of pathophysiology, lifestyle habits, underlying causes, and clinical manifestations that are relevant to endocrine and renal diseases.
3. Establish pharmaceutical care plan to improve patients' health and prevent drug-related problems and take special considerations for patients with renal and endocrine disorders.
4. Formulate special dosage schedule to meet patient individualization therapy based on patient's clinical data.
5. Contrast clinical data in the patient record with the normal range values.
6. Practice suitable advises for patients with endocrine and renal diseases on the safe and effective use of medicines and implement an appropriate plan for therapeutic drug monitoring.
7. Implement recent guidelines to formulate appropriate pharmaceutical plan in different endocrine and renal diseases and consider patients who are on dialysis.
8. Assess the scientific data obtained from different online resources and prioritize them according to their strength and quality of evidence.

V. Course Contents

First: Theoretical Aspect

No.	Course Units	Sub-topics	Week due	Contact Hours
1	Endocrinology Disorders	Diabetes mellitus (T1DM, T2DM), Diabetes ketoacidosis (DKA), Thyroid Disorders,	1 st to 6 th	12
2		Adrenal Gland Disorders, Pituitary Gland Disorders		
3	Mid-term Exam		7 th	2



4	Renal Disorders	Acute Kidney Injury, Chronic and End-Stage Renal Disease, Fluids and Electrolytes, Acid–Base Disturbances	8 th to 15 th	16
5	Final-term Exam		16 th	2
Total number of weeks and hours			16	32

Second: Tutorial Aspects

No.	Tutorial topics	Week due	Contact Hours
1	NA		
Total number of weeks and hours			

Third: Practical Aspects

No.	Practical topics	Week due	Contact Hours
1	NA		
Total number of weeks and hours			

VI. Teaching Strategies

1. Instructor-student interactive lectures
2. Micro-assignments
3. Interactive class discussions
4. Office hours (Tutorials)
5. report

VII. Tasks and Assignments

No.	Task/Assignment	Week due	Mark
1	Assignment 1/quiz	5 th week	5
2	Assignment 2/quiz	11 th week	5

VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Homework/Tasks/Assignments/quiz	2 nd , 3 rd	10	10 %
2	Midterm Exam	7 th	30	30 %
3	Final Exam	16 th	60	60 %
Total			100	100%



IX. Learning Resources

Textbooks:

- Marie Chisholm-Burns. (2022). Pharmacotherapy: principle and practice, 6th edition, New York: McGraw-Hill Medical, United States of America.
- Koda-Kimble, M. A., & Young, L. Y. (2018). Applied therapeutics: The clinical use of drugs, 11th edition. Baltimore, Md: Lippincott Williams & Wilkins, United States of America.

Essential References:

- Lexicomp, (2020). Drug Information Handbook, 29th edition, Lexi-Comp, U.S.A
- DiPiro, J. T. (2021). Pharmacotherapy: Handbook, 11th edition, New York: McGraw-Hill Medical, United States of America.
- British national formulary (BNF), last edition, Pharmaceutical Press.
- Philip Wiffen & els, (2017), Oxford Handbook of Clinical Pharmacy, 3rd edition.
- Marie Chisholm-Burns (January 3, 2019), Pharmacotherapy Principles and Practice, 5th Edition, McGraw-Hill Education / Medical, United States of America.

Electronic Materials and Web Sites:

1. www.uptodate.com
2. www.medscape.com
3. www.ncbi.nlm.nih.gov/pubmed
4. <http://www.accp.com/>

X. Course Policies :

Based on university regulations, the following aspects should be figured out:

1.	(Class Attendance) : <ul style="list-style-type: none"> • Students are required to attend all class lectures, tutorials and labs. • Student will not allow attending the final exam if he exceeds the maximum number of absences (15% without excuses and 25% with excuses).
2.	(Tardy) : <ul style="list-style-type: none"> • Attendance will be taken every lecture at the first 10 minutes and any student comes after that will be considered absent.
3.	(Exam Attendance/Punctuality) : <ul style="list-style-type: none"> • Student should be in the examination hall before 15 minutes from the beginning of the exam. • Late students are not allowed to get into the examination hall after the first 30 minutes and will be considered absent. • Makeup exams will be offered to students who miss a scheduled exam because of illness, death in the family or university-sponsored activity, but written documentation must be provided.
4.	(Assignments & Projects) : <ul style="list-style-type: none"> • All assignments must be done on their time. Late assignments will not be accepted. • Projects are assumed to be submitted on or before the dead-lines.
5.	(Cheating) : <ul style="list-style-type: none"> • Cheating is strictly prohibited behavior. • University regulations will be pursued and enforced on any cheating student.



6.	(Plagiarism) : <ul style="list-style-type: none"> Plagiarism is defined as “copying or stealing someone else’s words or ideas and claiming or presenting them as if they were your own.” University regulations will be pursued and enforced on any plagiarism attempt.
7.	(Other policies) : <ul style="list-style-type: none"> Students in class, Lab. are required to turn off all cell phones, iPods,

3.Course Syllabus Integrated Case- Based Learning 2

خطة مقرر التعلم القائم على الحالات 2

I. General information about the course:					
1	Course Title :	Integrated Case- Based Learning 2			
2	Course Code and Number:	PHD422			
3	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
			2		
4	Study Level and Semester:	Fourth Year/Second Semester			
5	Pre-requisites :	PHD411			
6	Co-requisites:	NA			
7	Program in which the course is offered:	Bachelor of PharmD			
8	Teaching Language:	English			
9	Instruction location:				

II. Course Description

This course involves simulated case studies and other activities aimed at integrating scientific and clinical concepts from across all courses in a problem-based learning environment. This course will emphasize on the comprehensive delivery of pharmaceutical care to patient with endocrine, renal disorders as well as woman’s and man’s health. Studying cardiovascular diseases is pre-requisite for this course. This course will be taught through PBL and group discussion.

III. Course Aims:

This course aims to:

1. Give student knowledge about the pathophysiology of endocrine, renal disorders woman’s and man’s related disorders.
2. Enable student to recognize the signs, symptoms and complications of endocrine, renal and woman and man related disorders.
3. Equip student with the required skills to identify treatment aims and algorithms, drug interactions, dose calculations and optimization, and their adverse effects.
4. Help student to recognize the safety of drugs in special groups like children, elderly and pregnancy as well as lifestyle modifications and health promotions.



IV. ICourse Intended Learning Outcomes (CILOs) :

After completing this course, students would be able to:

1. Recognize the drugs and their therapeutic uses, safety profile, optimum use for patient with endocrine and renal diseases.
2. Describe the principles of, pathophysiology, lifestyle habits, underlying causes contributing factors, and clinical manifestations that relevant to endocrine and renal diseases.
3. Establish treatment plan principles and take special considerations when designing therapeutic plan to improve woman's and man's health.
4. Formulate special dosage schedule to meet patient individualization therapy.
5. Distinguish clinical data for each patient to propose appropriate therapeutic plan for the diseases related to women and men.
6. Demonstrate your ability to provide suitable advice for the patients and other healthcare professionals on the safe and effective use of medicines.
7. Implement recent guidelines to formulate specific treatment plan to improve woman's and men's health as well as patients with endocrine and renal diseases.
8. Evaluate the scientific information related to endocrine, woman and man health disorders that are obtained from different sources.

V. Course Contents

First: Theoretical Aspect

No.	Course Units	Sub-topics	Week due	Contact Hours
1	Endocrinology disorders cases	Diabetes mellitus case, Thyroid Disorders case	1 st to 4 th	8
2	Renal disorders cases	Chronic and End-Stage Renal Disease case, acute kidney injury, Acid–Base Disturbances case	5 th to 7 th	6
3	Mid-term Exam		8 th	2
4	Women's and man's health cases	Benign Prostatic Hyperplasia case, Pregnancy and lactation: therapeutic considerations cases, Osteoporosis cases, Rheumatoid Arthritis cases,	9 th to 15 th	14
5	Final-term Exam		16 th	2
Total number of weeks and hours			16	32

Second: Tutorial Aspects

No.	Tutorial topics	Week due	Contact Hours
1	NA		
Total number of weeks and hours			



Third: Practical Aspects			
No.	Practical topics	Week due	Contact Hours
1	NA		
Total number of weeks and hours			

VI. Teaching Strategies	
<ol style="list-style-type: none"> 1. Instructor-student interactive lectures 2. Micro-assignments 3. Interactive class discussions 4. Office hours (Tutorials) 5. report 	

VII. Tasks and Assignments			
No.	Task/Assignment	Week due	Mark
1	Assignment 1/quiz	5 th week	5
2	Assignment 2/quiz	11 th week	5

VIII. Learning Assessment:				
No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Homework/Tasks/Assignments/quiz	5 th , 11 th	10	10 %
2	Midterm Exam	8 th	30	30 %
3	Final Exam	16 th	60	60 %
Total			100	100%

IX. Learning Resources	
Textbooks: <ul style="list-style-type: none"> Marie Chisholm-Burns. (2022). Pharmacotherapy: principle and practice, 6th edition, New York: McGraw-Hill Medical, United States of America. Koda-Kimble, M. A., & Young, L. Y. (2018). Applied therapeutics: The clinical use of drugs, 11th edition. Baltimore, Md: Lippincott Williams & Wilkins, United States of America. 	
Essential References: <ul style="list-style-type: none"> Lexicomp, (2020). Drug Information Handbook, 29th edition, Lexi-Comp, U.S.A DiPiro, J. T. (2021). Pharmacotherapy: Handbook, 11th edition, New York: McGraw-Hill Medical, United States of America. British national formulary (BNF), last edition, Pharmaceutical Press. Philip Wiffen & els, (2017), Oxford Handbook of Clinical Pharmacy, 3rd edition. Marie Chisholm-Burns (January 3, 2019), Pharmacotherapy Principles and Practice, 5th Edition, McGraw-Hill Education / Medical, United States of America. 	



Electronic Materials and Web Sites:

1. www.uptodate.com
2. www.medscape.com
3. www.ncbi.nlm.nih.gov/pubmed
4. <http://www.accp.com/>

X. Course Policies :

Based on university regulations, the following aspects should be figured out:

1.	(Class Attendance) : <ul style="list-style-type: none"> Students are required to attend all class lectures, tutorials and labs. Student will not allow attending the final exam if he exceeds the maximum number of absences (15% without excuses and 25% with excuses).
2.	(Tardy) : <ul style="list-style-type: none"> Attendance will be taken every lecture at the first 10 minutes and any student comes after that will be considered absent.
3.	(Exam Attendance/Punctuality) : <ul style="list-style-type: none"> Student should be in the examination hall before 15 minutes from the beginning of the exam. Late students are not allowed to get into the examination hall after the first 30 minutes and will be considered absent. Makeup exams will be offered to students who miss a scheduled exam because of illness, death in the family or university-sponsored activity, but written documentation must be provided.
4.	(Assignments & Projects) : <ul style="list-style-type: none"> All assignments must be done on their time. Late assignments will not be accepted. Projects are assumed to be submitted on or before the dead-lines.
5.	(Cheating) : <ul style="list-style-type: none"> Cheating is strictly prohibited behavior. University regulations will be pursued and enforced on any cheating student.
6.	(Plagiarism) : <ul style="list-style-type: none"> Plagiarism is defined as “copying or stealing someone else’s words or ideas and claiming or presenting them as if they were your own.” University regulations will be pursued and enforced on any plagiarism attempt.
7.	(Other policies) : <ul style="list-style-type: none"> Students in class, Lab. are required to turn off all cell phones, iPods,



4.Course Syllabus - Pharmacokinetics

خطة مقرر علم حرائك الادوية

I. General information about the course :						
1	Course Title:	Pharmacokinetics				
2	Course Code and Number :	PHS423				
3	Credit Hours :	Lecture	Seminar/Tutorial	Practical	Training	Total
		2				2
4	Study Level and Semester:	Fourth Year/Second Semester				
5	Pre-requisites (if any):	PHS415				
6	Co-requisites (if any) :	NA				
7	Program in which the course is offered	Bachelor of Pharmacy & Bachelor of PharmD				
8	Teaching Language:	English				
9	Study location					

II. Course Description :

This course covers the study of the kinetics of drug absorption, distribution, metabolism and elimination of the drug in the body. It includes compartmental models, volume of distribution, mathematical review, and kinetics of pharmacological effect, multiple dosing, renal and hepatic excretions and dosage regimen adjustment.

III. Course Aims:

1. To get an insight into the world of pharmacokinetics
- 2- To be familiar with pharmacokinetics such as volume of distribution, distribution coefficient, and different order modeling
- 3-To understand the basics, importance, and applications of compartment model in IV and oral routes
- 4- To learn the Clearance concept, mechanism of renal clearance, clearance ratio, and determination of renal clearance
- 5- To understand Hepatic elimination of drugs, first pass effect, extraction ratio, hepatic clearance, biliary excretion, extrahepatic circulation



IV. Course Intended Learning Outcomes (CILOs) :

- 1- Understanding the use of pharmacokinetics to direct the appropriate administration of drugs, particularly intravenous infusion and multiple dose administration.
- 2- Understanding the theoretical and practical issues of assessment of drug bioavailability and bioequivalence.
- 3- Ability to estimate pharmacokinetic parameters used in clinical pharmacokinetics and biopharmaceutics using plasma and urine drug level data.
- 4-Ability to correlate renal functions to dose and to perform needed calculations to account for any renal problems
- 5-Ability to use empirical pharmacokinetic models to devise and optimize dosage regimens
- 6-To acquire skills to carry out pharmacokinetics calculations needed for dose estimation and adjustment
- 7-To have the ability to deal with problems and to come up with solutions of the pharmacokinetics problems

V. Course topics

Topics/Units of Course Contents

Theoretical Aspects

No.	Course Topics/Units	Sub-topics	Week due	Contact Hours	
1	Introduction and definitions	-	1 st & 2 nd	4	
2	Pharmacokinetics of drug administered by intravenous route	- Pharmacokinetics Model - One compartment open model	3 rd & 4 th	4	
		- Two compartments open model	5 & 6 th	4	
3	Pharmacokinetics of drug administered by oral route	- Pharmacokinetics of drug absorption - Determination of Ka	7 & 8 th	4	
		- Extra-Vascular multiple dose administration	9 & 10 th	4	
		Models of oral absorption	11 & 12 th	4	
4	Renal excretion and clearance:	-	13 & 14 th	4	
5	Selected topics:	- Therapeutic drug monitoring - Determination of doses - Nonlinear pharmacokinetics - Protein binding of drugs	15 & 16 th	4	
Total number of weeks and hours			16	32	



VI. Teaching Strategies

Lectures

Interactive class discussions

Assignments

VII. Tasks and Assignments :

No.	Assessment Tasks	Mark	Weight
1	First test	20	5
2	Second test	20	10
3	Assignments	10	12
4	Final test	50	16
	Total	100	100%

IV. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Mid Test	8 th	30	30%
2	Assignment	5-6-7-8-9-10-11 th	10	10%
3	Final Exam	16 th	60	60%
	Total		100	

VIII. Learning Resources :

(Author, (Year), Book Title, Edition, Publisher, Country of publishing)

Textbooks-not more than 2

- 1- Applied biopharmaceutics & pharmacokinetics by Leon Shargel, Susanna Wu-Pong, Andrew B. C. Yu
- 2- Biopharmaceutics and Clinical Pharmacokinetics [Book] by Milo Gibaldi

Electronic Materials and Web Sites

Websites in international network (internet).

IX. Course Policies :

Based on university regulations, the following aspects should be figured out:

1.	Class Attendance : Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2.	Tardy :
3.	(Exam Attendance/Punctuality) :



	<p>All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.</p>
4.	Assignments & Projects:
5.	<p>Cheating:</p> <p>Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.</p>
6.	<p>Plagiarism:</p> <p>“To plagiarize is to take ideas or words of another person & pass them off as one’s own”. Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).</p>
7.	Other policies:



5.Course Syllabus Toxicology

خطة مقرر علم السموم

I. General information about the course :						
1.	:Course Title	Toxicology				
2.	Course Code and :Number	PHS424				
3.	:Credit Hours	Lecture	Seminar/Tutorial	Practical	Training	Total
		2	-	-	-	2
4.	Study Level and :Semester	Fourth Year/Second Semester				
5.	Pre-requisites (if :any)	PHS410				
6.	Co-requisites (if :any)					
7.	Program in which the course is offered	Bachelor of Pharmacy& Bachelor of PharmD				
8.	:Teaching Language	English				
9.	:Study System	Semester- based				

II. Course Description :

This course offered to fifth year pharmacy students as an applied toxicology course. During which common toxicological problems are presented to students to direct their knowledge towards the sources, mode of poisoning, clinical picture and treatment of poisoning.

III. Course Aims

1. To provide students with an acceptable knowledge about cases of poisoning.
2. To enable students diagnosing and differentiating poisoning cases from common symptoms and signs.
3. To motivate students about emergency measures and treatment of common cases of poisoning.



IV. Course Intended Learning Outcomes (CILOs) :

After completing this course, students would be able to:

1. Describe and relate different poisons according to the symptoms they cause depending on group classification.
2. Explain the mode of poisoning either suicidal, homicidal or accidental
3. Determine the most important investigations to be done and biological materials collection.
4. Recognize different procedures of treatment and emergency measures should be followed.
5. Interpret the most important symptoms and signs of poisoning and relate them to causative toxicant.
6. Formulate an appropriate management plans for treating poisons and emergency measures to be followed.
7. Take a proper history from patient or relatives related to the circumstances of poisoning.
8. Suspect the possible cause of poisoning and immediate action to be followed.
9. Formulate an appropriate management plans for treating poisons and emergency measures to be followed.
10. Communicate with patients and relatives to have an idea about the way of poisoning and the possible cause/causes.
11. React kindly and humanly with patients and concerned relatives regardless of the mode of poisoning.

V. Course topics

Topics/Units of Course Contents

First: Theoretical Aspects

No.	Course Topics/Units	Sub-topics	Week due	Contact Hours
1	Introduction to Occupational Environmental & Medical Toxicology	Definitions, types & mode of poisoning	1 st	2hrs
2	General diagnosis of poisoning	Clinical & laboratory approach	2 nd	2hrs
3	General treatment of poisoning	ABC, decontamination & antidotes	3 ^{ed}	2hrs
4	Corrosive poisons	Household acids and alkalis	4 th	2hr
5	Metallic poisons	Toxicology of heavy metals	5 th	2hr
6	Non metallic poisons	Insecticides, rodenticides and biocides	6 th	2hr
7	Analgesics	Non-steroidal anti-inflammatory drugs	7 th	2hr



8	Hypnotics	Barbiturates & benzodiazepines	8 th	2hr
9	Narcotics	Opium, opiates & drug addiction	9 th	2hrs
10	Hallucinogens	Cannabis, LSD & datura	10 th	2hr
11	Stimulants	Amphetamine & khat	11 th	2hr
12	Volatile poisons	Alcohols, CO, Petroleum distillates	12 th	2hr
13	Animal Envenomation	Snakes, scorpions, insects & rabies	13 th	2hrs
14	Harmful effects of drugs on organs.	CNS, CVS and renal intoxicants	14 th	2hrs
15	Allergic reactions to drugs		15	2hrs
16	Free radicals and antioxidants		16 th	2hrs
Total number of weeks and hours			16weeks	32

VII. Tasks and Assignments :

No.	Assessment Tasks	Mark	Weight
1	First test	20	5
2	Second test	20	10
3	Assignments	10	12
4	Final test	50	16
	Total	100	100%

VI. Learning Assessment:

No.	Assessment Tasks	Week due	Mark	Proportion of Final Assessment
1	Homework/Tasks/Assignments	-		
2	Quiz 1	5 th	5	%5
3	Midterm Exam	8 th	20	%20
4	Quiz 2	10 th	5	%5
5	Final Exam	16 th	70	%70
Total		4	100	%100



VII. Learning Resources :

(Author, (Year), Book Title, Edition, Publisher, Country of publishing)

Textbooks-not more than 2

1. Prof. Nabil H. AlHamadi, 2010, Toxicology, 3rd Edition, Sana'a University-Yemen
2. Stff. Membs Ain Shams University 2012, Principles of Clinical Toxicology, Elmanar medical press, Cairo- Egypt.

Essential References-not less than 4

1. Cassarett and Doll Toxicology
2. Manual of toxicological Emergencies
3. Nageshkuhmar Forensic Toxicology
4. Parik's Textbook of Forensic Toxicology

Electronic Materials and Web Sites

1. Forensic Encyclopedia
2. Metropolitan Forensic Investigations

VIII. Course Policies :

Based on university regulations, the following aspects should be figured out:

1.	(Class Attendance): Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2.	: (Tardy)
3.	: (Exam Attendance/Punctuality) All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4.	: (Assignments & Projects)
5.	:(Cheating) Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6.	:(Plagiarism) "To plagiarize is to take ideas or words of another person & pass them off as one's own". Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7.	: (Other policies)



6.Course Syllabus Clinical Nutrition

خطة مقرر التغذية السريرية

I. General information about the course:

1	Course Title :	Clinical Nutrition			
2	Course Code and Number:	PHD425			
3	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		2			
4	Study Level and Semester:	Fourth Year/Second Semester			
5	Pre-requisites (if any):	PHF326			
6	Co-requisites (if any):	NA			
7	Program in which the course is offered:	Bachelor of PharmD			
8	Teaching Language:	English			
9	Instruction location:				

II. Course Description

This course is designed to provide in-depth knowledge of nutrition and the role of the nutrient to promote human's health. This course will focus on the special needs of people throughout the life in health and disease state in addition to specific nutrition therapy in selected diseases. The concepts of nutrition should be studied before this course. This course is taught through series of instructor-student interactive lectures and interactive class discussions.

III. Course Aims:

This course aims to:

1. Help student to know the principle of human nutrition and their major functions in the body
2. Equip student to be able to explain the clinical manifestations and complications of nutritional related disorders
3. Enable student to know the application of nutrition concepts to personal everyday life and how healthy diet helps in disease prevention.
4. Assist student to learn nutrition therapy in different diseases, focusing on vulnerable groups like children, pregnant woman, and elderly.



IV. Course Intended Learning Outcomes (CILOs) :

After completing this course, students would be able to:

1. Define the basic information about the kinds, function and amounts of macro- and micronutrients needed for maintaining health.
2. Describe the role of pharmacist in the nutrition practice to promote health and Prevent diseases.
3. Identify suitable nutritional care plan to promote patient's health.
4. Examine the nutritional -related problems for diseased individuals.
5. Apply appropriate nutritional plan to ensure good nutritional outcome.
6. Cooperate effectively both independently and within a group

V. Course Contents

First: Theoretical Aspect

No.	Course Units	Sub-topics	Week due	Contact Hours
1	Over view of clinical nutrition	National health goal, Food choice, The energy yield nutrient, The role of nutrients in the maintenance of normal health, Fetal Growth and development, Dietary reference intake (DRI), EAR, RDA, AI, UL Descriptive terms on products, The Water-soluble and the fat-soluble vitamins	1 st	2
2	Parenteral nutrition	Concept of total parenteral nutrition in intensive care unit, NGT	2 nd	2
3	Planning a healthy diet	Diet planning principle, Key recommendation of dietary guideline, Fast food and health	3 rd	2
4	Weight Management: Overweight, obesity and underweight.	Causes of overweight and obesity ,Problems of Overweight and Obesity, Aggressive treatment of obesity, Weight loss strategies, Physical activity-weight maintenance underweight, Weight gain strategies, Eating disorders	4 th	2
5	Nutrition Care and Assessment	Nutrition in Health Care, Effects of Illness on Nutrition Status, Responsibility for Nutrition Care , Nutrition Screening , The Nutrition Care Process , Nutrition Assessment Historical Information ,Food Intake Data, Anthropometric Data ,Biochemical Data, Medical Tests and Procedures	5 th	2
6	Life Cycle Nutrition: Pregnancy and Lactation	Nutrition prior to Pregnancy, Growth and Development during Pregnancy, Maternal Weight , Exercise during	6 th	2



		Pregnancy, Nutrition during Pregnancy , Energy and Nutrient Needs during Pregnancy, Vegetarian Diets during Pregnancy and Lactation, Common Nutrition-Related Concerns of Pregnancy		
7	Mid-term Exam		7 th	2
8	Nutritional therapy of upper GIT disease.	GERD, peptic ulcer disease, gastritis	8 th	2
9	Nutrition Therapy of the lower GIT disease	Diarrhea, Constipation, Malabsorption syndromes: cystic fibrosis, celiac disease, Irritable bowel syndrome, Diverticulosis	9 th	2
10	Nutrition and Diabetes Mellitus.	Type of diabetes, Treatment of diabetes Medical nutrition therapy- Meal planning strategies, drug therapy and physical activity	10 th - 11 th	4
11	Nutrition and Cardiovascular Diseases.	Atherosclerosis ,Coronary heart diseases ,Therapeutic lifestyle changes for lowering CHD risk, Life style changes for lowering hypertriglyceridemia, Vitamin supplements and CHD risk - Hypertension : Contributing factors for HT, Treatment of HT, The principle of nutrition therapy, Highlight High fat diet- + DASH diet? - Heart Failure : Consequences of Heart Failure, Medical Management of Heart Failure - Stroke : Stroke Prevention , Stroke Management	12 th - 13 th	4
12	Nutrition and Renal Diseases	Functions of the Kidneys, Causes of Acute Renal Failure, Consequences of Acute Renal Failure, Treatment of Acute Renal Failure , Chronic Kidney Disease , Consequences of Chronic Kidney Disease, Treatment of Chronic Kidney Disease , Kidney Stones : Formation of Kidney Stones, Consequences of Kidney Stones, Prevention and Treatment of Kidney Stones	14 th	2
13	Nutrition and Liver Disease and Gallstones	Fatty Liver and Hepatitis, Cirrhosis Consequences of Cirrhosis, Treatment of Cirrhosis, Medical Nutrition Therapy for Cirrhosis, Liver Transplantation Gallbladder Disease , Types of Gallstones, Consequences of Gallstones, Risk Factors for Gallstones, Treatment for Gallstones	15 th	2



14	Final-term Exam		16 th	2
Total number of weeks and hours			16	32

Second: Tutorial Aspects

No.	Tutorial topics	Week due	Contact Hours
1	NA		
Total number of weeks and hours			

Third: Practical Aspects

No.	Practical topics	Week due	Contact Hours
1	NA		
Total number of weeks and hours			

VI. Teaching Strategies

1. Instructor-student interactive lectures
2. Micro-assignments
3. Interactive class discussions
4. Office hours (Tutorials)
5. report

VII. Tasks and Assignments

No.	Task/Assignment	Week due	Mark
1	Assignment 1/quiz	5 th week	5
2	Assignment 2/quiz	11 th week	5

VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Homework/Tasks/Assignments/quiz	2 nd , 3 rd	10	10 %
2	Midterm Exam	7 th	30	30 %
3	Final Exam	16 th	60	60 %
Total			100	100%

IX. Learning Resources

Textbooks:

- Sharon Rolfes, Kathryn Pinna and Ellie Whitney, 2017, Understanding normal and Clinical nutrition, 11th, Thompson, USA.

Essential References:

1. Peggy S. Stanfield (2010) Nutrition And Diet Therapy: Self-Instructional Approaches ,fifth edition
2. Jones and Bartlett Publishers International Barb House, Barb Mews London W6 7PA United Kingdom Copyright © 2010 by Jones and Bartlett Publishers, LLC ,Publisher: Kevin



Sullivan, Acquisitions Editor: Amy Sibley.

3. 2-L. Kathleen Mahan, M, S, R D, C DE, Sylvia Escott- Stump MA, , R D, CDE, (2016) KRAUSE'S Food , & Nutrition therapy, International Edition, 14 edition ISBN: 978-0-8089-2378- SAUNDERS EI-SEVIEI1830 Westline Industrial Drive St. Louis, Missouri 63146, Printed in Canada.
4. 3-Michael J. Gibney (Editor), Susan A. Lanham-New (Editor), Aedin Cassidy (Editor), Hester H. Vorster (Editor) (2019), Wiley-Blackwell Introduction to Human Nutrition, 3rd Edition, Norwich, UK

Electronic Materials and Web Sites:

<https://www.nutritioncare.org/>

<https://www.eatright.org/>

X. Course Policies :

Based on university regulations, the following aspects should be figured out:

1.	(Class Attendance) : <ul style="list-style-type: none"> Students are required to attend all class lectures, tutorials and labs. Student will not allow attending the final exam if he exceeds the maximum number of absences (15% without excuses and 25% with excuses).
2.	(Tardy) : <ul style="list-style-type: none"> Attendance will be taken every lecture at the first 10 minutes and any student comes after that will be considered absent.
3.	(Exam Attendance/Punctuality) : <ul style="list-style-type: none"> Student should be in the examination hall before 15 minutes from the beginning of the exam. Late students are not allowed to get into the examination hall after the first 30 minutes and will be considered absent. Makeup exams will be offered to students who miss a scheduled exam because of illness, death in the family or university-sponsored activity, but written documentation must be provided.
4.	(Assignments & Projects) : <ul style="list-style-type: none"> All assignments must be done on their time. Late assignments will not be accepted. Projects are assumed to be submitted on or before the dead-lines.
5.	(Cheating) : <ul style="list-style-type: none"> Cheating is strictly prohibited behavior. University regulations will be pursued and enforced on any cheating student.
6.	(Plagiarism) : <ul style="list-style-type: none"> Plagiarism is defined as “copying or stealing someone else’s words or ideas and claiming or presenting them as if they were your own.” University regulations will be pursued and enforced on any plagiarism attempt.
7.	(Other policies) : <ul style="list-style-type: none"> Students in class, Lab. are required to turn off all cell phones, iPods,



7. Course Syllabus Therapeutics- woman and man health

خطة مقرر معالجة دوائية (صحة الرجل والمرأة)

I. General information about the course:						
1	Course Title :	Therapeutics- woman and man health				
2	Course Code and Number:	PHD 426				
3	Credit Hours :	Credit Hours				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		2				2
4	Study Level and Semester:	Fourth year/Second Semester				
5	Pre-requisites (if any):	PHD422				
6	Co-requisites (if any):	NA				
7	Program in which the course is offered:	Bachelor of PharmD				
8	Teaching Language:	English				
9	Instruction location:					

II. Course Description
<p>This course deals essentially with chronic diseases and their therapies, especially optimization of drug therapy. The topics that will be covered are woman's and man's health as well as bone and joint disorders. The concepts of normal and abnormal body functions as well as different drug groups and classifications are required before this course. This course is taught through series of instructor-student interactive lectures and interactive class discussions.</p>

III. Course Aims:
<p>This course aims to:</p> <ol style="list-style-type: none"> 1. Provide students with knowledge regarding the pathophysiology of gynecologic, urologic, and bone disorders. 2. Enable student to explain the signs, symptoms and complications of gynecologic, urologic, and bone disorders. 3. Equip student with the analytic skills to figure out treatment aims and algorithms, drug interactions, dose calculations and optimization, and adverse drug reactions as well as the lifestyle modifications. 4. Help student to recognize the safety of drugs in special groups like elderly and pregnancy.



IV. Course Intended Learning Outcomes (CILOs) :

After completing this course, students would be able to:

1. Recognize the drugs and their therapeutic uses, safety, optimum use of medication and contraindications.
2. Describe the principals of, pathophysiology, lifestyle habits, underlying causes contributing factors, and clinical manifestations that relevant to geriatric diseases.
3. Establish treatment plan and take special considerations when designing for some populations.
4. Identify suitable pharmaceutical care plan to promote woman's and man's health.
5. Formulate special dosage schedule to meet patient individualization therapy based on patient's severity level
6. Solve medication-related problems and provide advice to patients and healthcare professionals about the effective use of medicine.
7. Implement appropriate therapeutic plan based on the current guidelines to ensure woman's and man's health improvement.
8. Cooperate effectively with patients, public and health care professionals; includes both written and oral communications.

V. Course Contents

First: Theoretical Aspect

No.	Course Units	Sub-topics	Week due	Contact Hours
1	Man health (Urologic Disorders)	Erectile Dysfunction, Benign Prostatic Hyperplasia, Urinary Incontinence	1 st to 4 th	8
2	Bone and Joint Disorders	Osteoporosis, Rheumatoid Arthritis, Osteoarthritis, Gout and Hyperuricemia	5 th to 7 th	10
3	Mid-term Exam		8 th	2
4	Women's health (Gynecologic and Obstetric Disorders)	Pregnancy and lactation: therapeutic considerations, contraception, menstruation-related disorders, Hormone Therapy in Menopause,	9 th to 15 th	10
5	Final-term Exam		16 th	2
Total number of weeks and hours			16	32

Second: Tutorial Aspects

No.	Tutorial topics	Week due	Contact Hours
1	NA		
Total number of weeks and hours			



Third: Practical Aspects			
No.	Practical topics	Week due	Contact Hours
1	NA		
Total number of weeks and hours			

VI. Teaching Strategies	
<ol style="list-style-type: none"> 1. Instructor-student interactive lectures 2. Micro-assignments 3. Interactive class discussions 4. Office hours (Tutorials) 5. report 	

VII. Tasks and Assignments			
No.	Task/Assignment	Week due	Mark
1	Assignment 1/quiz	5 th week	5
2	Assignment 2/quiz	11 th week	5

VIII. Learning Assessment:				
No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Homework/Tasks/Assignments/quiz	2 nd , 3 rd	10	10 %
2	Midterm Exam	8 th	30	30 %
3	Final Exam	16 th	60	60 %
Total			100	100%

IX. Learning Resources	
Textbooks: <ul style="list-style-type: none"> Marie Chisholm-Burns. (2022). Pharmacotherapy: principle and practice, 6th edition, New York: McGraw-Hill Medical, United States of America. Koda-Kimble, M. A., & Young, L. Y. (2018). Applied therapeutics: The clinical use of drugs, 11th edition. Baltimore, Md: Lippincott Williams & Wilkins, United States of America. 	
Essential References: <ul style="list-style-type: none"> Lexicomp, (2020). Drug Information Handbook, 29th edition, Lexi-Comp, U.S.A DiPiro, J. T. (2021). Pharmacotherapy: Handbook, 11th edition, New York: McGraw-Hill Medical, United States of America. British national formulary (BNF), last edition, Pharmaceutical Press. Philip Wiffen & els, (2017), Oxford Handbook of Clinical Pharmacy, 3rd edition. Marie Chisholm-Burns (January 3, 2019), Pharmacotherapy Principles and Practice, 5th Edition, McGraw-Hill Education / Medical, United States of America. 	
Electronic Materials and Web Sites: <ol style="list-style-type: none"> 1. www.uptodate.com 2. www.medscape.com 	



3. www.ncbi.nlm.nih.gov/pubmed

4. <http://www.accp.com/>

X. Course Policies :

Based on university regulations, the following aspects should be figured out:

1.	(Class Attendance) : <ul style="list-style-type: none"> Students are required to attend all class lectures, tutorials and labs. Student will not allow attending the final exam if he exceeds the maximum number of absences (15% without excuses and 25% with excuses).
2.	(Tardy) : <ul style="list-style-type: none"> Attendance will be taken every lecture at the first 10 minutes and any student comes after that will be considered absent.
3.	(Exam Attendance/Punctuality) : <ul style="list-style-type: none"> Student should be in the examination hall before 15 minutes from the beginning of the exam. Late students are not allowed to get into the examination hall after the first 30 minutes and will be considered absent. Makeup exams will be offered to students who miss a scheduled exam because of illness, death in the family or university-sponsored activity, but written documentation must be provided.
4.	(Assignments & Projects) : <ul style="list-style-type: none"> All assignments must be done on their time. Late assignments will not be accepted. Projects are assumed to be submitted on or before the dead-lines.
5.	(Cheating) : <ul style="list-style-type: none"> Cheating is strictly prohibited behavior. University regulations will be pursued and enforced on any cheating student.
6.	(Plagiarism) : <ul style="list-style-type: none"> Plagiarism is defined as “copying or stealing someone else’s words or ideas and claiming or presenting them as if they were your own.” University regulations will be pursued and enforced on any plagiarism attempt.
7.	(Other policies) : <ul style="list-style-type: none"> Students in class, Lab. are required to turn off all cell phones, iPods,



8.Course Syllabus Pharmacy Practice 2

خطة مقرر ممارسة صيدلة 2

I. General information about the course:

1	Course Title :	Pharmacy Practice 2			
2	Course Code and Number :	PHD427			
3	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		1			
4	Study Level and Semester:	Fourth year/Second Semester			
5	Pre-requisites (if any):	PHD417			
6	Co-requisites (if any):				
7	Program in which the course is offered:	Bachelor of Pharm D			
8	Teaching Language:	English			
9	Instruction location:				

II. Course Description

This course introduces students to hospital pharmacy practice and the pharmacist role in providing pharmacy services. Topics include policies and procedures, drug distribution systems, antimicrobials and injections, ensuring medicine safety and quality and consultant pharmacists and clinical pharmacy. The prerequisite for this course is Pharmacy Practice I. The lectures will be conducted in formally with participation by the student's seminars.

III. Course Aims:

1. Understand and define the different roles a pharmacist may have in a hospital setting.
2. Describe the organizational structure of the pharmacy department.
3. Enable students to Process prescriptions, using a variety of drug distribution methods
4. Introduce the students into the pharmaceutical services, which provided by the hospital pharmacist.
5. Equip the students with team work



IV. Course Intended Learning Outcomes (CILOs) :

- 1- Describe hospital organization/committee functions, drug dispensing and methods of Safe infection control.
- 2- Explain methods of infusions preparation, total parenteral nutrition, Dose adjustment, as well as illustrate steps involved in drug therapy monitoring
- 3- Examine patient and clinical data, including patients records held within practice settings.
- 4- Investigate potential drug- related problems and identify ways to prevent their occurrence.
- 5- Accurately assess admixture solutions for appropriate concentrations, rate, compatibilities, stability, and storage
- 6- Interpret patient scientific data to help evaluate and optimizing prescribing in primary care.
- 7- Communicate efficiently and effectively with patients and other healthcare professionals
- 8- Work effectively as a part of team in order to fulfill a certain project

V. Course Contents

Theoretical Aspect

No.	Course Topics/Units	Sub-topics	Week due	Contact Hours
1	Organization and Structure Organization of a hospital and hospital pharmacy	Organization and Structure Organization of a hospital and hospital pharmacy, Responsibilities of a hospital pharmacist, Pharmacy and therapeutic committee, Hospital formulary Contents, preparation and revision of hospital formulary.	1 st	1
2	Hospital Pharmacy Dispensing:	Outpatient dispensing - methods adopted, Dispensing of drugs to inpatients, Types of drug distribution systems	2 nd , 3 rd & 4 th	3
3	Technical services	Dose adjustment, Intravenous admixture (TPN), Therapy drug monitoring (TDM)	5 th , 6 th & 7 th	3
4	Mid term		8 th	1
5	Antimicrobials and injections	Antimicrobials, resistance and infection control Safe and appropriate use of injections	9 th	1
6	Ensuring medicine safety and quality	The need for ensuring medicine safety and quality	10 th , 11 th & 12 th	3



		Monitoring and addressing medication errors Controlled drugs in hospital pharmacy, Disposal of unwanted Medicines		
7	Consultant pharmacists AND Clinical pharmacy	Prescription monitoring Medication errors and adverse drug reaction reporting Patient education and counselling, Health promotion	13 th , 14 th & 15 th	3
8	Final exam		16 th	1
Total number of weeks and hours				16

VI. Tasks and Assignments

No.	Task/Assignment	Week due	Mark
2.	TDM	4	2.5
3.	TPN	7	2.5
4.	Dose adjustment	11	2.5
5.	Rational Use of Drugs And Essential Drug List,	14	2.5

VII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Mid Term	8	30	30%
2	Assignment	4, 7, 11, 14	10	10%
3	Final Exam	16	60	60%
	Total		100	

VIII. Learning Resources

Textbooks

1. M. C. Allwood and J. T. Fell, 2003, "Textbook of Hospital Pharmacy" Blackwell Scientific Publications, Oxford.

Essential References:

1. Loyd V. Allen, Jr., 2005, **Remington: The Science and Practice of Pharmacy**, twenty first edition, Lippincott Williams & Wilkins, USA.
2. A.J. Winfield, J.A. Rees, I. Smith, 2009, **Pharmaceutical practice**, fourth edition, Churchill Livingstone - Elsevier, USA



3. Mansoor A, Khan, (2000), pharmaceutical and clinical calculation, 2th edition by CRC Press LLC, USA
4. W.E. Hassan, 1986, "Hospital Pharmacy" 3rd ed. Lea and Febiger, Philadelphia.

Electronic Materials and Web Sites:

www.pubmed.com

www.sceincedirect..com

www.hinari.who.gov

IX. Course Policies :

Based on university regulations, the following aspects should be figured out:

1.	(Class Attendance): Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2.	(Tardy) :
3.	(Exam Attendance/Punctuality) : All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4.	(Assignments & Projects) :
5.	(Cheating) : Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6.	(Plagiarism) : "To plagiarize is to take ideas or words of another person & pass them off as one's own". Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7.	(Other policies) :



9. Course Syllabus Research Methodology

خطة مقرر مناهج البحث العلمي

I. معلومات عامة عن المقرر General information about the course				
1	اسم المقرر: Course Title	مناهج البحث العلمي		
2	رمز المقرر ورقمه: Course Code and Number	BUST10		
3	الساعات المعتمدة للمقرر: Credit Hours	الساعات المعتمدة		
		نظري	سمنار/تمارين	عملي
2		-	-	-
4	المستوى والفصل الدراسي: Level and Semester	حسب خطة كل برنامج		
5	المتطلبات السابقة لدراسة المقرر (إن وجدت): Pre-requisites (if any)	لا يوجد		
6	المتطلبات المصاحبة لدراسة المقرر (إن وجدت): Co-requisites (if any)	لا يوجد		
7	البرنامج/ البرامج التي يتم فيها تدريس المقرر: Program in which the course is offered:	جميع برامج الجامعة		
8	لغة تدريس المقرر: Teaching Language	اللغة العربية		
9	مكان تدريس المقرر: Instruction location:	قاعات الجامعة		

II. وصف المقرر الدراسي:

يعد هذا المقرر من أهم المقررات الدراسية كونه يساعد الطالب الجامعي على انجاز بحث التخرج، ويمكنه من المهارات البحثية للدراسات العليا المستقبلية، وهو يعمل على إكسابه مجموعة من المعلومات والمعارف حول العلم والمعرفة، ومناهج البحث، وطرق اختيار المشكلة، وصياغتها، وخطوات توضيحها، والعينات، وأدوات جمع المعلومات النظرية والميدانية، كما يكسبه مجموعة من المهارات المتعلقة بتصميم أدوات البحث، وكتابة التقرير النهائي للبحث، وتوثيق المراجع توثيقاً صحيحاً، وينمي الاتجاهات الإيجابية لدى المتعلم تجاه البحث العلمي، ولتحقيق ذلك يتم اتباع العديد من الأنشطة الفاعلة (طرائق وأساليب تدريس، ووسائل) كطريقة الحوار والمناقشة، والتعلم الذاتي، النقاش الفردي والجماعي، والبحث والتطبيقات، مع استخدام الباوربوينت عند العرض، وتقييم الطالب من خلال المشاركة الصفية والتكليفات المصاحبة – الصفية واللا صفية – والاختبار النصفى والنهائي

III. أهداف المقرر:

- 1- يظهر معرفة بالعلم والمعرفة والبحث العلمي، ومناهجه.
- 2- يكتسب مهارات تحديد مشكلة البحث، وكيفية مراجعة الدراسات السابقة، وتحديد العينة، واختيارها.
- 3- يكتب خطة، وتقريراً بحثياً.
- 4- يصمم أدوات لجمع المعلومات.
- 5- يستخدم المكتبات العامة والمصادر والمراجع، ويوثقها بصورة صحيحة.



6- يحرص على الاستفادة من البحث العلمي في شؤون حياته المختلفة.

IV. مخرجات التعلم المقصودة للمقرر:

- 1- يظهر معرفة بالعلم والمعرفة والبحث العلمي، ومناهجه.
- 2- يكتسب مهارات تحديد مشكلة البحث، وكيفية مراجعة الدراسات السابقة، وتحديد العينة، واختيارها.
- 3- يكتب خطة، وتقريراً بحثياً.
- 4- يصمم أدوات لجمع المعلومات.
- 5- يستخدم المكتبات العامة والمصادر والمراجع، ويوثقها بصورة صحيحة.
- 6- يحرص على الاستفادة من البحث العلمي في شؤون حياته المختلفة.

V. محتوى المقرر:

الجانب النظري:

الرقم	وحدات المقرر	المواضيع التفصيلية	الأسبوع	الساعات الفعلية
1.	العلم والمعرفة والبحث العلمي	تعريف العلم. تعريف المعرفة. أهداف العلم. مصادر العلم والمعرفة. تعريف البحث العلمي. أهمية البحث العلمي. أغراض البحث العلمي. ضوابط البحث العلمي.	الأول والثاني	4
2.	مناهج البحث العلمي	تعريف المنهج في اللغة. تعريف المنهج في الاصطلاح. تعريف منهج البحث العلمي. أنواع مناهج البحث • المنهج الوصفي: • المنهج التجريبي: • المنهج التاريخي:	الثالث والرابع	4
3.	إعداد خطة البحث	اختيار الموضوع وتحديد العنوان. عناصر خطة البحث: - مقدمة البحث. - مشكلة البحث وصياغتها. - أسئلة وفروض البحث. - أهداف البحث. - أهمية البحث. - حدود البحث. - مصطلحات البحث. - إجراءات البحث.	الخامس والسادس	4
4.	عينة البحث	* العينة العشوائية (الاحتمالية): - العينة العشوائية البسيطة.	السابع والثامن	4



		<ul style="list-style-type: none"> - العينة العشوائية المنتظمة. - العينة العشوائية الطبقية. - العينة العشوائية العنقودية. - العينة العشوائية المزدوجة. * العينة غير العشوائية (غير الاحتمالية): - العينة الملائمة. - العينة العمدية: * العينة الحكمية. * العينة الحصصية. 		
2	التاسع	• امتحان نصفي	امتحان نصفي	5.
4	العاشر والحادي عشر	<ul style="list-style-type: none"> • الاستبيان. • المقابلة. • الملاحظة. • الاختبارات. 	أدوات جمع المعلومات	6.
2	الثاني عشر والثالث عشر	<ul style="list-style-type: none"> • استخدام المكتبة - مفهوم المكتبة. - تنظيم المكتبة الحديثة. - التصنيف في المكتبة. - فهرس البطاقات. • مصادر البيانات والمعلومات: - مصادر ثانوية. - مصادر أساسية. • إسهام الإنترنت في مجال البحث العلمي. 	استخدام المكتبة والمصادر والمراجع	7.
2	الرابع عشر	<ul style="list-style-type: none"> • تعريف التوثيق العلمي. • التوثيق في متن البحث. • التوثيق في المصادر والمراجع: - التوثيق العلمي للكتب. - التوثيق العلمي للرسائل العلمية. - التوثيق العلمي للدوريات والمجلات العلمية. - التوثيق العلمي للإنترنت. 	التوثيق العلمي	8.
4	الخامس عشر	<ul style="list-style-type: none"> - توضيح ماهية المشكلة. - مراجعة الدراسات السابقة. - تصميم البحث وتحديد خطواته الإجرائية. - جمع المعلومات وتحليلها وتفسيرها. - ملخص البحث وأهم نتائجه، وتوصياته، وبحوث مقترحة للدراسة. 	خطوات إعداد البحث العلمي	9.
2	السادس عشر		الامتحان النهائي	10.



32	16	إجمالي عدد الأسابيع والساعات
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VI. استراتيجيات التدريس
1- المحاضرات النظرية
2- الحوار والمناقشة
3- التعلم التعاوني
4- التعلم الذاتي
5- العروض
6- العصف الذهني

VII. الأنشطة والتكليفات:			
الرقم	النشاط/ التكليف	الأسبوع	الدرجة
1.	واقع البحث العلمي في اليمن	2	2
2.	صياغة فروض البحث	5	2
3.	خطة بحث	6	4
	تمارين	8	2

VIII.تقييم التعلم:				
الرقم	موضوعات التقييم	موعد التقييم/ اليوم والتاريخ	الدرجة	الوزن النسبي (نسبة الدرجة إلى درجة التقييم النهائي)
7.	الواجبات / الأنشطة / التكليف Homework/Tasks/Assignments	2- 5- 6- 8	10	10%
8.	اختبار منتصف الفصل Midterm Exam	9	20	20%
3.	اختبارات قصيرة (مشاركة)		10	10%
	المجموع		40	40%

IX. مصادر التعلم:
المراجع الرئيسية:
<ul style="list-style-type: none"> عبد الغني محمد اسماعيل العمراني (2011): مناهج البحث العلمي، ط (1)، جامعة العلوم والتكنولوجيا، صنعاء. منصور محمد اسماعيل العريقي (2009): طرق البحث، ط (2)، الأمين للنشر والتوزيع، صنعاء.
المراجع المساعدة (لا تقل عن أربعة):
1. أحمد بدر (1984): أصول البحث العلمي ومناهجه، ط(7)، وكالة المطبوعات عبدالله حرمي، الكويت.
2. عبد الرحمن بدوي (1977): مناهج البحث العلمي، ط(3)، وكالة المطبوعات، الكويت.
3. حسين عبد الحميد رشوان (2003): أصول البحث العلمي، مؤسسة شباب الجامعة، الاسكندرية مصر.
4. ذوقان عبيدات، عبد الرحمن عدس، وكايد عبد الحق (د ت): البحث العلمي.. مفهومه، أدواته، أساليبه، دار مجدلاوي للنشر والتوزيع، الاردن، عمان.
5. صالح بن حمد العساف (2000): دليل الباحث في العلوم السلوكية، ط(2)، مكتبة العبيكان الرياض.
6. عبد الغني محمد اسماعيل العمراني (2007): دليل الطالب الى كتابة البحث العلمي، دار الكتاب الجامعي، صنعاء.
جابر عبد الحميد جابر، وأحمد خير ي كاظم (2002): مناهج البحث في التربية وعلم النفس، دار النهضة العربية. القاهرة، مصر



X. الضوابط والسياسات المتبعة في المقرر :	
بعد الرجوع للوائح الجامعة يتم كتابة السياسة العامة للمقرر فيما يتعلق بالآتي:	
1.	سياسة حضور الفعاليات التعليمية: تحدد سياسة الحضور ومتى يعتمد الغياب وكيفيته ونسبته، ومتى يعد الطالب محروماً من المقرر
2.	الحضور المتأخر: يتم تحديد السياسة المتبعة في حالات تكرار تأخر الطالب عن حضور الفعاليات التعليمية
3.	ضوابط الامتحان: تحديد السياسات المتبعة في حالات الغياب عن الامتحان و توصيف السياسة المتبعة في حالات تأخر الطالب عن الامتحان، وكذلك السياسات المتبعة في حالة إعادة الامتحان في الظروف المقبولة.
4.	التعيينات والمشاريع: تحديد السياسات المتبعة في حالات تأخير تسليم التكاليف والمشاريع ومتى يجب أن تسلم إلى الأستاذ.
5.	الغش: تحدد هنا السياسات المتبعة في حالات الغش إما في الامتحانات أو في التكاليف بأي طريقة من طرائق الغش.
6.	الانتحال: يحدد تعريف الانتحال وحالاته والإجراءات المتبعة في حالة حدوثه.
7.	سياسات أخرى: أي سياسات أخرى مثل استخدام الموبايل أو مواعيد تسليم التكاليف..... الخ



Faculty: pharmacy

Department: Clinical pharmacy and pharmacy practice

Program: Bachelor of PharmD

Fifth year

First semester

9. Course Syllabus Biostatistics

خطة مقرر الإحصاء الحيوي

I. General information about the course :					
1.	Course Title:	Biostatistics			
2.	Course Code and Number :	PHF 511			
3.	Credit Hours :	Lecture	Seminar/Tutorial	Practical	Training
		2	-	-	2
4.	Study Level and Semester:	Fifth year/first Semester			
5.	Pre-requisites (if any):	BUST10			
6.	Co-requisites (if any) :	Computer Skills (Excel)			
7.	Program in which the course is offered	Bachelor of Pharmacy & Bachelor of PharmD			
8.	Teaching Language:	English			
9.	Study System :				

II. Course Description :

The course focuses to prepare students with essential concepts and application in Biostatistics. Students will be discovered Descriptive Statistics including variable types, central and dispersion measurements and making graphs and tables. Also, he or she will be exposed to Inferential Statistics including normal distribution, selecting suitable statistical tests and interpreting the findings (p-value). S/he will be able to deal with Excel and SPSS to code variables, inter data and do the proper statistical tests and applications. Independent t-test, paired t-test, and Chi-square will give to students as common used parametric tests. Mann-Whitney, Wilcoxon Signed Rank and Fisher exact tests will be given as corresponding non-parametric tests. Students will be requested to install SPSS in their PCs and practical sessions will be run to explain them how to deal with such software.

III. Course Aims

1. Enhance students' knowledge, skills and practice with basic principles of Biostatistics
2. Enrich their capabilities to use such principles in scientific researches



IV. Course Intended Learning Outcomes (CILOs) :

1. Define basic terms and concepts in Biostatistics
2. Express the different methods of data presentation and interpretation.
3. Select appropriate statistical tests for give data
4. Interpret data process output from Statistical Package for Social Sciences software (SPSS).
5. Perform the suitable statistical calculations or test to analyze data
6. Construct suitable methods for data presentation and interpretation (tables and graphs)
7. Demonstrate critical thinking, decision making, synthesis and interpretation of statistical information.
8. Develop the ability to work with SPSS application and learn how to choose the proper method to analyze scientific data.

V. Course Contents

Theoretical Aspect:

No.	Course Topics/Units	Sub-topics	Week due	Contact Hours
1	Introduction to Biostatistics	Type of variables	1 st	2
2	Data presentation	Tables Graphs	2 nd & 3 th	4
3	Central tendency measurements	Mean Median Mode	4 th	2
4	Dispersion measurements	Range Standard deviation Inter-quartile range Standard error	5 th & 6 th	4
5	SPSS overview	Data coding and entry	7 th	2
6	Inferential Statistics	Estimation Hypotheses testing Selecting Suitable Statistical Tests	8,9,10 & 11 th	8
7	Statistical Tests	Independent t-test Paired t-test Chi-square Correlation and regression	12,13,14 & 15 th	10
	Final exam		16 th	2
Total number of weeks and hours			16	32



VI. Tasks and Assignments :

No.	Task/Assignment	Week due	Mark
1	Perform data presentation in table and graph	3 rd week	2.5
2	Calculate central tendency measurements	4 th week	2.5
3	Calculate dispersion measurement	5 th week	2.5
4	Summarize and present statistical tests findings	10 th week	2.5

VII. Learning Assessment:

No.	Assessment Tasks	Week due	Mark	Proportion of Final Assessment
1	Homework/Tasks/Assignments	As mentioned above	10	% 10
2	Midterm Exam	8 th week	30	% 30
3	Final Exam	15 th week	60	% 60
Total			100	% 100

VIII. Learning Resources :

(Author, (Year), Book Title, Edition, Publisher, Country of publishing)

Textbooks-not more than 2

1. Daniel, Wayne W., and W. Daniel Wayne. "Biostatistics: a foundation for analysis in the health sciences." (2012).
2. Field, Andy. *Discovering statistics using SPSS*. Sage Publications Limited, 2009

Essential References-not less than 4

1. Petrie, Aviva, and Caroline Sabin. *Medical statistics at a glance*. Vol. 29. Wiley-Blackwell, 2010.
2. Lecture notes

Electronic Materials and Web Sites

1. www.medicalstatistical.com

IX. Course Policies

Based on university regulations, the following aspects should be figured out:

1.	(Class Attendance): Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2.	(Tardy) :
3.	Exam Attendance/Punctuality) : All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was



	accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4.	(Assignments & Projects) :
5.	(Cheating) : Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6.	(Plagiarism) : “To plagiarize is to take ideas or words of another person & pass them off as one’s own”. Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7.	(Other policies) :

Course Syllabus Pharmacy Administration

خطة مقرر ادارة الصيدلة

I. General information about the course:					
1	Course Title :	Pharmacy Administration			
2	Course Code and Number :	PHS512			
3	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		1			
4	Study Level and Semester:	Fifth year/first Semester			
5	Pre-requisites (if any):	PHB426			
6	Co-requisites (if any):				
7	Program in which the course is offered:	Bachelor of Pharmacy& Bachelor of PharmD			
8	Teaching Language:	English			
9	Instruction location:				

II. Course Description

This course prepares a pharmacy students capable of anticipating and responding to administrative position within the health care system settings and pharmaceutical industries. This course relates the basic scientific management concepts and its functions. This includes the core functions of planning,



organizing, staffing, directing, coordinating and controlling—a preliminary idea of concepts, processes and techniques. Along with this it aids the students to develop leadership qualities, communication and interpersonal skills, motivation, supervision, problem solving, decision making and various managerial functions and professional skills. It will also introduce the student to national drug policy and principles of drug management cycle such as principles of selection of drugs, procurement and distribution.

III. Course Aims:

1. Introduce the students to the concepts of management and its functions.
2. Equip the students with the personal development and professional managers skill
3. Provide practical skills for the students in planning and evaluating activities.
4. Familiarity the students with the national drug policy and drug management techniques.

IV. Course Intended Learning Outcomes (CILOs) :

1. Identify management functions: Planning, organizing, staffing, directing, control and decision making- a preliminary idea of concepts, processes and techniques.
2. Recognize principles of management : co-ordination, communication, motivation, decision making, leadership, innovation, creativity, delegation of authority/ responsibility, record and keeping).
3. explain the national drug policy and components of drug management cycle.
4. Distinguish the relative data for situation analysis, indicator of monitoring and evaluation and planning.
5. Apply the relevant knowledge concerning leadership qualities, communication, team building and interpersonal skills in a practice setting.
6. Use of personal, organizational and time management skills in practice.
7. work effectively and efficiently in a primary health care facilities /hospitals practice setting
8. Work as a member/leader of a team (staff management) in the existing system. Coordinate effectively with other sectors to promote the health of the community.

V. Course Contents

Theoretical Aspect:

No.	Course Units	Sub-topics	Week due	Contact Hours
1	Introduction to Management	Management theories, components of an organization, management skills Mission, vision, objectives and strategies	1 st & 2 nd	2
2	Management Functions	Planning, organizing, staffing, directing, control and decision making- a preliminary idea of concepts, processes and techniques	3 ^{ed} & 4 th	2
3	Planning Cycle	Situation analysis, problem solving, preparation of the	5-7 th	3



		work plan and health planning		
4	First Test		8 th	1
5	Monitoring and Evaluation	Definition, steps in evaluation, indicator of monitoring and evaluation	9 th	1
6	Leadership and Motivation	Influence power and authority, managers power Life cycle theory of leadership, factors effecting leadership Motivation and organization theories	10&11 th	2
7	Supervision and Coordination	Good supervision involves, how to supervise and approaches to supervision coordination skill	12&13 th	2
8	Management of drugs	National health & drug policy, drug management cycle; selection of drugs, procurement, storage and distribution	14&15 th	2
9	Final exam		16 th	1
Total number of weeks and hours				16

VI. Teaching Strategies

1. Lectures
2. Interactive class discussions
3. Practical sessions (group work)
4. Assignments

VII. Tasks and Assignments

No.	Task/Assignment	Week due	Mark
1	Draft of annual plan	7 th	10

VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Tasks/Assignments	7 th	10	10%
2	Midterm Exam	8 th	30	30%
3	Final Exam	16 th	60	60%
Total			100	100%



IX. Learning Resources	
Textbooks	
1. Desselle, S., et al. (2012). Pharmacy Management, Third Edition, McGraw-Hill Education.	
Essential References:	
1. Tootelian, D. H., et al. (2012). Essentials of pharmacy management, Second Edition Pharmaceutical Press.	
2. Chisholm-Burns, M. A., et al. (2010). Pharmacy management, leadership, marketing, and finance Jones & Bartlett Learning.	
Electronic Materials and Web Sites:	

XI. Course Policies	
Based on university regulations, the following aspects should be figured out:	
1.	(Class Attendance): Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2.	(Tardy) :
3.	(Exam Attendance/Punctuality) : All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4.	(Assignments & Projects) :
5.	(Cheating) : Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6.	(Plagiarism) : “To plagiarize is to take ideas or words of another person & pass them off as one’s own”. Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7.	(Other policies) :



3. Course Syllabus Pharmacy Law & Ethics

خطة مقرر قوانين وأخلاقيات الصيدلة

I. General information about the course:					
1	Course Title :	Pharmacy Law & Ethics			
2	Course Code and Number :	PHS513			
3	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		1			
4	Study Level and Semester:	Fifth year/first Semester			
5	Pre-requisites (if any):	PHS327			
6	Co-requisites (if any):	NA			
7	Program in which the course is offered:	Bachelor of Pharmacy & Bachelor of PharmD			
8	Teaching Language:	English			
9	Instruction location:				

II. Course Description

This course introduces pharmacy students to ethical concepts, giving them directed practice in applying ethical principles in pharmacy practice and research through provide students with tools and methods for ethical analysis and discussed such topics as conflicts of interest, pharmacist-patient relationship and ethical considerations in professional communications, informed consent and research ethics. Teaching will be conducted in the form of lectures and class discussions.

III. Course Aims:

1. Introduces the student to the basic principles of ethics as they pertain to health care in general and pharmacy practice in particular.
2. Equip the students with tools and methods for analysis the practice problems using legal and ethical frameworks.
3. Provide students with an understanding of ethical issues that arise in pharmacy practice
4. Familiarity the students with the current ethics and laws regulating pharmacy practice in Yemen and sets the ethical standards in pharmacy practice.

IV. Course Intended Learning Outcomes (CILOs) :

1. Discuss pharmacist malpractice liability and identify contemporary ethical dilemmas associated with pharmacy practice.
2. Synthesize legal and ethical principles within the context of pharmaceutical care to facilitate



effective drug distribution and cognitive practice.

3. Demonstrate the principles of bioethics and how these principles should be applied the ethical conduct of human subject research.
4. Demonstrate ethical issues related to the development, promotion, sales, prescription, and use of drugs.
5. Review the current ethics and laws regulating pharmacy practice in Yemen
6. Argue issues surrounding ethics, values, professionalism, culture and social behavior as they relate to pharmacy and health care.

V. Course Contents

Theoretical Aspect:

No.	Course Units	Sub-topics	No. of Weeks	Contact Hours
1	Overview of pharmacy law/ethics	<ul style="list-style-type: none"> – What is ethics? – How can ethics contribute towards professionalism? – Ethical issues encountered in medical practice – The need for ethics – An ethical method of reasoning – What is law – What encompasses ‘law’ in relation to medical practice? 	1 st	1
2	Bioethics	<ul style="list-style-type: none"> – The birth of bioethics – Health and disease as values – Principles of bioethics – Ethics committees – Medical professionalism 	2 nd	1
3	Bioethical principles concepts	<ul style="list-style-type: none"> – Human dignity and human rights – Benefit and harm – Autonomy and individual responsibility – Respect for human vulnerability and personal integrity – Privacy and confidentiality – Equality, justice and equity – Non-discrimination and non-stigmatization 	3 ^{ed} & 4 th	2
4	Professional values in pharmacy practice	<ul style="list-style-type: none"> – Traditional professional values in pharmacy practice – Shifting professional values in pharmacy practice – Incorporating human values into pharmacy practice – The pharmacist as a health-care provider 	5 th	1
5	Foundations of ethical decision making	<ul style="list-style-type: none"> – Traditional ethical theories applied to pharmacy practice – Commonly held virtues among pharmacists(fair dealing and equity, patient-centered services, faithfulness.) 	6 th	1



		<ul style="list-style-type: none"> – Ethical principles applied to pharmacy practice – Rights and duties in the practice of pharmacy 		
6	Ethical considerations in professional communications	<ul style="list-style-type: none"> – Communication as an ethical/ a practice standard – Ethical considerations in pharmacy communication – Considerations when initiating/ monitoring drug therapy – Considerations involving irrational prescribing/ adverse drug reactions/ self-medication 	7 th	1
7	Midterm Exam		8 th	1
8	The pharmacist-patient relationship	<ul style="list-style-type: none"> – The nature of the pharmacist-patient relationship – The moral basis of the pharmacist-patient relationship <ul style="list-style-type: none"> – Beneficence vs. Nonmaleficence, justice, autonomy, fidelity, veracity – Conflicts among role obligations 	9 th	1
9	The principle of informed consent	<ul style="list-style-type: none"> – Interconnection of principles – What is the purpose of the principle of consent? – Interrelation between consent and autonomy – Explanation of the principle – Exceptional circumstances for the application of the principle of consent 	10 th	1
10	Research Ethics	<ul style="list-style-type: none"> – History of research ethics – Contemporary issues in research ethics – Balancing the benefits and harms of participation in research – Ethical issues in study design <ul style="list-style-type: none"> – Informed consent in research – Research sponsorship – Research Ethics Committees – Context of Research Involving Human Subjects 	11 th	1
11	Codes of ethics	<ul style="list-style-type: none"> – WHO ethical criteria for medicinal drug promotion – Middle East & Africa Regional Code of pharmaceutical promotional practices – Code of conduct for pharmacy students 	12 th	1
12	Pharmacy legislation in Yemen	<ul style="list-style-type: none"> – Regulation of pharmacy and other drug acts in Yemen – legislative positions on ethical issues 	13 th	1
13	Ethical issues of current pharmacy practice	<ul style="list-style-type: none"> – Ethical considerations in drug distribution – Refusal to provide services – Limits to autonomy – Alternative medicines – Truth disclosure 	14 th	1
14	Conflicts of interest	<ul style="list-style-type: none"> – Understanding financial conflicts of interest – Pharmacists, pharmaceutical manufacturers, and conflicts of interest. 	15 th	1



		– Ethics in advertising and marketing of pharmaceutical products		
	Final exam		16 th	1
Total number of weeks and hours			16	16

VI. Teaching Strategies

1. Lectures
2. Interactive class discussions
3. Practical sessions (group work)
4. Assignments

VII. Tasks and Assignments

No.	Task/Assignment	Week due	Mark
1	Review the current ethics and laws regulating of pharmacy practice in Yemen	9	10
2	Ethical issues of current pharmacy practice - Case Studies	10	10

VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Tasks/Assignments	9&10	10	10%
2	Midterm Exam	8	30	30%
3	Final Exam	16	60	60%
Total			100	100%

IX. Learning Resources

Textbooks

1. Buerki, R. A., et al. (2008). Foundations of Ethical Pharmacy Practice, 1st edition American Institute of the History of Pharmacy. Madison, Wisconsin
2. Buerki, R. A. and L. D. Vottero (2002). Ethical Responsibility in Pharmacy Practice, 2nd. edition American Institute of the History of Pharmacy. Madison, Wisconsin

Essential References:

1. Beauchamp, T. L. and J. F. Childress (2009). Principles of Biomedical Ethics, 7th. edition Oxford University Press, Incorporated.
2. Society, R. P. and R. P. S. o. G. Britain (2013). Medicines, Ethics and Practice: The Professional Guide for Pharmacists, Pharmaceutical Press.
3. Veatch, R. M. and A. M. Haddad (1999). Case Studies in Pharmacy Ethics, Oxford University Press.



4. Abood, R. R. (2012). Pharmacy Practice and the Law, Jones & Bartlett Learning.

Electronic Materials and Web Sites:

Purnell LD, Paulanka BJ. Guide to culturally competent health care. F. A Davis Company; 2005.
STAT!Ref Online Electronic Medical Library. at <http://online.statref.com/titleinfo/fixid-85.html>

X. Course Policies :

Based on university regulations, the following aspects should be figured out:

1.	(Class Attendance): Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2.	(Tardy) :
3.	(Exam Attendance/Punctuality) : All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4.	(Assignments & Projects) :
5.	(Cheating) : Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6.	(Plagiarism) : “To plagiarize is to take ideas or words of another person & pass them off as one’s own”. Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7.	(Other policies) :



4. Course Syllabus Pharmaceutical Biotechnology

خطة مقرر تقنية حيوية صيدلانية

I. General information about the course:

1	Course Title :	Pharmaceutical Biotechnology			
2	Course Code and Number:	PHS514			
3	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		2			
4	Study Level and Semester:	Fifth Year / First Semester			
5	Pre-requisites (if any):	NA			
6	Co-requisites (if any):	PHS415			
7	Program in which the course is offered:	Bachelor of Pharmacy & Bachelor of PharmD			
8	Teaching Language:	English			
9	Instruction location:				

II. Course Description

The basic concepts behind biotechnology and the use in providing many therapeutic solutions for many diseases are discussed throughout the course. The principles and mechanism. involved in the development of biotechnology-derived products will be emphasized. This will be achieved through interactive class discussions and open journal club discussions. A prior knowledge of the basics of microbiology and immunology is essential for this course

III. Course Aims:

1. Introduce the students to the scientific concepts behind biotechnology products.
2. Familiarize students with biotechnology products both in research and in market.
3. Disseminate knowledge to the students about the development and manufacturing of biotechnology products.
4. Envision the potential applications of pharmaceutical biotechnology in meeting the needs of patients



IV. Course Intended Learning Outcomes (CILOs) :

By the end of this course, students should be able to:

1. Explain the basics behind and the importance of the development of biotechnology products.
2. Recall the techniques employed in the development and isolation of biotechnology products.
3. Name biotechnology products available in the market and in industry pipelines.
4. Discriminate between pharmaceutical, biological and biotechnology products available in the market.
5. Hypothesize possible drug candidates for the development as biotechnology products.
6. Choose the proper biotechnology alternative product for a certain therapeutic situation.
7. Obtain literature from information resources
8. Cooperate with peers in presenting a Journal club seminar

V. Course Contents

First: Theoretical Aspect

No.	Course Units	Sub-topics	Week due	Contact Hours
1	Introduction to biotechnology		1 st	2
2	Protein structure and genetics	Primary, secondary, tertiary, and quaternary structures of proteins, Genes and encoding process.	2 nd	2
3	Fermentation	basics, instruments, applications	3 ^{ed}	2
4	Recombinant DNA technology	basics, steps, applications	4 th	2
5	Cloning	Types and applications	5 th	2
6	Therapeutic hormones in biotechnology: Insulin	Production of insulin, formulation of insulin Products, engineered insulin	6 th	2
7	Cytokines	Functions, interleukins, interferons	7-8 th	4



8	Midterm		9 th	2
9	Vaccinestechnology	Types, interleukins, vaccine vectors	10 th	2
10	Tissue culture	Cell and tissue culture, classifications, Procedure	11 th	2
11	Monoclonal antibodies	Production, hybridoma, uses in cancer	12 th	2
12	Gene therapy	Genes, milestones, antisense therapy, viral and non-viral vectors	13 th	2
13	Journal Club Seminars		14-15 th	4
	Final Exam		16 th	2
Total number of weeks and hours			16	32

VI. Teaching Strategies

1. Lectures
2. Interactive class discussions
3. Journal club

VII. Tasks and Assignments

No.	Task/Assignment	Week due	Mark
1	Seminar	14 th	10

VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Midterm	7 th	30	30 %
2	Assignments	14 th	10	10 %
3	Final Exam	16 th	60	60 %
Total			100	100%

IX. Learning Resources

Textbooks:

1. Gary Walsh, (2007), Pharmaceutical Biotechnology: concep edition. Wiley, USA



1. Oliver Kayser, Heribert Warzecha, (2012), Pharmaceutical Bi Discovery and Clinical Applications, Second edition, Wiley-E
2. Michael J. Groves, (2005), Pharmaceutical Biotechnology, Se USA.
3. Hd Kumar, Sp Vyas, (2011), Advances In Pharmaceutical Bio Cbs Publishers & Distributors, USA.
4. . Ramadass, (2007), Practical Biotechnology, First edition, Jaype Publishers, USA

Electronic Materials and Web Sites:

Center for Pharmaceutical Biotechnology and Nanomedicine, Northeastern University
(www.northeastern.edu/pharmsci/research/centers/center-for-pharmaceutical-biotechnology-and-nanomedicine/)

X. Course Policies :

Based on university regulations, the following aspects should be figured out:

1	(Class Attendance) : Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2	(Tardy) :
3	(Exam Attendance/Punctuality) : All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in- course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4	(Assignments & Projects) :
5	(Cheating) : Cheating in examinations or tes may take the form of copying from another student of bringing unauthorised materials into the exam room (g, notes, pagers or cell phone) Exam cheating can also inchade exam impersonations. A dent found gdy of commuting to cheating in examinations or tes is also subjectades penalty Please refer to the academic ulations of UST for the decis
6	(Plagiarism) : "To plagiarize is to take ideas or wonds of another person & pass them off as one's own Plagiarism or any other form of cheating in examinations, terms tests or academic work is subject to serious academic penalty (eg spension or expulsion from the faculty or university)
7	(Other policies) :



5.Course Syllabus Integrated Case- Based Learning 3

خطة مقرر التعلم القائم على الحالات 3

I. General information about the course:					
1.	Course Title :	Integrated Case- Based Learning 3			
2.	Course Code and Number:	PHD515			
3.	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
			2		
4.	Study Level and Semester:	Fifth year/First semester			
5.	Pre-requisites :	PHD422			
6.	Co-requisites:	NA			
7.	Program in which the course is offered:	Bachelor of PharmD			
8.	Teaching Language:	English			
9.	Instruction location:				

II. Course Description

This course involves simulated case studies and other activities aimed at integrating scientific and clinical concepts from across all courses in a problem-based learning environment. This course will focus on neuro/psychiatric disorders as well as respiratory and GIT related diseases. Studying integrated case-based learning 2 is pre-requisite. This course will be taught through PBL and group discussion, students are allowed to have more time for self-directed learning and brainstorming with teachers and classmates.

III. Course Aims:

This course aims to:

1. Provide student with knowledge about the pathophysiology of neurologic, psychiatric, respiratory, and GIT related disorders.
2. Equip student to identify the clinical manifestations and complications of neurologic, psychiatric, respiratory, and GIT related disorders.
3. Enable student to propose therapeutic plan and to have skills to explore the treatment aims and algorithms, differential diagnosis, drug interactions, dose calculations and optimization, and side effects of drugs in different disorders.
4. Help student to recognize the safety of drugs in special groups like children, elderly and pregnancy as well as counsel the patient about lifestyle modifications and disease progression

IV. I Course Intended Learning Outcomes (CILOs)

After completing this course, students would be able to:

1. Recognize the drugs and their therapeutic uses, safety profile, optimum dose for neurologic, psychiatric, respiratory and GIT disorders.



2. Outline an algorithm for evaluation and treatment of a patient with neurologic, psychiatric, respiratory and GIT disorders.
3. Identify suitable pharmaceutical care plan for neuropsychiatric disorders, respiratory, and GIT diseases, taking special considerations when designing for some populations.
4. Formulate special dosage schedule for patient with neuropsychiatric disorders to meet patient individualization therapy.
5. Practice suitable advises for the patients with neuropsychiatric, respiratory, and GIT disorders on the safe and effective use of medicines.
6. Implement the recent guidelines to design therapeutic plan for neuropsychiatric disorders and respiratory and GIT diseases.

Evaluate the scientific literature and provide high class recommendations that have high evidence level for neuropsychiatric, respiratory, and GIT disorders.

V. Course Contents

First: Theoretical Aspect

No.	Course Units	Sub-topics	Week due	Contact Hours
1	Neurologic disorders cases	Epilepsy, Pain Management, Headache	1 st to 4 th	8
2	Psychiatric Disorders cases	Schizophrenia, Major Depressive Disorder, Bipolar Disorder, Sleep Disorders	5 th to 7 th	6
3	Mid-term Exam		8 th	2
4	Respiratory diseases cases	Asthma, COPD	9 th to 15 th	14
	GIT diseases cases	Gastroesophageal Reflux Disease (GERD), Peptic Ulcer Disease (PUD), Inflammatory Bowel Disease (IBD), Constipation, Diarrhea, and Irritable Bowel Syndrome,		
5	Final-term Exam		16 th	2
Total number of weeks and hours			16	32

Second: Tutorial Aspects

No.	Tutorial topics	Week due	Contact Hours
1	NA		
Total number of weeks and hours			

Third: Practical Aspects

No.	Practical topics	Week due	Contact Hours
1	NA		



Total number of weeks and hours		
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VI. Teaching Strategies

1. Instructor-student interactive lectures
2. Micro-assignments
3. Interactive class discussions
4. Office hours (Tutorials)
5. report

VII. Tasks and Assignments

No.	Task/Assignment	Week due	Mark
1	Assignment 1/quiz	5 th week	5
2	Assignment 2/quiz	11 th week	5

VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Homework/Tasks/Assignments/quiz	5 th , 11 th	10	10 %
2	Midterm Exam	8 th	30	30 %
3	Final Exam	16 th	60	60 %
Total			100	100%

IX. Learning Resources

Textbooks:

- Marie Chisholm-Burns. (2022). Pharmacotherapy: principle and practice, 6th edition, New York: McGraw-Hill Medical, United States of America.
- Koda-Kimble, M. A., & Young, L. Y. (2018). Applied therapeutics: The clinical use of drugs, 11th edition. Baltimore, Md: Lippincott Williams & Wilkins, United States of America.

Essential References:

- Lexicomp, (2020). Drug Information Handbook, 29th edition, Lexi-Comp, U.S.A
- DiPiro, J. T. (2021). Pharmacotherapy: Handbook, 11th edition, New York: McGraw-Hill Medical, United States of America.
- British national formulary (BNF), last edition, Pharmaceutical Press.
- Philip Wiffen & els, (2017), Oxford Handbook of Clinical Pharmacy, 3rd edition.
- Marie Chisholm-Burns (January 3, 2019), Pharmacotherapy Principles and Practice, 5th Edition, McGraw-Hill Education / Medical, United States of America.



Electronic Materials and Web Sites:

1. www.uptodate.com
2. www.medscape.com
3. www.ncbi.nlm.nih.gov/pubmed
4. <http://www.accp.com/>

X. Course Policies :

Based on university regulations, the following aspects should be figured out:

1.	(Class Attendance) : <ul style="list-style-type: none"> Students are required to attend all class lectures, tutorials and labs. Student will not allow attending the final exam if he exceeds the maximum number of absences (15% without excuses and 25% with excuses).
2.	(Tardy) : <ul style="list-style-type: none"> Attendance will be taken every lecture at the first 10 minutes and any student comes after that will be considered absent.
3.	(Exam Attendance/Punctuality) : <ul style="list-style-type: none"> Student should be in the examination hall before 15 minutes from the beginning of the exam. Late students are not allowed to get into the examination hall after the first 30 minutes and will be considered absent. Makeup exams will be offered to students who miss a scheduled exam because of illness, death in the family or university-sponsored activity, but written documentation must be provided.
4.	(Assignments & Projects) : <ul style="list-style-type: none"> All assignments must be done on their time. Late assignments will not be accepted. Projects are assumed to be submitted on or before the dead-lines.
5.	(Cheating) : <ul style="list-style-type: none"> Cheating is strictly prohibited behavior. University regulations will be pursued and enforced on any cheating student.
6.	(Plagiarism) : <ul style="list-style-type: none"> Plagiarism is defined as “copying or stealing someone else’s words or ideas and claiming or presenting them as if they were your own.” University regulations will be pursued and enforced on any plagiarism attempt.
7.	(Other policies) : <ul style="list-style-type: none"> Students in class, Lab. are required to turn off all cell phones, iPods,



6. Course Syllabus of Clinical Pharmacokinetics

خطة مقرر علم حرائك الادوية السريري

I. General information about the course:					
1	Course Title :	Clinical Pharmacokinetics			
2	Course Code and Number:	PHD516			
3	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		2	-	-	-
4	Study Level and Semester:	Fifth year/first semester			
5	Pre-requisites (if any):	PHS423			
6	Co-requisites (if any):	NA			
7	Program in which the course is offered:	Bachelor of PharmD			
8	Teaching Language:	English			
9	Instruction location:				

II. Course Description

This course deals with the principles of clinical pharmacokinetics of several drugs and their application to the therapy of various disease states, development of dosage regimens and interpretation of serum drug levels based on pharmacokinetic concepts. The course will cover also the application of dosage individualization in patients with kidney and liver diseases and therapeutic drug monitoring for some of narrow therapeutic index drugs. This course is taught through series of instructor-student interactive lectures and interactive class discussions.

III. Course Aims:

This course aims to:

1. Enable students to define clinical pharmacokinetics
2. Help student to recognize the differences between wide and narrow therapeutic windows
3. Give student the ability to understand the rational of therapeutic drug monitoring
4. Equip student to dealing with some clinical cases using common pharmacokinetic equations

IV. Course Intended Learning Outcomes (CILOs) :

After completing this course, students would be able to:

1. Recognize the clinical pharmacokinetic principles.
2. Discuss the various aspects of a drug pharmacokinetic properties and factors affecting them.
3. Design special regimen to meet patient individualization therapy
4. Conduct suitable advises for the patients on the clinical manifestations of potential



- toxicities associated with patient's medication
5. Implement suitable therapeutic drug monitoring strategy.
 6. Review the required scientific information from available sources.

V. Course Contents				
First: Theoretical Aspect				
No.	Course Units	Sub-topics	Week due	Contact Hours
1	Review of basic pharmacokinetics		1 st , 2 nd	4
2	Metabolite kinetics		3 ^{ed} , 4 th	4
3	Design of dosage regimens	- Determination of dose & dosing interval - Effect of changing dose and dosing interval on C ∞ max C ∞ min & C ∞ av - Conversion from IV infusion to oral dosing - Nomograms and tabulations in designing dosage regimens - dosing in infants, children, elderly and obese patients	5, 6, 7 th	6
4	Mid-exam		8 th	2
5	Dosage individualization	- Variability - Genetics - Age and weight - Disease (renal & hepatic disease) - Interacting drugs - Concentration monitoring	9, 10, 11, 12 th	8
6	Therapeutic drug monitoring	- Aminoglycosides - Carbamazepin - Digoxin - Theophylline - Phenytoin - Lidocaine - Lethium - Methotrexate	13, 14, 15 th	6
7	Final exam		16 th	2
Total number of weeks and hours			16	32



VI. Teaching Strategies

1. Instructor-student interactive lecture
2. Lectures and Interactive class discussions
3. Assignment
4. Office hour
5. Seminar

VII. Tasks and Assignments

No.	Task/Assignment	Mark
1	Assignment 1	6
2	Assignment 2	11

VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Assignments	6&11	10	10%
2	Midterm Exam	8	30	30%
3	Final Exam	16	60	60%
Total			100	100%

IX. Learning Resources

Textbooks:

1. Virginia H. Fleming; Robin L. Southwood; Gary Huckaby, (2018), **Concepts in clinical pharmacokinetics**, 4th ed., American Society of Health-System Pharmacists, USA.
2. Notari, (2013), **Biopharmaceutics and Clinical Pharmacokinetics**, an Introduction, fourth edition. CRC Press, USA.

Essential References:

1. Larry A. Bauer, (2008), **Applied clinical Pharmacokinetics**, 2nd ed., McGraw-Hill Medical, USA.
2. Leon Shargel & Andrew B.C. Yu, 2016, **Applied Biopharmaceutics & Pharmacokinetics**, McGraw-Hill Education, 7th E
3. Robin L. Southwood, Virginia H. Fleming & Gary Huckaby, 2018, **Concepts in Clinical Pharmacokinetics**, American Society of Health-System Pharmacists, Inc., 7th E.
4. Rowland and Tozer's, 2020, **Clinical Pharmacokinetics and Pharmacodynamics _ Concepts and Applications**, Wolters Kluwer, 5th E.

Electronic Materials and Web Sites:

Lectures handouts



X. Course Policies	
Based on university regulations, the following aspects should be figured out:	
1. (Class Attendance) :	<ul style="list-style-type: none"> Students are required to attend all class lectures, tutorials and labs. Student will not allow attending the final exam if he exceeds the maximum number of absences (15% without excuses and 25% with excuses).
2. (Tardy) :	<ul style="list-style-type: none"> Attendance will be taken every lecture at the first 10 minutes and any student comes after that will be considered absent.
3. (Exam Attendance/Punctuality) :	<ul style="list-style-type: none"> Student should be in the examination hall before 15 minutes from the beginning of the exam. Late students are not allowed to get into the examination hall after the first 30 minutes and will be considered absent. Makeup exams will be offered to students who miss a scheduled exam because of illness, death in the family or university-sponsored activity, but written documentation must be provided.
4. (Assignments & Projects) :	<ul style="list-style-type: none"> All assignments must be done on their time. Late assignments will not be accepted. Projects are assumed to be submitted on or before the dead-lines.
5. (Cheating) :	<ul style="list-style-type: none"> Cheating is strictly prohibited behavior. University regulations will be pursued and enforced on any cheating student.
6. (Plagiarism) :	<ul style="list-style-type: none"> Plagiarism is defined as “copying or stealing someone else’s words or ideas and claiming or presenting them as if they were your own.” University regulations will be pursued and enforced on any plagiarism attempt.
7. (Other policies) :	<ul style="list-style-type: none"> Students in class, Lab. are required to turn off all cell phones, iPods,



7.Course Syllabus Pharmacy Practice Training

خطة مقرر تدريب ممارسة صيدلانية

I. General information about the course:					
1	Course Title :	Pharmacy Practice Training			
2	Course Code and Number :	PHD517			
3	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		-	-	4	-
4	Study Level and Semester:	Fifth year/first Semester			
5	Pre-requisites (if any):	-			
6	Co-requisites (if any):	-			
7	Program in which the course is offered:	Bachelor of d Pharm D			
8	Teaching Language:	English			
9	Instruction location:				

II. Course Description

Pharmacy Practice Training is an experience and supervised training program for pharmacy students in their fifth year of the program. This credit hour of pharmacy practice course consists of 200 hours of pharmacy experience in a community/hospital pharmacy setting. This course will introduce the students to the fundamentals of pharmacy practice in the community/ hospital pharmacy environment. A prior completion of pharmacy practice I &II course is required to register the course. The students will develop professionalism, judgment, and skills needed to function in this setting. The students will observe and discuss the many roles of the pharmacist in the community/ hospital pharmacy.

III. Course Aims

1. Enable students to understand and apply legal and ethical principles important to community pharmacy practice.
- 2.Enable students to gather, store and manage patient information in the community pharmacy setting
2. Help the students to participate in and manage medication use and medication therapy management Systems
3. Allow students to communicate with professional colleagues and patients regarding the selection and/or use of Non-prescription or prescription medications.



IV. Course Intended Learning Outcomes (CILOs) :

- 1- Recognize the various groups of medication, indications, contraindications, precautions, methods of administration, storage, price... etc of available dosage forms
- 2- Know the names of pharmaceutical companies
- 3- Explore the Distribution of medication in community/hospital pharmacy
- 4-Differentiate between the generic and trade names of medications.
- 5-Perform calculations required to compound, dispense and administer medication
- 6-Practice dispensing the prescriptions
- 7-Demonstrate effective communication skills in response to preceptors and site workers.
- 8-Communicate with physicians, pharmacists, dentists, vets, promotion team and pharmaceutical companies

V. Course Contents

Theoretical Aspect:

No.	Course Units	Sub-topics	Week due	Contact Hours
1	Not Applicable			
Total number of weeks and hours				

VI. Teaching Strategies

Observations
Assigned readings
Interdisciplinary mentoring

VII. Tasks and Assignments

No.	Task/Assignment	Week due	Mark
	Not applicable		

Each student is required to:

Attend the scheduled debriefing session at the beginning of the training. This session is mandatory and critical to meeting the course objectives

Complete a total of 200 hours of community pharmacy training

Submit a training notebook at the end of the training reflecting the whole training experience in a daily report format.

Perform a presentation describing his training experience.

Complete and submit all evaluation forms to the course co-coordinator on or before the due date specified.

Behave in a professional manner at all times. Students are also expected to wear appropriate, professional attire suitable to their experiential site.

Evaluation of the Experience:



These forms **MUST** be handed into the co-coordinator on or before the date specified in the Academic schedule:

A training site issued certificate confirms the completion of required number of hours.

Training notebook.

Evaluation forms:

- Student Performance Evaluation by the site coordinator.
- Student Performance Evaluation by the college coordinator.
- Training Evaluation by the student.

Visit reports in training notebook should be filled immediately after the visit and should include:

- Date, time, and duration of the visit
- Establishment where training took place
- Objectives of the visit

VIII. Learning Assessment:			
No.	Assessment Tasks	Mark	weight
1	Completion of required hours	50	50%
4	Notebook	50	50%
Total		100	100%

IX. Learning Resources:
(Author, (Year), Book Title, Edition, Publisher, Country of publishing)
Textbooks-not more than 2
A. Fathelrahman, M. Ibrahim, A.Wertheime (2016)Pharmacy Practice in Developing Countries first edition eBook ISBN: 9780128017111- Elsevier, USA
Essential References-not less than 4
A.J. Winfield, J.A, Rees, I. Smith, 2009, Pharmaceutical practice , fourth edition, Churchill Livingston - Elsevier, USA
Electronic Materials and Web Sites
www.pubmed.com www.sceincedirect..com www.hinari.who.gov



X. Course Policies :	
Based on university regulations, the following aspects should be figured out:	
1.	(Class Attendance): Attendance is mandatory for credit to be received. Students are expected to be punctual and to adhere to the scheduled times arranged with the site coordinator. If for any reason the student is not able to fulfill this commitment, the site coordinator is to be contacted and alternative arrangements are to be made to complete the course requirements.
2.	(Tardy) :
3.	(Exam Attendance/Punctuality) : All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4.	(Assignments & Projects) :
5.	(Cheating) : Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6.	(Plagiarism) : “To plagiarize is to take ideas or words of another person & pass them off as one’s own”. Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7.	(Other policies) : <ul style="list-style-type: none"> Community pharmacy training is hosted by local community pharmacy. Keep in mind that your attitude and interaction affect the image of your school and future training agreements with these pharmacies. Follow the regulations of the establishments and remember that these businesses are investing a lot of effort in your training. Dress and act professionally. Be attentive to what you are told and interact positively. Reading the theoretical material prior to visits is always a must-do practice. Every student should have a notebook for the training experience. This notebook should be available for inspection by instructors upon request and will be graded.



8.Course Syllabus Therapeutics - Respiratory & GIT diseases

خطة مقرر معالجة دوائية (أمراض الجهاز التنفسي والهضمي)

I. General information about the course:					
1	Course Title :	Therapeutics - Respiratory & GIT diseases			
2	Course Code and Number:	PHD518			
3	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		2			
4	Study Level and Semester:	Fifth year/first Semester			
5	Pre-requisites (if any):	PHD515			
6	Co-requisites (if any):	NA			
7	Program in which the course is offered:	Bachelor of PharmD			
8	Teaching Language:	English			
9	Instruction location:				

II. Course Description
<p>This course is primarily design to help student to deal with chronic diseases and their therapeutic approaches and treatment algorithm specially, treatment plan and drug optimization. This course will cover respiratory and gastrointestinal related diseases. The concepts of normal & abnormal body functions as well as different drug groups should be studied before this course. This course is taught through series of instructor-student interactive lectures.</p>

III. Course Aims:
<p>This course aims to:</p> <ol style="list-style-type: none"> 1. Provides student with knowledge about the etiology and pathophysiology of respiratory and GIT disorders. 2. Equip student to explain the clinical manifestations, diagnosis and complications of respiratory and GIT diseases. 3. Enable student to gain analytical skills to identify the treatment aims and algorithms, drug interactions, dose calculations and optimization, and drugs adverse effect. 4. Help student to recognize the safety of drugs in vulnerable groups like children, elderly and pregnancy.



IV. Course Intended Learning Outcomes (CILOs) :

After completing this course, students would be able to:

1. Recognize the respiratory and GIT drugs and their therapeutic uses, safety, optimum use and their contraindications.
2. Outline an algorithm for evaluation and treatment of a patient with signs and symptoms respiratory and GIT.
3. Establish treatment plan and take special considerations drug-related problems while designing for some populations with respiratory and GIT diseases.
4. Identify suitable pharmaceutical care plan for respiratory and GIT diseases to promote patient's health.
5. Formulate special dosage schedule to meet patient individualization therapy based on patient's clinical data.
6. Practice suitable advice on the safe and effective use of medicines for patient with respiratory and GIT related diseases, specially the use of inhalers.
7. Implement recent guidelines to design appropriate treatment plan based on the setting and severity of the respiratory and GIT related diseases.
8. Cooperate effectively with patients, public and health care professionals and use the suitable type of communication to deliver the accurate drug information to the patient.

V. Course Contents

First: Theoretical Aspect

No.	Course Units	Sub-topics	Week due	Contact Hours
1	Respiratory Disorders	asthma, Chronic obstructive pulmonary disease (COPD), Cystic Fibrosis	1 st to 4 th	8
2	Gastrointestinal disorders	Gastroesophageal Reflux Disease (GERD), Peptic Ulcer Disease (PUD)	5 th to 6 th	4
3	Mid-term Exam		7 th	2
4	Gastrointestinal disorders	Inflammatory Bowel Disease (IBD), Constipation, Diarrhea, and Irritable Bowel Syndrome, Pancreatitis, Portal Hypertension and Cirrhosis, Viral Hepatitis, Nausea and Vomiting	8 th to 15 th	16
5	Final-term Exam		16 th	2
Total number of weeks and hours			16	32



Second: Tutorial Aspects

No.	Tutorial topics	Week due	Contact Hours
1	NA		
Total number of weeks and hours			

Third: Practical Aspects

No.	Practical topics	Week due	Contact Hours
1	NA		
Total number of weeks and hours			

VI. Teaching Strategies

1. Instructor-student interactive lectures
2. Micro-assignments
3. Interactive class discussions
4. Office hours (Tutorials)
5. report

VII. Tasks and Assignments

No.	Task/Assignment	Week due	Mark
1	Assignment 1/quiz	5 th week	5
2	Assignment 2/quiz	11 th week	5

VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Homework/Tasks/Assignments/quiz	2 nd , 3 rd	10	10 %
2	Midterm Exam	8 th	30	30 %
3	Final Exam	16 th	60	60 %
Total			100	100%

IX. Learning Resources

Textbooks:

- Marie Chisholm-Burns. (2022). Pharmacotherapy: principle and practice, 6th edition, New York: McGraw-Hill Medical, United States of America.
- Koda-Kimble, M. A., & Young, L. Y. (2018). Applied therapeutics: The clinical use of drugs, 11th edition. Baltimore, Md: Lippincott Williams & Wilkins, United States of America.

Essential References:

- Lexicomp, (2020). Drug Information Handbook, 29th edition, Lexi-Comp, U.S.A
- DiPiro, J. T. (2021). Pharmacotherapy: Handbook, 11th edition, New York: McGraw-Hill Medical, United States of America.
- British national formulary (BNF), last edition, Pharmaceutical Press.
- Philip Wiffen & els, (2017), Oxford Handbook of Clinical Pharmacy, 3rd edition.



- Marie Chisholm-Burns (January 3, 2019), Pharmacotherapy Principles and Practice, 5th Edition, McGraw-Hill Education / Medical, United States of America.

Electronic Materials and Web Sites:

1. www.uptodate.com
2. www.medscape.com
3. www.ncbi.nlm.nih.gov/pubmed
4. <http://www.accp.com/>

X. Course Policies

Based on university regulations, the following aspects should be figured out:

1.	(Class Attendance) : <ul style="list-style-type: none"> Students are required to attend all class lectures, tutorials and labs. Student will not allow attending the final exam if he exceeds the maximum number of absences (15% without excuses and 25% with excuses).
2.	(Tardy) : <ul style="list-style-type: none"> Attendance will be taken every lecture at the first 10 minutes and any student comes after that will be considered absent.
3.	(Exam Attendance/Punctuality) : <ul style="list-style-type: none"> Student should be in the examination hall before 15 minutes from the beginning of the exam. Late students are not allowed to get into the examination hall after the first 30 minutes and will be considered absent. Makeup exams will be offered to students who miss a scheduled exam because of illness, death in the family or university-sponsored activity, but written documentation must be provided.
4.	(Assignments & Projects) : <ul style="list-style-type: none"> All assignments must be done on their time. Late assignments will not be accepted. Projects are assumed to be submitted on or before the dead-lines.
5.	(Cheating) : <ul style="list-style-type: none"> Cheating is strictly prohibited behavior. University regulations will be pursued and enforced on any cheating student.
6.	(Plagiarism) : <ul style="list-style-type: none"> Plagiarism is defined as “copying or stealing someone else’s words or ideas and claiming or presenting them as if they were your own.” University regulations will be pursued and enforced on any plagiarism attempt.
7.	(Other policies) : <ul style="list-style-type: none"> Students in class, Lab. are required to turn off all cell phones, iPods,



9.Course Syllabus - Therapeutics - Neurologic & psychiatric disorders

خطة مقرر معالجة دوائية
(الاضطرابات العصبية والنفسية)

I. General information about the course:

1	Course Title :	Therapeutics - Neurologic & psychiatric disorders			
2	Course Code and Number:	PHD519			
3	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		2			
4	Study Level and Semester:	Fifth year/first Semester			
5	Pre-requisites (if any):	NA			
6	Co-requisites (if any):	PHD515			
7	Program in which the course is offered:	Bachelor of PharmD			
8	Teaching Language:	English			
9	Instruction location:				

II. Course Description

This course will focus primarily on common mental and dementia related disorders and their pharmacotherapeutic approaches and treatment algorithm including non-pharmacologic therapies. This course will cover common psychiatric and neurologic disorders. The concepts of normal & abnormal body functions as well as different drug groups are required. This course is taught through series of instructor-student interactive lectures.

III. Course Aims:

This course aims to:

1. Provide student with knowledge about the hypothesis and etiology of neurologic and psychiatric disorders.
2. Equip student to explain the clinical manifestations and complications of neurologic and psychiatric disorders.
3. Enable student to know treatment aims and algorithms, differential diagnosis, drug interactions, dose calculations and optimization, and side effects of drugs in different mental disorders.
4. Help student to recognize the safety of drugs in special groups like children, elderly and pregnancy as well as counsel the patient about lifestyle modifications and disease progression.



IV. Course Intended Learning Outcomes (CILOs) :

After completing this course, students would be able to:

1. Recognize the drugs and their therapeutic uses, safety, optimum use of neuropsychiatric medication and contraindications.
2. Outline an algorithm for evaluation and treatment of a patient with signs and symptoms of neurologic and psychiatric disorders.
3. Establish treatment plan and considering patient- and drug-related factors when designing pharmaceutical plan for neuropsychiatric patients to ensure effective therapy.
4. Formulate special dosage schedule to meet neuropsychiatric patient individualization therapy.
5. Contrast clinical data in the patient record with the normal range values.
6. Practice suitable advises for the patients and others on the safe and effective use of antipsychotic, and implement an appropriate monitoring plan to ensure effective therapy.
7. Implement recent guidelines to formulate appropriate therapeutic plan for a patient with neurologic or psychiatric disorders.
8. Evaluate the information about disease and clinical therapy that obtained from several sources, considering strength and quality of evidence.

V. Course Contents

First: Theoretical Aspect

No.	Course Units	Sub-topics	Week due	Contact Hours
1	Neurologic Disorders	Alzheimer Disease, Epilepsy, Parkinson Disease, Pain Management, Headache, ADHD	1 st to 7 th	14
2	Mid-term Exam		8 th	2
4	Psychiatric Disorders	Substance-Related Disorders, Schizophrenia, Major Depressive Disorder, Bipolar Disorder, Generalized Anxiety Disorder, Panic Disorder, PTSD, and Social Anxiety Disorder, Sleep Disorders	9 th to 15 th	14
5	Final-term Exam		16 th	2
Total number of weeks and hours			16	32

Second: Tutorial Aspects

No.	Tutorial topics	Week due	Contact Hours
1	NA		



Total number of weeks and hours		
---------------------------------	--	--

Third: Practical Aspects			
No.	Practical topics	Week due	Contact Hours
1	NA		
Total number of weeks and hours			

VI. Teaching Strategies	
<ol style="list-style-type: none"> 1. Instructor-student interactive lectures 2. Micro-assignments 3. Interactive class discussions 4. Office hours (Tutorials) 5. report 	

VII. Tasks and Assignments			
No.	Task/Assignment	Week due	Mark
1	Assignment 1/quiz	5 th week	5
2	Assignment 2/quiz	11 th week	5

VIII. Learning Assessment:				
No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Homework/Tasks/Assignments/quiz	2 nd , 3 rd	10	10 %
2	Midterm Exam	8 th	30	30 %
3	Final Exam	16 th	60	60 %
Total			100	100%

IX. Learning Resources	
Textbooks: <ul style="list-style-type: none"> Marie Chisholm-Burns. (2022). Pharmacotherapy: principle and practice, 6th edition, New York: McGraw-Hill Medical, United States of America. Koda-Kimble, M. A., & Young, L. Y. (2018). Applied therapeutics: The clinical use of drugs, 11th edition. Baltimore, Md: Lippincott Williams & Wilkins, United States of America. 	
Essential References: <ul style="list-style-type: none"> Lexicomp, (2020). Drug Information Handbook, 29th edition, Lexi-Comp, U.S.A DiPiro, J. T. (2021). Pharmacotherapy: Handbook, 11th edition, New York: McGraw-Hill Medical, United States of America. British national formulary (BNF), last edition, Pharmaceutical Press. Philip Wiffen & els, (2017), Oxford Handbook of Clinical Pharmacy, 3rd edition. Marie Chisholm-Burns (January 3, 2019), Pharmacotherapy Principles and Practice, 5th 	



Edition, McGraw-Hill Education / Medical, United States of America.

Electronic Materials and Web Sites:

1. www.uptodate.com
2. www.medscape.com
3. www.ncbi.nlm.nih.gov/pubmed
4. <http://www.accp.com/>

X. Course Policies

Based on university regulations, the following aspects should be figured out:

1.	(Class Attendance) : <ul style="list-style-type: none"> Students are required to attend all class lectures, tutorials and labs. Student will not allow attending the final exam if he exceeds the maximum number of absences (15% without excuses and 25% with excuses).
2.	(Tardy) : <ul style="list-style-type: none"> Attendance will be taken every lecture at the first 10 minutes and any student comes after that will be considered absent.
3.	(Exam Attendance/Punctuality) : <ul style="list-style-type: none"> Student should be in the examination hall before 15 minutes from the beginning of the exam. Late students are not allowed to get into the examination hall after the first 30 minutes and will be considered absent. Makeup exams will be offered to students who miss a scheduled exam because of illness, death in the family or university-sponsored activity, but written documentation must be provided.
4.	(Assignments & Projects) : <ul style="list-style-type: none"> All assignments must be done on their time. Late assignments will not be accepted. Projects are assumed to be submitted on or before the dead-lines.
5.	(Cheating) : <ul style="list-style-type: none"> Cheating is strictly prohibited behavior. University regulations will be pursued and enforced on any cheating student.
6.	(Plagiarism) : <ul style="list-style-type: none"> Plagiarism is defined as “copying or stealing someone else’s words or ideas and claiming or presenting them as if they were your own.” University regulations will be pursued and enforced on any plagiarism attempt.
7.	(Other policies) : <ul style="list-style-type: none"> Students in class, Lab. are required to turn off all cell phones, iPods,



Fifth year

Second semester

1. Course Syllabus Pharmaceutical Marketing

خطة مقرر التسويق الصيدلاني

I. General information about the course:					
1	Course Title :	Pharmaceutical Marketing			
2	Course Code and Number :	PHS520			
3	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		2			
4	Study Level and Semester:	Fifth Year /Second Semester			
5	Pre-requisites (if any):	PHS513, PHS512			
6	Co-requisites (if any):	NA			
7	Program in which the course is offered:	Bachelor of Pharmacy & Bachelor of PharmD			
8	Teaching Language:	English			
9	Instruction location:				

II. Course Description

This course provides a comprehensive description of theoretical principles of marketing and promotional with practical issues and challenges facing the pharmaceutical industry. It will bridge knowledge gaps, and help understand the dramatic changes in pharmaceutical marketing techniques ranging from the pharmaceutical representatives detailing to the increasing use of direct-to-customer advertising, the internet, and social media and the impact on prescribing. This course delivered by lectures and through which will be discussed such topics as ethical practice in pharmaceutical marketing and the impact of government regulations on these activities.

III. Course Aims:

1. To acquaint students with the basic concepts and techniques of pharmaceutical marketing, its link to the environmental factors that affect their application.
2. To familiarize students with the promotion decision – communication process, promotion mix, promotion strategies with reference to consumer and industrial products.
3. To provide students with a more in depth understanding of how pharmaceutical marketing impacts physicians, other prescribers ,pharmacists, and other health care professionals.
4. Engage students in ethical practice in pharmaceutical sales and marketing.



IV. Course Intended Learning Outcomes (CILOs) :

1. Describe the social, ethical, political, and legal issues unique to the pharmaceutical market and how these issues impact the marketing and choice of pharmaceuticals.
2. Define comparative efficacy and safety, and understand its importance in drug selection and optimizing patient outcomes and safety.
3. Differentiate the strategies and uses of DTC advertising for the various stakeholders, including consumers, physicians, third party insurers, and the pharmaceutical manufacturers themselves.
4. Apply a framework for understanding and implementing different aspects of social media to pharmaceutical marketing.
5. Evaluate the role of pricing as a part of the marketing mix and understand the economic factors affecting prices.
6. Evaluate the compliance of pharmaceutical companies with ethical guidelines of marketing practices and critique of its claims in drug promotional material.

V. Course Contents

Theoretical Aspect:

No.	Course Units	Sub-topics	Week due	Contact Hours
1	Introduction to Marketing	<ul style="list-style-type: none"> – Principles of marketing; needs, wants, demand, and value. – Marketing mix (product, price, place, and promotion) – Unique aspects of pharmaceutical marketing and sales. 	1 st	2
2	Market segmentation	<ul style="list-style-type: none"> – Methods of market segmentation, problems associated with market segmentation, identifying market segments; Target market selection 	2 nd	2
3	Communication strategy	<ul style="list-style-type: none"> – Communication strategy –integrated communication ,personal selling , advertising and public relations with sales promotion 	3 ^{ed}	2
4	Pharmaceutical marketing in the 21st century	<ul style="list-style-type: none"> – The shift in marketing mix – Social media & E-pharma marketing: opportunities and challenges. – Changing aspects of training 	4 th	2
5	Promotional marketing activities & practices	<ul style="list-style-type: none"> – Promotion decision – communication process, promotion mix, promotion strategies with reference to consumer and industrial products – Pharmaceutical marketing techniques which are frequently used by medical representatives 	5 th	2
6	Prescribers, health care practitioners, & marketing's role in practice	<ul style="list-style-type: none"> – Factors affecting consumer behavior; direct and indirect factors that influence physicians' prescribing decisions and the role of pharmaceutical marketing firms 	6 th	2



7	Midterm exam.		7 th	2
8	Physicians' interactions with medical representatives	<ul style="list-style-type: none"> Physicians' perceptions of medical representative visits in Yemen. Medical representative views on current drug promotion techniques in Yemen Health industry practices that create conflicts of interest. 	8 th	2
9	DTC prescription & drug advertising	<ul style="list-style-type: none"> Direct to consumer (DTC) advertising growth and DTC advertising regulation. The quantity and quality of scientific graphs in pharmaceutical advertisements 	9 th	2
10	Drug development and the marketing research	<ul style="list-style-type: none"> Products in the pharmaceutical industry: trends, identification, approval, and monitoring. Marketing research – risk of research, information needed, marketing information system 	10 th	2
11	Pharmaceutical marketing and the industry environment	<ul style="list-style-type: none"> Economics of the pharmaceutical industry. Prescription drug expenditures Drug price competition and patent term. Drug pricing policies and regulations. 	11 th	2
12	Regulatory affair	<ul style="list-style-type: none"> WHO ethical criteria for medicinal drug promotion. Code of pharmaceutical marketing practices(Middle East &Africa Regional Code of Pharmaceutical Promotional Practices) Laws and regulation of pharmacy in Yemen 	12 th	2
13	An assessment of the promotional techniques and materials.	<ul style="list-style-type: none"> Assessing promotional techniques, Assessing promotional materials: Leaflet, Journal and TV advertising. 	13,14&15 th	6
14	Final exam		16 th	2
Total number of weeks and hours			16	32

VI. Teaching Strategies

- Lectures
- Interactive class discussions
- Group work
- Assignments

VII. Tasks and Assignments

No.	Task/Assignment	Week due	Mark
1	Assessing promotional techniques,	9 & 10 th	5
2	Assessing promotional materials: Leaflet, Journal and	9 & 10 th	5



	TV advertising.		
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VIII. Learning Assessment:				
No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Tasks/Assignments	9 & 10 th	10	10%
2	Midterm Exam	7 th	30	30%
3	Final Exam	15 th	60	60%
	Total		100	100%

IX. Learning Resources
Textbooks 1. Rollins, B. L. and M. Perri, (2014). Pharmaceutical Marketing, 1st Edition, Jones & Bartlett Learning. United State.
Essential References: 1. Tootelian, D. H., et al. (2012). Essentials of pharmacy management, Second Edition Pharmaceu Press. 2. Petryna, A., et al.(2006). Global Pharmaceuticals: Ethics, Markets, Practices. Durham: Duke University Press. 3. Mickey C. Smith. (2002).Pharmaceutical Marketing: Principles, Environment, and Practice:Hav Medical Pr. 4. David A., et al.(2000).Marketing for Pharmacists, 2 edition, American Pharmacists Association
Electronic Materials and Web Sites: Journal of Consumer Marketing : www.emeraldinsight.com/jcm.htm www.healthyskepticism.org . www.drugpromo.info

X. Course Policies
Based on university regulations, the following aspects should be figured out:
(Class Attendance): Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
(Tardy) :
(Exam Attendance/Punctuality) : All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in



	the second attempt examinations.
	(Assignments & Projects) :
	<p>(Cheating) :</p> <p>Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.</p>
	<p>(Plagiarism) :</p> <p>“To plagiarize is to take ideas or words of another person & pass them off as one’s own”. Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).</p>
	(Other policies) :



2.Course Syllabus Complementary and Alternative Medicine.

خطة مقررات الطب المكمل والبديل

I. General information about the course:					
1	Course Title :	Complementary and Alternative Medicine			
2	Course Code and Number :	PHS521			
3	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		1			
4	Study Level and Semester:	Fifth Year /Second Semester			
5	Pre-requisites (if any):	PHS224			
6	Co-requisites (if any):				
7	Program in which the course is offered:	Bachelor of Pharmacy & Bachelor of PharmD			
8	Teaching Language:	English			
9	Instruction location:				

II. Course Description
<p>This introduction to complementary and alternative medicine reviews the wide variety of Complementary and Alternative Medicine "CAM" therapies that are in use, including acupuncture, chiropractic, herbal medicine, homeopathic medicine, energy medicine, behavioral medicine and others. The course requires to study of pharmacognosy as pre-request. Different methods of teaching/learning are used in this course including lectures and seminar.</p>
III. Course Aims
<p>On completion of the course the student will be able to:</p> <ol style="list-style-type: none"> 1. illustrate the fundamental knowledge about herbal medicine including preparation, identity, efficacy, standardization and its relation to conventional medicine. 2. use herbal medications in some common health problems, and will know its toxicological aspects, regulatory laws of production and forensic pharmacognosy. 3. demonstrate increased knowledge of specific systems of complementary and alternative therapy, including homeopathy, traditional Chinese medicine, Ayurvedic medicine, naturopathy, mind-body medicine, energy medicine, and chiropractic.



IV. Course Intended Learning Outcomes (CILOs) :

1. Illustrate the principles of alternative medicine (history and forms) and its relation to conventional medicine.
2. demonstrate increased knowledge of specific systems of complementary and alternative therapy, including homeopathy, traditional Chinese medicine, Ayurvedic medicine, naturopathy, mind-body medicine, energy medicine, and chiropractic.
3. Identify pharmacological properties, adverse reactions and contraindications of some herbal medications used in some specific health problems.
4. Outline the principles of herbal medicine preparation, identification, efficacy and standardization.
5. Diagnose simple health problem.
6. Describe a herbal remedy for treatment of common health problems.
7. Demonstrate decision making and problem solving in using of herbal medicine as an alternative medicine.
8. Work effectively as a member of a team.
9. Write reports and present it.

V. Course topics and sub-topics (theoretical and practical) with contact hours

Topics/Units of Course Contents

Theoretical Aspects

No.	Course Topics/Units	Sub-topics	No. of Weeks	Contact Hours
1	Introduction	-Definition, history and forms of alternative medicine	1 st	1
2	CAM Therapies: Chiropractic	Principle and methods	2 nd	1
3	CAM Therapies: Naturopathy	Principle and methods	3 ^{ed}	1
4	CAM Therapies: Traditional Chinese Medicine	Principle and methods	4 th	1
5	CAM Therapies: Homeopathic Medicine	Principle and methods	5 th	1
6	CAM Therapies: Mind-Body/Energy Medicine	Principle and methods	6 th	1
7	CAM Therapies: Ayurvedic Medicine	Principle and methods	7 th	1



8	Mid term exam		8 th	1
9	-Herbal medicine versus conventional medicine	Introduction to Natural Health Products (NHPs): NHPs :Musculoskeletal NHPs: Cardiovascular Health NHPs: Heart Failure NHPs :Diabetes NHPs: Cancer	9-15 th	7
	Final exam		16 th	1
Total number of weeks and hours				16

VIII. Teaching Strategies

Lectures

independent study

Seminars

Presentation

VI. Tasks and Assignments :

No.	Task/Assignment	Week due	Mark
1	Assignment and presentation	6 th	10
2	Quizzes	4,10 th	10

VII. VII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Assignments, seminar	6 th	5	5%
2	Quiz 1	4 th	2.5	2.5%
3	Midterm Exam	6,12 th	30	30%
4	Quiz 2	10 th	2.5	2.5%
5	Final Exam	16 th	60	60%
Total		16 th	100	100%

IX. Learning Resources :

(Author, (Year), Book Title, Edition, Publisher, Country of publishing)

Textbooks-not more than 2



1. Evans, W.C.; Saunders-Elsevier, 2009, Pharmacognosy.
2. Murray, M.T., Random House, 2004, The healing power of herbs.

Essential References-not less than 4

1. Varror, T. and Foster, S. ;Haworth Herbal Press ,Binghamton, NY(1999) The honest herb
2. Miller, L. and Murray, W.; Pharmaceutical Products Press ,Binghamton, NY.(1998), The honest herbal.
3. Ramsden, Christopher E (2007) Nutrition by the numbers.
4. Chopra A, Doiphode V (2002), Ayurvedic medicine. Core concept, therapeutic principles, current relevance. Med Clin North Am. Jan;86(1):75-89.
5. Herron R, Fagan J. Lipophil (2002), mediated reduction of toxicants in humans: an evaluation of an Ayurvedic detoxification procedure. Alternative Therapies in Health & Medicine, Sep/Oct , 8(5):40-52.

Electronic Materials and Web Sites

1. Journal of Natural Products
2. <http://pim.med.unc.edu/Monographs.html>

X. Course Policies:

Based on university regulations, the following aspects should be figured out:

1	(Class Attendance): Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2	(Tardy) :
3	(Exam Attendance/Punctuality) : All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4	(Assignments & Projects) :
5	(Cheating) : Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6	(Plagiarism) : “To plagiarize is to take ideas or words of another person & pass them off as one’s own”. Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7	(Other policies) :



3.Course Syllabus - Therapeutics - Infectious diseases

خطة مقرر معالجة دوائية
(الأمراض المعدية)

I. General information about the course:					
1	Course Title :	Therapeutic- Infectious diseases			
2	Course Code and Number:	PHD522			
3	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		2			
4	Study Level and Semester:	Fifth year/Second Semester			
5	Pre-requisites (if any):	-			
6	Co-requisites (if any):	PHD524			
7	Program in which the course is offered:	Bachelor of PharmD			
8	Teaching Language:	English			
9	Instruction location:	Semester-based			

II. Course Description
<p>This course deals essentially with infectious diseases and their therapeutic approaches. This course will provide student with the systematic approach for the evaluation of each patient's clinical presentation and utilization of antibiotic and therapeutic plan for infectious diseases of different body systems. The concepts of normal & abnormal body functions as well as different antibiotic groups is pre-requisite for this course. This course is taught through series of instructor-student interactive lectures.</p>

III. Course Aims:
<p>This course aims to:</p> <ol style="list-style-type: none"> 1. Provide student with knowledge regarding the etiology of infectious diseases. 2. Enable student to explain the signs, symptoms and complications of the infectious diseases. 3. Equip student with the analysis of treatment aims and algorithms, drug interactions, dose calculations and optimization, and side effects of antibiotics. 4. Help student to select an appropriate agent (and alternative agents) and recognize the safety of antibiotics in special groups like children, elderly and pregnancy.



IV. Course Intended Learning Outcomes (CILOs) :

After completing this course, students would be able to:

1. Recognize the drugs and their therapeutic uses, safety, optimum use in medication and contraindications.
2. Outline an algorithm for evaluation and treatment of a patient with signs and symptoms related to infectious diseases.
3. Explain an appropriate selection of antibiotics based on patient's setting, and risk of resistance to ensure eradication of bacteria and promote patient's health.
4. Formulate special dosage schedule to meet patient individualization therapy, considering patient's related data to prevent drug-related problems.
5. Design suitable methods to minimize the risk of infection and resistance.
6. Practice suitable advises for the patients and others on the safe and effective use of antibiotics, and implement an appropriate monitoring plan to ensure effective therapy.
7. Implement national guidelines to formulate appropriate therapeutic plan based on the site of infection and risk of bacterial resistance.
8. Evaluate the information about disease and clinical therapy that obtained from several sources, considering strength and quality of evidence.

V. Course Contents

First: Theoretical Aspect

No.	Course Units	Sub-topics	Week due	Contact Hours
1	Infectious diseases	Antimicrobial Regimen Selection, Lower Respiratory Tract Infections, Upper Respiratory Tract Infections, Tuberculosis, Intra-Abdominal Infections, Gastrointestinal Infections,	1 st to 4 th	8
2		Urinary Tract Infections, Sepsis and Septic Shock, Infective Endocarditis,	5 th to 7 th	10
3		Mid-term Exam	8 th	2
4		Central Nervous System Infections, skin and soft tissue infection, Antimicrobial Prophylaxis in Surgery, malaria and Dengue fever, Vaccines and Toxoids	9 th to 15 th	10
5		Final-term Exam	16 th	2
Total number of weeks and hours			16	32



Second: Tutorial Aspects

No.	Tutorial topics	Week due	Contact Hours
1	NA		
Total number of weeks and hours			

Third: Practical Aspects

No.	Practical topics	Week due	Contact Hours
1	NA		
Total number of weeks and hours			

VI. Teaching Strategies

1. Instructor-student interactive lectures
2. Micro-assignments
3. Interactive class discussions
4. Office hours (Tutorials)
5. report

VII. Tasks and Assignments

No.	Task/Assignment	Week due	Mark
1	Assignment 1/quiz	5 th week	5
2	Assignment 2/quiz	11 th week	5

VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Homework/Tasks/Assignments/quiz	2 nd , 3 rd	10	10 %
2	Midterm Exam	8 th	30	30 %
3	Final Exam	16 th	60	60 %
Total			100	100%

IX. Learning Resources

Textbooks:

- Marie Chisholm-Burns. (2022). Pharmacotherapy: principle and practice, 6th edition, New York: McGraw-Hill Medical, United States of America.
- Koda-Kimble, M. A., & Young, L. Y. (2018). Applied therapeutics: The clinical use of drugs, 11th edition. Baltimore, Md: Lippincott Williams & Wilkins, United States of America.

Essential References:

- Lexicomp, (2020). Drug Information Handbook, 29th edition, Lexi-Comp, U.S.A
- DiPiro, J. T. (2021). Pharmacotherapy: Handbook, 11th edition, New York: McGraw-Hill Medical, United States of America.
- British national formulary (BNF), last edition, Pharmaceutical Press.
- Philip Wiffen & els, (2017), Oxford Handbook of Clinical Pharmacy, 3rd edition.



- Marie Chisholm-Burns (January 3, 2019), Pharmacotherapy Principles and Practice, 5th Edition, McGraw-Hill Education / Medical, United States of America.

Electronic Materials and Web Sites:

1. www.uptodate.com
2. www.medscape.com
3. www.ncbi.nlm.nih.gov/pubmed
4. <http://www.accp.com/>

X. Course Policies :

Based on university regulations, the following aspects should be figured out:

1.	(Class Attendance) : <ul style="list-style-type: none"> Students are required to attend all class lectures, tutorials and labs. Student will not allow attending the final exam if he exceeds the maximum number of absences (15% without excuses and 25% with excuses).
2.	(Tardy) : <ul style="list-style-type: none"> Attendance will be taken every lecture at the first 10 minutes and any student comes after that will be considered absent.
3.	(Exam Attendance/Punctuality) : <ul style="list-style-type: none"> Student should be in the examination hall before 15 minutes from the beginning of the exam. Late students are not allowed to get into the examination hall after the first 30 minutes and will be considered absent. Makeup exams will be offered to students who miss a scheduled exam because of illness, death in the family or university-sponsored activity, but written documentation must be provided.
4.	(Assignments & Projects) : <ul style="list-style-type: none"> All assignments must be done on their time. Late assignments will not be accepted. Projects are assumed to be submitted on or before the dead-lines.
5.	(Cheating) : <ul style="list-style-type: none"> Cheating is strictly prohibited behavior. University regulations will be pursued and enforced on any cheating student.
6.	(Plagiarism) : <ul style="list-style-type: none"> Plagiarism is defined as “copying or stealing someone else’s words or ideas and claiming or presenting them as if they were your own.” University regulations will be pursued and enforced on any plagiarism attempt.
7.	(Other policies) : <ul style="list-style-type: none"> Students in class, Lab. are required to turn off all cell phones, iPods,



4 Course Syllabus Pharmacoepidemiology & Pharmacoeconomics

خطة مقرر علوم إنتشار استخدام
الادوية والإقتصاد الصيدلي

I. General information about the course:					
1	Course Title :	Pharmacoepidemiology & Pharmacoeconomics			
2	Course Code and Number :	PHS523			
3	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		1	-		-
4	Study Level and Semester:	Fifth Year /Second Semester			
5	Pre-requisites (if any):	PHS410			
6	Co-requisites (if any):	NA			
7	Program in which the course is offered:	Bachelor of Pharmacy & Bachelor of PharmD			
8	Teaching Language:	English			
9	Instruction location:				

II. Course Description
<p>This course introduces students to the basic concepts of pharmacoeconomics and pharmacoepidemiology. It presents the importance of utilizing Pharmacoeconomic and Pharmacoepidemiology results when evaluating drug safety. The students will explore and assess vital topics and trends regarding spontaneous reporting systems, adverse drug reactions, and post marketing surveillance. A prior knowledge of the basics of professional skills⁵ is essential for this course.</p>
III. Course Aims: This course aims to make the students able to:
<ol style="list-style-type: none"> 1. Understanding the concepts of pharmacoepidemiology as well as pharmacoeconomics 2. Explore factors that may potentially impact the quality of pharmacoepidemiologic research, including choice of study design, data quality and common sources of bias. 3. Know and understand the methods, steps, and techniques used to conduct pharmacoeconomic evaluations. 4. Enable to practice Pharmacovigilance in community and hospital pharmacy. 5. Equip with team-work and problem solving skills.



IV. Course Intended Learning Outcomes (CILOs) :

By the end of this course, students should be able to:

1. Define the concept of pharmacoeconomics, pharmacoepidemiology, adverse drug reactions and pharmacovigilence
2. Identify and discuss the different types of economic and the pharmacoepidemiological applications in monitoring, evaluating, and approval of new drugs
3. Choose rationally the best economic evaluation for drugs or disease
4. Differentiate between various types of pharmacoepidemiological methods
5. interpret, and evaluate published pharmacoeconomic studies
6. Perform filling spontaneous adverse drug reaction report
7. Demonstrate critical thinking, synthesis and interpretation of pharmaceutical information, and responsibility
8. Work effectively as a part of team in order to fulfill a certain project.

V. Course Contents

Theoretical Aspect:

No.	Course Units	Week due	Contact Hours
1	-Introduction to pharmacoeconomics -Describe main types of economic evaluation	1 st & 2 ^{ed}	2
2	- Cost determination - Evaluating outcomes-effectiveness - Methods of data collection and analysis (decision analysis modeling)	3-5 th	3
3	-Cost benefit analysis - Cost utility analysis (quality of life)	6-7 th	2
4	Mid term		
5	-Principles of pharmacoepidemiology - Study designs available for pharmacoepidemiology	8&9 th	2
6	-Regulatory agencies and pharmacoepidemiology - Safety profiles of new drugs at the time of initial marketing	10 th	1
7	- Pharmacovigilence and spontaneous reporting systems	11-13 th	3
8	- The drug approval process and the information it provides	14 th	1
9	-Risk analysis and pharmaceuticals - Standards of postmarketing surveillance (PMS)	15 th	1
10	Final exam	16 th	1
Total number of weeks and hours			16



VI. Teaching Strategies

1. Lectures and Interactive class discussions
2. Assignment

VII. Tasks and Assignments

No.	Task/Assignment	Week due	Mark
.1	Cost benefit analysis -Cost utility analysis (quality of life)	7 th week	5
.2	Pharmacovigilance and spontaneous reporting systems	12 th week	5

VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Mid Term	8 th	30	30%
3	Assignment	7, 12 th	10	10%
5	Final Exam	16 th	60	60%
Total			100	

IX. Learning Resources

Textbooks

1. F. Randy, Phd Vogenberg, Randy Vogenberg. Introduction to Applied Pharmacoeconomics. (2000). McGraw-Hill; 1st. edition.
2. Brian L. Strom. pharmacoepidemiology. 3rd. edition (2000). John Wiley & Sons.

Essential References:

1. Bungay, K, Osterhaus, J, Paladino, J, Sanchez, L. Pharmacoeconomics and Outcomes: Application for Patient Care. (1997). The American College of Clinical Pharmacy.
- Joyce A. Cramer, Bert, Ph.D. Spilker. Quality of Life and Pharmacoeconomics, An introduction.
2. 2nd. edition (1998). Lippincott Williams & Wilkins Publishers.
3. Brenda Waning, Michael Montagne, William W. McCloskey, Rebecca A. Maki. pharmacoepidemiology: Principles & Practice. (2000).
4. McGraw-Hill/Appleton & Lange.9, **Pharmaceutical practice**, fourth edition, Churchill Living - Elsevier, USA

Electronic Materials and Web Sites:

<https://www.springer.com/journal>



X. Course Policies	
Based on university regulations, the following aspects should be figured out:	
1.	(Class Attendance): Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2.	(Tardy) :
3.	(Exam Attendance/Punctuality) : All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4.	(Assignments & Projects) :
5.	(Cheating) : Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6.	(Plagiarism) : “To plagiarize is to take ideas or words of another person & pass them off as one’s own”. Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7.	(Other policies) :



5.Course Syllabus - Therapeutics -Integrated Case- Based Learning 4

خطة مقرر التعلم القائم على الحالات 4

I. General information about the course:					
	Course Title :	Integrated Case- Based Learning 4			
2.	Course Code and Number:	PHD524			
3.	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
			2		
4.	Study Level and Semester:	Fifth year/Second semester			
5.	Pre-requisites :	PHD515			
6.	Co-requisites:	NA			
7.	Program in which the course is offered:	Bachelor of PharmD			
8.	Teaching Language:	English			
9.	Instruction location:				

II. Course Description

This course involves simulated case studies and other activities aimed at integrating scientific and clinical concepts from across all courses in a problem-based learning environment. This course will focus on infectious disease management and therapeutic plan. Studying integrated case-based learning 3 is pre-requisite for this course. This course will be taught through PBL and group discussion, students are allowed more time for self-directed learning and brainstorming with teachers and classmates.

III. Course Aims:

This course aims to:

1. Give student knowledge about the etiology, clinical microbiology that are involve in infectious of diseases.
2. Enable student to explain the signs, symptoms and complications of infectious and diseases.
3. Equip student with the necessary skills for identifying treatment aims and algorithms, drug interactions, dose calculations and optimization, and side effects of antibiotics.
4. Help student to select an appropriate antibiotic in designing therapeutic plan and recognize the safety of antibiotics in special groups like children, elderly and pregnancy.



IV. Course Intended Learning Outcomes (CILOs) :

After completing this course, students would be able to:

1. Recognize the drugs and their therapeutic uses, safety, optimum use of medications and their contraindications.
2. Outline an algorithm for evaluation and treatment of a patient with signs and symptoms related to infectious diseases.
3. Explain an appropriate selection of antibiotics and other supportive therapy required for prevent drug-related problems during treatment of infectious diseases.
4. Formulate appropriate therapeutic plan for each patient with infectious disease in different settings, considering patient data, antibiotics agent, dose, frequency, and duration
5. Design suitable methods to minimize the risk of infection and resistance.
6. Practice suitable advises for the patients and others on the safe and effective use of medicines, and implement an appropriate monitoring plan.
7. Implement recent guidelines to apply appropriate antibiotic plan based on the site of infection and risk of bacterial resistance.
8. Evaluate critically the information about disease and clinical therapy that obtained from several sources.

V. Course Contents

First: Theoretical Aspect

No.	Course Units	Sub-topics	Week due	Contact Hours
1	Infectious diseases cases	Central Nervous System Infections cases, Lower Respiratory Tract Infections cases, Upper Respiratory Tract Infections cases,	1 st to 4 th	8
2		Tuberculosis cases, Intra-Abdominal Infections cases, Malaria cases,	5 th to 7 th	6
3		Mid-term Exam	8 th	2
4		Gastrointestinal Infections cases, Sepsis and Septic Shock cases, Urinary Tract Infections cases, Infective Endocarditis cases, surgical site infection cases	9 th to 15 th	14
5		Final-term Exam	16 th	2
Total number of weeks and hours			16	32

Second: Tutorial Aspects

No.	Tutorial topics	Week due	Contact Hours
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1	NA		
Total number of weeks and hours			

Third: Practical Aspects			
No.	Practical topics	Week due	Contact Hours
1	NA		
Total number of weeks and hours			

VI. Teaching Strategies	
<ol style="list-style-type: none"> 1. Instructor-student interactive lectures 2. Micro-assignments 3. Interactive class discussions 4. Office hours (Tutorials) 5. report 	

VII. Tasks and Assignments			
No.	Task/Assignment	Week due	Mark
1	Assignment 1/quiz	5 th week	5
2	Assignment 2/quiz	11 th week	5

VIII. Learning Assessment:				
No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Homework/Tasks/Assignments/quiz	5 th , 11 th	10	10 %
2	Midterm Exam	8 th	30	30 %
3	Final Exam	16 th	60	60 %
Total			100	100%

IX. Learning Resources	
Textbooks: <ul style="list-style-type: none"> Marie Chisholm-Burns. (2022). Pharmacotherapy: principle and practice, 6th edition, New York: McGraw-Hill Medical, United States of America. Koda-Kimble, M. A., & Young, L. Y. (2018). Applied therapeutics: The clinical use of drugs, 11th edition. Baltimore, Md: Lippincott Williams & Wilkins, United States of America. 	
Essential References: <ul style="list-style-type: none"> Lexicomp, (2020). Drug Information Handbook, 29th edition, Lexi-Comp, U.S.A DiPiro, J. T. (2021). Pharmacotherapy: Handbook, 11th edition, New York: McGraw-Hill Medical, United States of America. British national formulary (BNF), last edition, Pharmaceutical Press. Philip Wiffen & els, (2017), Oxford Handbook of Clinical Pharmacy, 3rd edition. Marie Chisholm-Burns (January 3, 2019), Pharmacotherapy Principles and Practice, 5th 	



Edition, McGraw-Hill Education / Medical, United States of America.

Electronic Materials and Web Sites:

1. www.uptodate.com
2. www.medscape.com
3. www.ncbi.nlm.nih.gov/pubmed
4. <http://www.accp.com/>

X. Course Policies :

Based on university regulations, the following aspects should be figured out:

1.	(Class Attendance) : <ul style="list-style-type: none"> Students are required to attend all class lectures, tutorials and labs. Student will not allow attending the final exam if he exceeds the maximum number of absences (15% without excuses and 25% with excuses).
2.	(Tardy) : <ul style="list-style-type: none"> Attendance will be taken every lecture at the first 10 minutes and any student comes after that will be considered absent.
3.	(Exam Attendance/Punctuality) : <ul style="list-style-type: none"> Student should be in the examination hall before 15 minutes from the beginning of the exam. Late students are not allowed to get into the examination hall after the first 30 minutes and will be considered absent. Makeup exams will be offered to students who miss a scheduled exam because of illness, death in the family or university-sponsored activity, but written documentation must be provided.
4.	(Assignments & Projects) : <ul style="list-style-type: none"> All assignments must be done on their time. Late assignments will not be accepted. Projects are assumed to be submitted on or before the dead-lines.
5.	(Cheating) : <ul style="list-style-type: none"> Cheating is strictly prohibited behavior. University regulations will be pursued and enforced on any cheating student.
6.	(Plagiarism) : <ul style="list-style-type: none"> Plagiarism is defined as “copying or stealing someone else’s words or ideas and claiming or presenting them as if they were your own.” University regulations will be pursued and enforced on any plagiarism attempt.
7.	(Other policies) : <ul style="list-style-type: none"> Students in class, Lab. are required to turn off all cell phones, iPods,



6. Course Syllabus of Medication Therapy Management

خطة مقرر ادارة العلاج الدوائي

I. General information about the course:					
1	Course Title :	Medication Therapy Management			
2	Course Code and Number:	PHD525			
3	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		2			
4	Study Level and Semester:	Fifth year/Second semester			
5	Pre-requisites (if any):	PHD411			
6	Co-requisites (if any):	NA			
7	Program in which the course is offered:	Bachelor of PharmD			
8	Teaching Language:	English			
9	Instruction location:				

II. Course Description

This course provides students with the opportunity to develop the skills required to apply clinical knowledge in a practical, Patient-focused manner, in order to effectively manage patients' drug therapy. The topics that will be covered through this course are cardio, respiratory, renal and endocrine systems as well as documentation of patient assessment. Pharmacotherapies courses should be studied before this course. This course is taught through series of instructor-student interactive lectures and clinical scenarios.

III. Course Aims:

This course aims to:

1. Give student knowledge to evaluate scientific literature for use in providing up-to-date, evidence-based, and cost-effective MTM services.
2. Help student to identify drug-related problems and recommend rational solutions based on a mastery of pharmacotherapy.
3. Enable student to design a medication-related action plan, taking into account patient abilities and Preferences.
4. Equip student with skills to educate patients regarding techniques to improve adherence, decrease the risk of adverse drug reactions, and maximize appropriate and safe medication use as well as document MTM services to follow the patient progress.



IV. Course Intended Learning Outcomes (CILOs) :

After completing this course, students would be able to:

1. Recognize the drugs and their therapeutic uses, safety, optimum use in medication and contraindications.
2. Outline an algorithm for evaluation and treatment of a patient with signs and symptoms using life style modification and pharmacotherapy
3. Construct special dosage schedule to meet patient individualization therapy.
4. Contrast clinical data in the patient record with the normal range values .
5. Practice suitable medication therapy management for different clinical setting to ensure safe and effective use of medicines .
6. Practice evidence-based treatment strategies and recommendations that improve pediatric patient's outcome.
7. Cooperate effectively with patients, public and health care professionals; includes communication both written and oral.
8. Evaluate the information about disease and clinical therapy that obtained from several sources.

V. Course Contents

Theoretical Aspect:				
No.	Course Units	Sub-topics	Week due	Contact Hours
1	Introduction to data sets for MTM	MTM Overview, Comprehensive Medication Review, <u>Oral and Nonverbal Communication in Medication Therapy Management, Documentation</u>	1 st , 2 nd , 3 rd , 4 th	18
2	Respiratory-MTM	<u>Asthma-MTM, COPD-MTM,</u>	5 th , 6 th	4
3	Mid-term Exam		7 th	1
4	Endocrine-MTM	<u>Diabetes Mellitus-MTM</u>	8 th , 9 th	6
5	Cardiovascular-MTM	<u>Hypertension-MTM, Heart Failure –MTM, Chronic Stable Angina-MTM, Stroke-MTM, Dyslipidemia-MTM</u>	10 th , 11 th , 12 th , 13 th , 14 th	10
6	Renal-MTM	<u>Chronic Kidney Disease-MTM</u>	15 th	4
7	Final-term Exam		16 th	2
Total number of weeks and hours			16	32



Second: Tutorial Aspects			
No.	Tutorial topics	Week due	Contact Hours
1	NA		
Total number of weeks and hours			

VI. Teaching Strategies
<ol style="list-style-type: none"> 1. Instructor-student interactive lectures 2. Micro-assignments 3. Interactive class discussions 4. Office hours (Tutorials) 5. report

VII. Tasks and Assignments			
No.	Task/Assignment	Week due	Mark
1	Assignment 1/quiz	5 th week	5
2	Assignment 2/quiz	11 th week	5

VIII. Learning Assessment:				
No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Homework/Tasks/Assignments/quiz	2 nd , 3 rd	10	10 %
2	Midterm Exam	8 th	30	30 %
3	Final Exam	16 th	60	60 %
Total			100	100%

IX. Learning Resources
<p>■ Angaran, Karen Whalen, 2018, Medication Therapy Management: A Comprehensive Approach, 2nd edition (April 5, 2018) McGraw-Hill Editors David M. on Access Pharmacy.</p> <ol style="list-style-type: none"> 1. Applied Therapeutics: The Clinical Use of Drugs (Koda Kimble and Youngs Applied Therapeutics) by Caroline S Zeind PharmD, Michael G Carvalho PharmD, et al. May 6, 2023 2. Drug Information Handbook: A Clinically Relevant Resource for All Healthcare Professionals 30th Edition Lexi Comp; (April, 2021). 3. Pharmacotherapy Casebook: A Patient-Focused Approach, Eleventh Edition by Terry L. Schwinghammer , Julia M. Koehler, et al. Apr 15, 2020 4. Pharmacotherapy Principles and Practice, Sixth Edition by Marie Chisholm-Burns, Terry Schwinghammer, et al. Feb 4, 2022



Electronic Materials and Web Sites:

1. www.uptodate.com
2. www.medscape.com
3. www.ncbi.nlm.nih.gov/pubmed
4. <http://www.accp.com/>
5. www.cms.gov/medicare

X. Course Policies

Based on university regulations, the following aspects should be figured out:

1.	(Class Attendance) : <ul style="list-style-type: none"> Students are required to attend all class lectures, tutorials and labs. Student will not allow attending the final exam if he exceeds the maximum number of absences (15% without excuses and 25% with excuses).
2.	(Tardy) : <ul style="list-style-type: none"> Attendance will be taken every lecture at the first 10 minutes and any student comes after that will be considered absent.
3.	(Exam Attendance/Punctuality) : <ul style="list-style-type: none"> Student should be in the examination hall before 15 minutes from the beginning of the exam. Late students are not allowed to get into the examination hall after the first 30 minutes and will be considered absent. Makeup exams will be offered to students who miss a scheduled exam because of illness, death in the family or university-sponsored activity, but written documentation must be provided.
4.	(Assignments & Projects) : <ul style="list-style-type: none"> All assignments must be done on their time. Late assignments will not be accepted. Projects are assumed to be submitted on or before the dead-lines.
5.	(Cheating) : <ul style="list-style-type: none"> Cheating is strictly prohibited behavior. University regulations will be pursued and enforced on any cheating student.
6.	(Plagiarism) : <ul style="list-style-type: none"> Plagiarism is defined as “copying or stealing someone else’s words or ideas and claiming or presenting them as if they were your own.” University regulations will be pursued and enforced on any plagiarism attempt.
7.	(Other policies) : <ul style="list-style-type: none"> Students in class, Lab. are required to turn off all cell phones, iPods,



7.Course Syllabus - Selected topics in clinical Toxicology خطة مقرر مواضيع مختارة في علم السموم السريري

I. General information about the course :						
1.	Course Title:	Selected topics in clinical Toxicology				
2.	Course Code and Number :	PHD526				
3.	Credit Hours :	Lecture	Seminar/Tutorial	Practical	Training	Total
		2	-	-	-	2
4.	Study Level and Semester:	Fifth Year /Second Semester				
5.	Pre-requisites (if any):	PHS424				
6.	Co-requisites (if any) :	NA				
7.	Program in which the course is offered	Bachelor Of Pharmacy& PharmD				
8.	Teaching Language:	English				
9.	Instruction location:					

II. Course Description :

The aim of this course is to focus on the poisoned management by different ways. The course requires to learn the concepts of pharmacology as pre-request. Different methods of teaching/learning are used in this course including lectures, cooperative learning and problem-based learning (case study).

III. Course Aims

This course aims to make students able to:

1. Differentiate between the types of drug and food poisoning.
2. Choose the suitable steps for treating poisoned person .
3. Develop the ability of student to communicate with others in a team
4. Recognize the drugs that should not be used in pregnancy and lactation.

IV. Course Intended Learning Outcomes (CILOs) :

1. Define the different terms in applied toxicology like toxicokinetics and toxicodynamics.
2. Distinguish between different types of drug and food poisoning and initial steps of their management
3. Explain the safety of drugs during pregnancy and lactation
4. Compare between drugs used in pregnancy, lactation and other situation
5. Design a therapy plan for covered poisoned patient.
6. Choose the suitable medications for poisoned patients based on updated researches.
7. Perform patient counseling regarding drug therapy especially during pregnancy and lactation
8. Evaluate scientific information obtained from available sources..



V. Course topics				
Topics/Units of Course Contents				
First: Theoretical Aspects				
N o.	Course Topics/Units	Sub-topics	Week due	Contact Hours
1	Special terms in toxicology	Toxokinetics and toxicodynamics, ED50, TD50, TI, and LD50, class of chemicals based on LD.	1st	2
2	Management of the poisoned patient	ABCD rule in management	2 nd	2
3	Safety of drugs during pregnancy and lactation	-	3ed &4th	4
4	Food poisoning and management.	Bacteria, plants and animal sources	5&6 th	4
5	Midterm Exam.1		7 th	2
6	Controlled drugs.	Alcohols, benzodiazepines, opioid, antipsychotics , antidepressants, Anorectics (amphetamines)	8-10 th	6
7	Poisoning and management	Alcohols, benzodiazepines, opioid, antipsychotics , antidepressants, Anorectics (amphetamines)	11-13 th	6
8	Poisoning and management	Paracetamol, Oragano-phosphorus compounds, Anticholinergics	14&15 th	4
9	Final exam.		16 th	2
Total number of weeks and hours				32

VI. Teaching Strategies
Lecture
Self-learning (homework)
Case studies
Small group discussion



VII. Tasks and Assignments :

No.	Task/Assignment	Week due	Mark
1	Case studies and Presentation	7, 11 th	5
2	Reports	Every 2 weeks	5

VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	weight
1	Case studies and Presentation	7, 11 th	5	5%
2	Reports	Every 2 weeks	5	5%
3	Midterm Exam	8 th	30	30%
4	Final Exam	16 th	60	60%
Total		16 th	100	100%

IX. Learning Resources :

(Author, (Year), Book Title, Edition, Publisher, Country of publishing)
Textbooks-not more than 2
3. Richard C Dart, Medical toxicology, 2004, 3rd Edition, Lippincott, USA
Essential References-not less than 4
1. Rang HP, Dale MM and Ritter JM (2012). Pharmacology. 7 th ed. CHURCHILL LIVINGSTONE London
2. Laurence DR, Bennett PN and Brown MJ (2010). Clinical pharmacology. Ninth ed. CHURCHILL LIVINGSTONE. London
3. Hardman JG and Limbird LE (2010). Goodman & Gilman's the pharmacological basis of Therapeutics. Tenth ed. McGraw Hill. London
4. Harvey RA. Pharmacology (2012). 5 th ed. Lippincott Williams & Wilkins. Republic of China
5. John A Timbrell, Introduction to toxicology (2002). 3 rd edition. Taylor & Francis Group. London
Electronic Materials and Web Sites
1. International journal of toxicology (2013)
2- Journal of applied toxicology (2013).
3. WWWPubMed.com.



XI. Course Policies	
Based on university regulations, the following aspects should be figured out:	
1.	(Class Attendance) : <ul style="list-style-type: none"> Students are required to attend all class lectures, tutorials and labs. Student will not allow attending the final exam if he exceeds the maximum number of absences (15% without excuses and 25% with excuses).
2.	(Tardy) : <ul style="list-style-type: none"> Attendance will be taken every lecture at the first 10 minutes and any student comes after that will be considered absent.
3.	(Exam Attendance/Punctuality) : <ul style="list-style-type: none"> Student should be in the examination hall before 15 minutes from the beginning of the exam. Late students are not allowed to get into the examination hall after the first 30 minutes and will be considered absent. Makeup exams will be offered to students who miss a scheduled exam because of illness, death in the family or university-sponsored activity, but written documentation must be provided.
4.	(Assignments & Projects) : <ul style="list-style-type: none"> All assignments must be done on their time. Late assignments will not be accepted. Projects are assumed to be submitted on or before the dead-lines.
5.	(Cheating) : <ul style="list-style-type: none"> Cheating is strictly prohibited behavior. University regulations will be pursued and enforced on any cheating student.
6.	(Plagiarism) : <ul style="list-style-type: none"> Plagiarism is defined as “copying or stealing someone else’s words or ideas and claiming or presenting them as if they were your own.” University regulations will be pursued and enforced on any plagiarism attempt.
7.	(Other policies) : <ul style="list-style-type: none"> Students in class, Lab. are required to turn off all cell phones, iPods,



8.Course Syllabus - Therapeutics - Hematology and oncology diseases

خطة مقرر معالجة دوائية
(أمراض الدم والسرطان)

I. General information about the course:					
1	Course Title :	Therapeutics - Hematology and oncology diseases			
2	Course Code and Number:	PHD527			
3	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		2			
4	Study Level and Semester:	Fifth Year /Second Semester			
5	Pre-requisites (if any):	NA			
6	Co-requisites (if any):	PHD524			
7	Program in which the course is offered:	Bachelor of PharmD			
8	Teaching Language:	English			
9	Instruction location:				

II. Course Description
<p>This course is designed to provide students with overview of pharmacotherapy and treatment approaches for patient with different types of malignancies and immunology disorders. This course will cover different types of oncologic, hematologic, and immunologic disorders. The concepts of normal & abnormal body functions as well as different drug groups are required before this course. This course is taught through series of instructor-student interactive lectures.</p>

III. Course Aims:
<p>This course aims to:</p> <ol style="list-style-type: none"> 5. Provide student with knowledge about the pathophysiology, etiology, and risk factors of oncologic, hematologic, and immunologic disorders. 6. Equip student to explain the clinical manifestations and complications of oncologic, hematologic, and immunologic related disorders. 7. Enable student to recognize treatment aims and algorithms, drug interactions, dose calculations and optimization, and chemotherapy adverse effect and management. 8. Help student to recognize the safety of chemotherapies in special groups like children, elderly and pregnancy.



IV. Course Intended Learning Outcomes (CILOs) :

After completing this course, students would be able to:

1. Identify different types of drug and their therapeutic uses, safety, and contraindications.
2. Outline an algorithm for evaluation and treatment of oncologic, hematologic, and immunologic disorders.
3. Illustrate appropriate lifestyle modifications and pharmaceutical care plan to promote patient's health.
4. Formulate special dosage schedule to meet patient individualization therapy according to drug- and disease-related factors.
5. Contrast clinical data in the patient record with the normal range values to assess severity and prognosis of the disease.
6. Practice suitable advice for the patients on the safe and effective use of chemotherapy and radiotherapy.
7. Apply the current guidelines to design appropriate therapeutic plan in different oncologic, hematologic, and immunologic disorders.
8. Assess the scientific data obtained from different online resources and prioritize them to provide evidence-based recommendation.

V. Course Contents

First: Theoretical Aspect

No.	Course Units	Sub-topics	Week due	Contact Hours
1	Oncologic Disorders	Breast Cancer, Prostate Cancer, Lung Cancer, Colorectal Cancer, Ovarian Cancer, Acute Leukemia, supportive care in oncology	1 st to 6 th	12
2	Mid-term Exam		7 th	2
3	Oncologic and Hematologic disorders	Malignant Lymphomas, Skin Cancer Anemia, Sickle Cell Disease, Coagulation and Platelet Disorders ^(seminar)	8 th to 13 th	12
4	Immunologic Disorders	Drug hypersensitivity Reactions, Systemic Lupus Erythematosus, Solid Organ Transplantation ^(seminar)	14 th -15 th	4
5	Final-term Exam		16 th	2
Total number of weeks and hours			16	32



Second: Tutorial Aspects			
No.	Tutorial topics	Week due	Contact Hours
1	NA		
Total number of weeks and hours			

Third: Practical Aspects			
No.	Practical topics	Week due	Contact Hours
1	NA		
Total number of weeks and hours			

VI. Teaching Strategies	
<ol style="list-style-type: none"> 1. Instructor-student interactive lectures 2. Micro-assignments 3. Interactive class discussions 4. Office hours (Tutorials) 5. report 	

VII. Tasks and Assignments			
No.	Task/Assignment	Week due	Mark
1	Assignment 1/quiz	5 th week	5
2	Assignment 2/quiz	11 th week	5

VIII. Learning Assessment:				
No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Homework/Tasks/Assignments/quiz	2 nd , 3 rd	10	10 %
2	Midterm Exam	7 th	30	30 %
3	Final Exam	16 th	60	60 %
Total			100	100%

IX. Learning Resources	
Textbooks: <ul style="list-style-type: none"> Marie Chisholm-Burns. (2022). Pharmacotherapy: principle and practice, 6th edition, New York: McGraw-Hill Medical, United States of America. Koda-Kimble, M. A., & Young, L. Y. (2018). Applied therapeutics: The clinical use of drugs, 11th edition. Baltimore, Md: Lippincott Williams & Wilkins, United States of America. 	
Essential References: <ul style="list-style-type: none"> Lexicomp, (2020). Drug Information Handbook, 29th edition, Lexi-Comp, U.S.A DiPiro, J. T. (2021). Pharmacotherapy: Handbook, 11th edition, New York: McGraw-Hill Medical, United States of America. British national formulary (BNF), last edition, Pharmaceutical Press. Philip Wiffen & els, (2017), Oxford Handbook of Clinical Pharmacy, 3rd edition. 	



- Marie Chisholm-Burns (January 3, 2019), Pharmacotherapy Principles and Practice, 5th Edition, McGraw-Hill Education / Medical, United States of America.

Electronic Materials and Web Sites:

1. www.uptodate.com
2. www.medscape.com
3. www.ncbi.nlm.nih.gov/pubmed
4. <http://www.accp.com/>

X. Course Policies

Based on university regulations, the following aspects should be figured out:

1.	(Class Attendance) : <ul style="list-style-type: none"> • Students are required to attend all class lectures, tutorials and labs. • Student will not allow attending the final exam if he exceeds the maximum number of absences (15% without excuses and 25% with excuses).
2.	(Tardy) : <ul style="list-style-type: none"> • Attendance will be taken every lecture at the first 10 minutes and any student comes after that will be considered absent.
3.	(Exam Attendance/Punctuality) : <ul style="list-style-type: none"> • Student should be in the examination hall before 15 minutes from the beginning of the exam. • Late students are not allowed to get into the examination hall after the first 30 minutes and will be considered absent. • Makeup exams will be offered to students who miss a scheduled exam because of illness, death in the family or university-sponsored activity, but written documentation must be provided.
4.	(Assignments & Projects) : <ul style="list-style-type: none"> • All assignments must be done on their time. Late assignments will not be accepted. • Projects are assumed to be submitted on or before the dead-lines.
5.	(Cheating) : <ul style="list-style-type: none"> • Cheating is strictly prohibited behavior. • University regulations will be pursued and enforced on any cheating student.
6.	(Plagiarism) : <ul style="list-style-type: none"> • Plagiarism is defined as “copying or stealing someone else’s words or ideas and claiming or presenting them as if they were your own.” • University regulations will be pursued and enforced on any plagiarism attempt.
7.	(Other policies) : <ul style="list-style-type: none"> • Students in class, Lab. are required to turn off all cell phones, iPods,



Faculty: Pharmacy

Department: Clinical pharmacy and pharmacy practice

Program: Bachelor of PharmD

**Sixth year
First Semester**

**First semester
الفصل الأول**

1. Clinical training cardiovascular diseases

تدريب سريري: أمراض القلب والشرابيين

I. General information about the course:					
1.	Course Title :	Clinical training: cardiovascular diseases			
2.	Course Code and Number:	PHD 611			
3.	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
					4
4.	Study Level and Semester:	Sixth year - First semester			
5.	Pre-requisites (if any):	PHD 411			
6.	Co-requisites (if any):	NA			
7.	Program in which the course is offered:	Bachelor of PharmD			
8.	Teaching Language:	English			
9.	Instruction location:	UST and USTH			

II. Course Description

Cardiology rotation includes four weeks of supervised experiential training in the cardiology department at university of science and technology hospital. This rotation includes heart failure, acute coronary syndrome, arrhythmia, and other cardiovascular related diseases encountered in hospital setting. Trainee is required to attend morning round and discussing clinical cases based on daily follow-up, monitoring parameters in addition to developing pharmaceutical care plan. Completing therapeutics-cardiovascular diseases is prerequisite of this course.

III. Course Aims:

The aims of the course are to:

1. Enable students to improve effective verbal and non-verbal communication skills when interact with patient, caregivers or health care provider.
2. Train students to recognize signs, symptoms and complication of different cardiovascular disorders and differentiate between them.
3. Propose clinical interventions about pharmaceutical plan based on the clinical presentation and lab results of the patient during hospital setting
4. Equip the students with team-work and problem-solving skills



IV. Course Intended Learning Outcomes (CILOs) :

After completing this course, students would be able to:

1. Recognize the drugs and their therapeutic uses, safety, optimum use of medication and contraindications with other drug or in specific disease.
2. Describe underline causes, contributing factors and clinical manifestation of cardiovascular disorders and propose the life style modification and pharmaceutical plan.
3. Create patient-centered approach with the help of patient and other healthcare providers to improve patient's clinical outcome and quality of life.
4. Design cardiovascular treatment plan for patients with cardiovascular diseases and analyze their data to prevent drug related problems.
5. Apply academic knowledge and problem-solving skills to ensure effective use of cardiovascular medications and the effective way of self-monitoring plan to achieve the goal of treatment.
6. Implement therapeutic plan for patient based on the recommended treatment strategies and contribute to improve patient's outcome by providing medical intervention to the preceptor.
7. Cooperate effectively with patients and their care givers as well as healthcare professional by using effective verbal and non-verbal communication skills.
8. Review the information obtained from different resources with the ability to use those resources correctly to provide suitable medical intervention.

V. Course Contents

First: Theoretical Aspect

No.	Course Units	Sub-topics	Week due	Contact Hours
1	NA	•		
Total number of weeks and hours			16	

Second: Tutorial Aspects

No.	Tutorial topics	Week due	Contact Hours
1	NA		
Total number of weeks and hours			

Third: Practical Aspects

No.	Practical topics	Week due	Contact Hours
1	Hypertension (HTN) Heart Failure (HF)	1 st -4 th week	40
2	Venous Thromboembolism (VTE) Arrhythmia , Dyslipidemia	1 st -4 th week	40



3	Ischemic Heart Disease (IHD) Acute coronary syndrome (ACS)	1 st -4 th week	40
4	Hypovolemic Shock, Stroke	1 st -4 th week	40
Final exam		4 th week	2
Total number of weeks and hours		four weeks	162

VI. Teaching Strategies

1. Clinical cases studies
2. Small practical session and discussion
3. Tutorial session
4. Seminars
5. Critical analysis and reading
6. Clinical training and decision-making skills
7. Independent study
8. Use of advanced database searches
9. Individual supervision
10. Academic project support
11. Collecting, interpreting, and integrating available information in disease state
12. Review and monitor patient medication regimens
13. Oral presentations

VII. Tasks and Assignments

No.	Task/Assignment	Week due	Mark
1	In-Service	3 rd -4 th week	5

VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Rotation attendance	1 st -4 th week	10	15%
2	Daily evaluation	1 st -4 th week	15	15%
3	Weekly quiz	2 nd -3 rd week	10	10%
4	Formal case presentation	2 nd -3 rd week	20	20%
5	In-service	3 rd -4 th week	5	5%
6	Final term examination	4 th week	40	40%
Total			100	100%



IX. Learning Resources

1. Textbooks:

- Marie Chisholm-Burns. (2022). Pharmacotherapy: principle and practice, 6th edition, New York: McGraw-Hill Medical, United States of America.
- Koda-Kimble, M. A., & Young, L. Y. (2018). Applied therapeutics: The clinical use of drugs, 11th edition. Baltimore, Md: Lippincott Williams & Wilkins, United States of America.

2. Essential References:

- Lexicomp, (2020). Drug Information Handbook, 29th edition, Lexi-Comp, U.S.A
- DiPiro, J. T. (2021). Pharmacotherapy: Handbook, 11th edition, New York: McGraw-Hill Medical, United States of America.
- British national formulary (BNF), last edition, Pharmaceutical Press.
- Philip Wiffen & els, (2017), Oxford Handbook of Clinical Pharmacy, 3rd edition.
- Marie Chisholm-Burns (January 3, 2019), Pharmacotherapy Principles and Practice, 5th Edition, McGraw-Hill Education / Medical, United States of America.

3. Electronic Materials and Web Sites:

- www.uptodate.com
- www.medscape.com
- www.ncbi.nlm.nih.gov/pubmed
- <http://www.accp.com/>

X. Course Policies

Based on university regulations, the following aspects should be figured out:

1. (Class Attendance) :

- Students are required to attend all class lectures, tutorials and labs.
- Student will not allow attending the final exam if he exceeds the maximum number of absences (15% without excuses and 25% with excuses).

2. (Tardy) :

- Attendance will be taken every lecture at the first 10 minutes and any student comes after that will be considered absent.

3. (Exam Attendance/Punctuality) :

- Student should be in the examination hall before 15 minutes from the beginning of the exam.
- Late students are not allowed to get into the examination hall after the first 30 minutes and will be considered absent.
- Makeup exams will be offered to students who miss a scheduled exam because of illness, death in the family or university-sponsored activity, but written documentation must be provided.

4. (Assignments & Projects) :

- All assignments must be done on their time. Late assignments will not be accepted.
- Projects are assumed to be submitted on or before the dead-lines.

5. (Cheating) :

- Cheating is strictly prohibited behavior.
- University regulations will be pursued and enforced on any cheating student.



6.	(Plagiarism) : <ul style="list-style-type: none"> Plagiarism is defined as “copying or stealing someone else’s words or ideas and claiming or presenting them as if they were your own.” University regulations will be pursued and enforced on any plagiarism attempt.
7.	(Other policies) : <ul style="list-style-type: none"> Students in class, Lab. are required to turn off all cell phones, iPods,

2.Clinical training Oncology diseases

تدريب سريري: أمراض السرطان

I. General information about the course:					
1.	Course Title :	Clinical training: Oncology diseases			
2.	Course Code and Number:	PHD612			
3.	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
					4
4.	Study Level and Semester:	Sixth year - First semester			
5.	Pre-requisites (if any):	PHD527			
6.	Co-requisites (if any):	NA			
7.	Program in which the course is offered:	Bachelor of PharmD			
8.	Teaching Language:	English			
9.	Instruction location:	UST and USTH			

II. Course Description

Oncology rotation is deal with chemotherapy and supportive care of chemotherapy that utilized for the care of cancer patients. During this rotation, student will understand the therapeutic plan and procedure for patient with oncologic/hematologic disorders. This rotation will be taught through attending oncology rotation, discussing clinical cases based on daily follow-up, monitoring parameters in addition to pharmaceutical care plan evaluation. Completing PHD 527 is prerequisite for this rotation.

III. Course Aims:

The aims of the course are to:

1. Develop student’s knowledge and competence to provide clinical pharmacy services to hematology/oncology patients.
2. Develop practical and clinical skills that enable the student to improve the quality of life and provide advance pharmaceutical care for cancer patient.
3. Equip student with knowledge to recognize drug monitoring, patient assessments of pain, nausea, and other supportive care functions for oncology patient.
4. Establish collaborative professional relationships with patient, and oncology health care team.



IV. Course Intended Learning Outcomes (CILOs) :

After completing this course, students would be able to:

1. Recall chemotherapy agents and their therapeutic uses, safety, optimum use of medication and contraindications with other drug or in specific disease.
2. Identify contributing factors, clinical presentations, and disease prognosis to establish chemotherapy and supportive care plan with maintaining patient's quality of life.
3. Propose and prioritize medical recommendations in a variety of oncology/hematology disease.
4. Analyze the data collected to design chemotherapy regimen for cancer patient and prevent, detect, and resolve medication-related problems.
5. Implement evidence-based chemotherapeutic regimen and corresponding monitoring plan to the patient and other healthcare team in assertive and polite manner.
6. Practice evidence-based treatment strategy by giving interventions and recommendations that improve patient's outcome.
7. Cooperate effectively with patients and their care givers as well as healthcare professional by using effective verbal and non-verbal communication skills.
8. Assess information obtained from different resources like NCCN with the ability to provide suitable critique and use those resources correctly to provide evidence-based recommendations with maintaining the code of practice.

V. Course Contents

First: Theoretical Aspect

No.	Course Units	Sub-topics	Week due	Contact Hours
1	NA	•		
Total number of weeks and hours			16	

Second: Tutorial Aspects

No.	Tutorial topics	Week due	Contact Hours
1	NA		
Total number of weeks and hours			

Third: Practical Aspects

No.	Practical topics	Week due	Contact Hours
1	Breast Cancer Lung cancer	1 st -4 th week	40
2	Colorectal cancer Prostate cancer	1 st -4 th week	40



3	Lymphoma Acute and chronic Leukemia Multiple myeloma	1 st -4 th week	40
4	Ovarian, gastric, bladder, pancreatic, skin testicular carcinoma and osteosarcoma	1 st -4 th week	40
Final exam		4 th week	2
Total number of weeks and hours		four weeks	162

VI. Teaching Strategies

1. Clinical cases studies
2. Small practical session and discussion
3. Tutorial session
4. Seminars
5. Critical analysis and reading
6. Clinical training and decision-making skills
7. Independent study
8. Use of advanced database searches
9. Individual supervision
10. Academic project support
11. Collecting, interpreting, and integrating available information in disease state
12. Review and monitor patient medication regimens
13. Oral presentations

VII. Tasks and Assignments

No.	Task/Assignment	Week due	Mark
1	In-Service	3 rd -4 th week	5

VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Rotation attendance	1 st -4 th week	10	15%
2	Daily evaluation	1 st -4 th week	15	15%
3	Weekly quiz	2 nd -3 rd week	10	10%
4	Formal case presentation	2 nd -3 rd week	20	20%
5	In-service	3 rd -4 th week	5	5%
6	Final term examination	4 th week	40	40%
Total			100	100%



IX. Learning Resources

Textbooks:

- Marie Chisholm-Burns. (2022). Pharmacotherapy: principle and practice, 6th edition, New York: McGraw-Hill Medical, United States of America.
- Koda-Kimble, M. A., & Young, L. Y. (2018). Applied therapeutics: The clinical use of drugs, 11th edition. Baltimore, Md: Lippincott Williams & Wilkins, United States of America.

Essential References:

- Lexicomp, (2020). Drug Information Handbook, 29th edition, Lexi-Comp, U.S.A
- DiPiro, J. T. (2021). Pharmacotherapy: Handbook, 11th edition, New York: McGraw-Hill Medical, United States of America.
- British national formulary (BNF), last edition, Pharmaceutical Press.
- Philip Wiffen & els, (2017), Oxford Handbook of Clinical Pharmacy, 3rd edition.
- Marie Chisholm-Burns (January 3, 2019), Pharmacotherapy Principles and Practice, 5th Edition, McGraw-Hill Education / Medical, United States of America.

Electronic Materials and Web Sites:

- www.uptodate.com
- www.NCCN.org
- www.ncbi.nlm.nih.gov/pubmed
- <http://www.accp.com/>

X. Course Policies

Based on university regulations, the following aspects should be figured out:

1.	(Class Attendance) : <ul style="list-style-type: none"> • Students are required to attend all class lectures, tutorials and labs. • Student will not allow attending the final exam if he exceeds the maximum number of absences (15% without excuses and 25% with excuses).
2.	(Tardy) : <ul style="list-style-type: none"> • Attendance will be taken every lecture at the first 10 minutes and any student comes after that will be considered absent.
3.	(Exam Attendance/Punctuality) : <ul style="list-style-type: none"> • Student should be in the examination hall before 15 minutes from the beginning of the exam. • Late students are not allowed to get into the examination hall after the first 30 minutes and will be considered absent. • Makeup exams will be offered to students who miss a scheduled exam because of illness, death in the family or university-sponsored activity, but written documentation must be provided.
4.	(Assignments & Projects) : <ul style="list-style-type: none"> • All assignments must be done on their time. Late assignments will not be accepted. • Projects are assumed to be submitted on or before the dead-lines.
5.	(Cheating) : <ul style="list-style-type: none"> • Cheating is strictly prohibited behavior. • University regulations will be pursued and enforced on any cheating student.



6.	(Plagiarism) : <ul style="list-style-type: none"> Plagiarism is defined as “copying or stealing someone else’s words or ideas and claiming or presenting them as if they were your own.” University regulations will be pursued and enforced on any plagiarism attempt.
7.	(Other policies) : <ul style="list-style-type: none"> Students in class, Lab. are required to turn off all cell phones, iPods,

3. Clinical training Ambulatory care

تدريب سريري العيادات الخارجية

I. General information about the course:					
1.	Course Title :	Clinical training: Ambulatory care			
2.	Course Code and Number:	PHD613			
3.	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
					4
4.	Study Level and Semester:	Sixth year - First semester			
5.	Pre-requisites (if any):	PHD411, PHD421			
6.	Co-requisites (if any):	NA			
7.	Program in which the course is offered:	Bachelor of PharmD			
8.	Teaching Language:	English			
9.	Instruction location:	Semester-based			

II. Course Description
Ambulatory rotation is four experiential training weeks essentially deal with management of chronic diseases in the ambulatory care setting. In this course, student will expose to health-related disorders in cardiology, rheumatology, endocrinology and dermatology. This rotation will be taught through attending ambulatory clinics and discussing clinical cases based on daily follow-up, monitoring parameters and pharmaceutical care plan evaluation. Completing all therapeutics as well as integrated case-based learning courses is prerequisite for ambulatory rotation.

III. Course Aims:
This course aims to: <ol style="list-style-type: none"> Help student to understand the clinical manifestations and complications of the diseases encountered in ambulatory setting. Equip student with the ability to analyze treatment aims and algorithms, lab result interpretation, drug interactions, dose calculations, and drugs adverse effects. Develop student’s skills and gain experience in various roles in which pharmacist contribute to patient care in ambulatory setting. Guide student to develop practical and clinical skills that will improve patient’s pharmaceutical care.



IV. Course Intended Learning Outcomes (CILOs) :

After completing this course, students would be able to:

1. Recognize medication therapy management, safety, optimum use in ambulatory care setting and its contraindications
2. characterize the underline causes, contributing factors and clinical manifestations of the diseases encounter in outpatient setting along with patient data in order to develop a pharmaceutical care and monitoring plan to ensure efficacy and prevent drug-related problems.
3. Analyze the collected data to propose appropriate pharmaceutical regimen and monitoring plan for the patients in outpatient setting to ensure clinical improvement without drug-related problems.
4. Apply the effective use of medicine, provide timely and appropriate medication information and implement pharmaceutical care plan for the patient in the ambulatory care setting.
5. Employ interventions and recommendations regarding different treatment strategies in a way that improve patient's outcome.
6. Cooperate effectively with patients and their care givers as well as healthcare professional by using effective verbal and non-verbal communication skills.
7. Assess the information obtained from different resources and provide evidence-based medical intervention.

V. Course Contents

First: Theoretical Aspect

No.	Course Units	Sub-topics	Week due	Contact Hours
1	NA	•		
Total number of weeks and hours			16	

Second: Tutorial Aspects

No.	Tutorial topics	Week due	Contact Hours
1	NA		
Total number of weeks and hours			

Third: Practical Aspects

No.	Practical topics	Week due	Contact Hours
1	Bronchial asthma, COPD, allergic rhinitis, pharyngitis, sinusitis	1 st -4 th week	40



2	Gout and hyperuricemia, osteoarthritis, osteoporosis, rheumatoid arthritis	1 st -4 th week	40
3	IHD, HTN, HF, hyperlipidemia, post-stroke, post-MI, post-DVT	1 st -4 th week	40
4	Diabetes mellitus, thyroid disorders, Acne, psoriasis, dermatitis, topics discussion	1 st -4 th week	40
	Final exam	4 th week	2
Total number of weeks and hours		Four weeks	162

VI. Teaching Strategies

1. Clinical cases studies
2. Small practical session and discussion
3. Tutorial session
4. Seminars
5. Critical analysis and reading
6. Clinical training and decision-making skills
7. Independent study
8. Use of advanced database searches
9. Individual supervision
10. Academic project support
11. Collecting, interpreting, and integrating available information in disease state
12. Review and monitor patient medication regimens
13. Oral presentations

VII. Tasks and Assignments

No.	Task/Assignment	Week due	Mark
1	In-Service	3 rd -4 th week	5

VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Rotation attendance	1 st -4 th week	10	10%
2	Daily evaluation	1 st -4 th week	15	15%
3	Weekly quiz	2 nd -3 rd week	10	10%
4	Formal case presentation	2 nd -3 rd week	20	20%
5	In-service	3 rd -4 th week	5	5%
6	Final term examination	4 th week	40	40%
Total			100	100%



IX. Learning Resources

Textbooks:

- Marie Chisholm-Burns. (2022). Pharmacotherapy: principle and practice, 6th edition, New York: McGraw-Hill Medical, United States of America.
- Koda-Kimble, M. A., & Young, L. Y. (2018). Applied therapeutics: The clinical use of drugs, 11th edition. Baltimore, Md: Lippincott Williams & Wilkins, United States of America.

Essential References:

- Lexicomp, (2020). Drug Information Handbook, 29th edition, Lexi-Comp, U.S.A
- DiPiro, J. T. (2021). Pharmacotherapy: Handbook, 11th edition, New York: McGraw-Hill Medical, United States of America.
- British national formulary (BNF), last edition, Pharmaceutical Press.
- Philip Wiffen & els, (2017), Oxford Handbook of Clinical Pharmacy, 3rd edition.
- Marie Chisholm-Burns (January 3, 2019), Pharmacotherapy Principles and Practice, 5th Edition, McGraw-Hill Education / Medical, United States of America.

Electronic Materials and Web Sites:

1. www.uptodate.com
2. www.medscape.com
3. www.ncbi.nlm.nih.gov/pubmed
4. <http://www.accp.com/>

X. Course Policies

Based on university regulations, the following aspects should be figured out:

1.	(Class Attendance) : <ul style="list-style-type: none"> • Students are required to attend all class lectures, tutorials and labs. • Student will not allow attending the final exam if he exceeds the maximum number of absences (15% without excuses and 25% with excuses).
2.	(Tardy) : <ul style="list-style-type: none"> • Attendance will be taken every lecture at the first 10 minutes and any student comes after that will be considered absent.
3.	(Exam Attendance/Punctuality) : <ul style="list-style-type: none"> • Student should be in the examination hall before 15 minutes from the beginning of the exam. • Late students are not allowed to get into the examination hall after the first 30 minutes and will be considered absent. • Makeup exams will be offered to students who miss a scheduled exam because of illness, death in the family or university-sponsored activity, but written documentation must be provided.
4.	(Assignments & Projects) : <ul style="list-style-type: none"> • All assignments must be done on their time. Late assignments will not be accepted. • Projects are assumed to be submitted on or before the dead-lines.
5.	(Cheating) : <ul style="list-style-type: none"> • Cheating is strictly prohibited behavior. • University regulations will be pursued and enforced on any cheating student.



6.	(Plagiarism) : <ul style="list-style-type: none"> Plagiarism is defined as “copying or stealing someone else’s words or ideas and claiming or presenting them as if they were your own.” University regulations will be pursued and enforced on any plagiarism attempt.
7.	(Other policies) : <ul style="list-style-type: none"> Students in class, Lab. are required to turn off all cell phones, iPods,

4. Clinical training :Intensive care

تدريب سريري العناية المركزة

I. General information about the course:					
1.	Course Title:	Clinical training: Intensive care			
2.	Course Code and Number:	PHD614			
3.	Credit Hours:	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
					4
4.	Study Level and Semester:	Sixth year - First semester			
5.	Pre-requisites (if any):	PHD411			
6.	Co-requisites (if any):	NA			
7.	Program in which the course is offered:	Bachelor of PharmD			
8.	Teaching Language:	English			
9.	Instruction location:	UST & UST hospital			

II. Course Description

This rotation will provide the student the opportunity to develop skills for dealing with critically ill patients, under the supervision of team of multidisciplinary health care experts in an ICU environment. Main areas covered will be fluid electrolyte balance, cardiovascular hemodynamics, therapeutic drug monitoring for critically ill patients, glycemic control, prevention of stress ulcers, DVT, ventilator associated pneumonia, sepsis etc

III. Course Aims:

1. Improve students’ practical clinical skills that would enhance the positive contribution of clinical pharmacists in critical care.
2. Provides the students with advanced clinical training in critical care pharmacotherapy.
3. Prepares the students to function independently in the therapeutic management of patients admitted to intensive care units.
4. Teach students how to integrate their knowledge of drugs delivery and patient care to optimize and ensure a safe and cost-effective medication use system



IV. Course Intended Learning Outcomes (CILOs) :

1. Recognize the drugs and their therapeutic uses, safety, optimum use of medication and contraindications with other drug or in specific disease.
2. Describe the pathophysiology, underline causes, contributing factors and clinical manifestation of Sepsis, Fluid/Electrolyte abnormalities, and pulmonary embolism. In addition, propose the pharmaceutical care plan.
3. Establish treatment plan and take special considerations when designing for some populations.
4. Design and organize complex medication recommendations in a variety of critical care environments.
5. Formulate special dosage schedule to meet patient individualization therapy and Compare clinical data in the patient record with the normal range values, and analyze them.
6. Perform appropriate advice for the patients and other health care professionals on the safe and effective use of medicines, and implements an appropriate plan for therapeutic drug monitoring.
7. Implement, independently, interventions and recommendations about treatment strategies and cooperate effectively with patients, public and health care professionals; by using both written and oral communications.
8. Assess the scientific information about diseases and drugs that obtained from several online resources.

V. Course Contents

Theoretical Aspect:

No.	Course Units	Sub-topics	Week due	Contact Hours
1.	NA			
Total number of weeks and hours				

Second: Practical/Tutorial/Clinical Aspects :

Write up practical/tutorial/clinical topics

No.	Practical/Tutorial/Clinical topics *	No. of Weeks	Contact Hours
1.	Pulmonary Acute respiratory distress syndrome/acute lung injury, Status asthmaticus, Acute COPD exacerbation, Pulmonary embolism	1 st week	40
2.	Neurology Status epilepticus, Traumatic brain injury, Ischemic stroke,	2 nd week	40



	Subarachnoid hemorrhage, Intracerebral hemorrhage		
3.	Gastroenterology Acute upper and lower gastrointestinal bleeding, Severe pancreatitis, Liver failure, Hepatorenal syndrome, Complications of cirrhosis	3 rd week	40
4.	Renal & Infectious Diseases Acute renal failure, Acid-base imbalance, Fluid and electrolyte disorders, Sepsis, Ventilator Associated Pneumonia/Nosocomial Pneumonia , Intraabdominal Infections , Meningitis, Catheter Related Infections	4 th week	40
5.	Final exam	4 th week	2
Total number of weeks and hours		4 weeks	162

VI. Teaching Strategies

1. Clinical cases studies
2. Small practical session and discussion
3. Tutorial session
4. Seminars
5. Critical analysis and reading
6. Clinical training and decision-making skills
7. Independent study
8. Use of advanced database searches
9. Individual supervision
10. Academic project support
11. Collecting, interpreting, and integrating available information in disease state
12. Review and monitor patient medication regimens
13. Oral presentations

VII. Tasks and Assignments

No.	Task/Assignment	Week due	Mark
3	NA		

VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
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1	Rotation attendance	Week 1-4	15	15%
2	Daily evaluation	Week 1-4	15	15%
3	Weekly quiz	Week 2-4	10	10%
4	Formal case presentation	Week 1-4	20	20%
5	Final term examination	Week 4	40	40%
Total			100	100%

IX. Learning Resources

Textbooks

1. DiPiro, J. T. (2020). Pharmacotherapy: A pathophysiologic approach, 11th edition, New York: McGraw-Hill Medical, United States of America.
2. Koda-Kimble, M. A., & Young, L. Y. (2018). Applied therapeutics: The clinical use of drugs, 11th edition. Baltimore, Md: Lippincott Williams & Wilkins, United States of America

Essential References:

1. Lexicomp, (2020). Drug Information Handbook, 29th edition, Lexi-Comp, U.S.A
2. DiPiro, J. T. (2020). Pharmacotherapy: Handbook, 11th edition, New York: McGraw-Hill Medical, United States of America.
3. British national formulary (BNF), last edition, Pharmaceutical Press.
4. Philip Wiffen & els, (2017), Oxford Handbook of Clinical Pharmacy, 3rd edition.
5. Marie Chisholm-Burns (January 3, 2019), Pharmacotherapy Principles and Practice, 5th Edit McGraw-Hill Education / Medical, United States of America.

Electronic Materials and Web Sites:

1. www.uptodate.com
2. www.medscape.com
3. www.ncbi.nlm.nih.gov/pubmed
4. <http://www.accp.com>

X. Course Policies:

1.	Class Attendance : Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2.	Tardy : Attendance will be taken every lecture at the first 10 minutes and any student come after that will be considered absent
3.	Exam Attendance/Punctuality : All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4.	Assignments & Projects : All assignments must be done on their time. Late assignments will not be accepted.



5.	Cheating: Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6.	Plagiarism: “To plagiarize is to take ideas or words of another person & pass them off as one’s own”. Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7.	<p>Other policies:</p> <ul style="list-style-type: none"> • Industrial pharmacy training is hosted by local pharmaceutical industry. Keep in mind that your attitude and interaction affect the image of your school and future training agreements with these factories. Follow the regulations of the establishments and remember that these businesses are investing a lot of effort in your training. • Dress and act professionally. • Be attentive to what you are told and interact positively. Reading the theoretical material prior to visits is always a must-do practice. <p>Every student should have a notebook for the training experience. This notebook should be available for inspection by instructors upon request and will be graded.</p>



Second Semester

الفصل الثاني

1. Clinical training: Internal medicine I

تدريب سريري أمراض باطنية 1

I. General information about the course:					
1.	Course Title:	Clinical training: Internal medicine I			
2.	Course Code and Number:	PHD621			
3.	Credit Hours:	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
					4
4.	Study Level and Semester:	Sixth Year – Second Semester			
5.	Pre-requisites (if any):	PHD522, PHD421			
6.	Co-requisites (if any):	NA			
7.	Program in which the course is offered:	Bachelor of PharmD			
8.	Teaching Language:	English			
9.	Instruction location:	UST & UST hospital			

II. Course Description

This rotation will integrate knowledge of therapeutics and pathophysiology and is designed to allow the student the opportunity to provide pharmaceutical care in the areas of adult internal medicine. This course will stress the application of therapeutics in patient care and will cover infectious diseases, cardiovascular diseases, gastroenterology diseases, and kidney diseases.

III. Course Aims

1. Demonstrate an understanding for the principles and application of pharmacotherapy in medical care at the hospital.
2. Develop practical clinical skills that will enable the student to enhance the quality of life of patients and advance pharmaceutical care for the hospitalized patient.
3. Provide experiences in order to enhance communications skills when dealing with patients and with other healthcare providers.
4. Foster life-long learning via a self-directed educational process.

IV. Course Intended Learning Outcomes (CILOs) :

1. Recall the drugs and their therapeutic uses, safety, optimum use of medication and contraindications with other drug or in specific disease.



2. Describe the pathophysiology, underline causes, contributing factors and clinical manifestation of cardiovascular disorders and propose the life style and pharmaceutical plan.
3. Establish treatment plan and take special considerations when designing for some populations.
4. Design and organize complex medication recommendations in a variety of hospitalized patients and formulate special dosage schedule to meet patient individualization therapy.
5. Compare clinical data in the patient record with the normal range values, and analyze them and demonstrate suitable advice for the patients and other health care professionals on the safe and effective use of medicines, and implements an appropriate plan for therapeutic drug monitoring.
6. Implement, independently, interventions and recommendations about treatment strategies.
7. Cooperate effectively with patients, public and health care professionals; by using both written and oral communications.
8. Assess the scientific information about diseases and drugs that obtained from several online resources.

V. Course Contents

Theoretical Aspect:

No.	Course Units	Sub-topics	Week due	Contact Hours
1.	NA			
Total number of weeks and hours				

Second: Practical/Tutorial/Clinical Aspects :

Write up practical/tutorial/clinical topics

No.	Practical/Tutorial/Clinical topics	Week due	Contact Hours
1.	Infectious Diseases Respiratory tract infections, Tuberculosis, UTI	1 st week	40
2.	Cardiovascular Diseases Heart Failure (HF), Ischemic Heart Disease (IHD), Hypertension , Thromboembolic Disorders	2 nd week	40
3.	Gastroenterology Diseases Peptic Ulcer Disease (PUD) / Gastroesophageal reflux disease GERD, Management of nausea and vomiting (N/V), Management of diarrhea / constipation , Hepatic diseases (cirrhosis, hepatitis, drug-induced hepatitis)	3 rd week	40
4.	Renal Disorders Chronic Renal Failure/ESRD/Dialysis,	4 th week	40



	Acute Renal Failure , Acid/Base Balance		
5.	Final exam	4 th week	2
Total number of weeks and hours		4 weeks	162

VI. Teaching Strategies

1. Clinical cases studies
2. Small practical session and discussion
3. Tutorial session
4. Seminars
5. Critical analysis and reading
6. Clinical training and decision-making skills
7. Independent study
8. Use of advanced database searches
9. Individual supervision
10. Academic project support
11. Collecting, interpreting, and integrating available information in disease state
12. Review and monitor patient medication regimens
13. Oral presentations

VII. Tasks and Assignments

No.	Task/Assignment	Week due	Mark
4	NA		

VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Rotation attendance	Week 1-4	15	15%
2	Daily evaluation	Week 1-4	15	15%
3	Weekly quiz	Week 2-4	10	10%
4	Formal case presentation	Week 1-4	20	20%
5	Final term examination	Week 4	40	40%
Total			100	100%

IX. Learning Resources

Textbooks

1. DiPiro, J. T. (2020). Pharmacotherapy: A pathophysiologic approach, 11th edition, New York: McGraw-Hill Medical, United States of America.
2. Koda-Kimble, M. A., & Young, L. Y. (2018). Applied therapeutics: The clinical use of



drugs, 11th edition. Baltimore, Md: Lippincott Williams & Wilkins, United States of America

Essential References:

1. Lexicomp, (2020). Drug Information Handbook, 29th edition, Lexi-Comp, U.S.A
2. DiPiro, J. T. (2020). Pharmacotherapy: Handbook, 11th edition, New York: McGraw-Hill Medical, United States of America.
3. British national formulary (BNF), last edition, Pharmaceutical Press.
4. Philip Wiffen & els, (2017), Oxford Handbook of Clinical Pharmacy, 3rd edition.
5. Marie Chisholm-Burns (January 3, 2019), Pharmacotherapy Principles and Practice, 5th Edit McGraw-Hill Education / Medical, United States of America.

Electronic Materials and Web Sites:

1. www.uptodate.com
2. www.medscape.com
3. www.ncbi.nlm.nih.gov/pubmed
4. http://www.accp.com

X. Course Policies

1.	Class Attendance : Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2.	Tardy : Attendance will be taken every lecture at the first 10 minutes and any student come after that will be considered absent.
3.	Exam Attendance/Punctuality: All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4.	Assignments & Projects: All assignments must be done on their time. Late assignments will not be accepted.
5.	Cheating: Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6.	Plagiarism: "To plagiarize is to take ideas or words of another person & pass them off as one's own". Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7.	Other policies: <ul style="list-style-type: none"> • Industrial pharmacy training is hosted by local pharmaceutical industry. Keep in mind that your attitude and interaction affect the image of your school and future training agreements with these factories. Follow the regulations of the establishments and remember that these businesses are investing a lot of effort in



	<p>your training.</p> <ul style="list-style-type: none"> • Dress and act professionally. • Be attentive to what you are told and interact positively. Reading the theoretical material prior to visits is always a must-do practice. <p>Every student should have a notebook for the training experience. This notebook should be available for inspection by instructors upon request and will be graded.</p>
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2. Clinical training :internal medicine II

تدريب سريري أمراض باطنية 2

I. General information about the course:					
1.	Course Title:	Clinical training: internal medicine II			
2.	Course Code and Number:	PHD622			
3.	Credit Hours:	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
					4
4.	Study Level and Semester:	Sixth Year – Second Semester			
5.	Pre-requisites (if any):	PHD519, PHD421			
6.	Co-requisites (if any):	NA			
7.	Program in which the course is offered:	Bachelor of PharmD			
8.	Teaching Language:	English			
9.	Instruction location:	UST & UST hospital			

II. Course Description

This rotation will integrate knowledge of therapeutics, pathophysiology and is designed to allow the student the opportunity to provide pharmaceutical care in the areas of adult internal medicine. This course will stress the application of therapeutics in patient care and will cover rheumatology disorders, endocrinology disorders, neurology diseases, and pulmonary diseases.

III. Course Aims

1. Demonstrate an understanding for the principles and application of pharmacotherapy in medical care at the hospital.
2. Develop practical clinical skills that will enable the student to enhance the quality of life of patients and advance pharmaceutical care for the hospitalized patient.
3. Provide experiences in order to enhance communications skills when dealing with patients and with other healthcare providers.
4. Foster life-long learning via a self-directed educational process.



IV. Course Intended Learning Outcomes (CILOs):

1. Illustrate the drugs and their indications, safety, proper use of medications and contraindications with other drug or in specific disease.
2. Review the pathophysiology, underline causes, risk factors and clinical presentation of rheumatology disorders and other subjects in this rotation including the suggestions of the life style and pharmaceutical care plan.
3. Express the treatment plan and making special considerations when designing for some populations and create and systematize complicated medication regimens in a variety of hospitalized patients.
4. Propose special dosage schedule to meet patient individualization therapy and contrast clinical data in the patient record with the normal range values, and integrate them.
5. Perform appropriate advice for the patients and other health care professionals on the safety and efficacy of medicines, and implements a suitable plan for drug monitoring.
6. Employ interventions and recommendations about treatment strategies independently.
7. Cooperate effectively with patients, public and health care professionals; by using both written and oral communications.
8. Evaluate the scientific information about diseases and drugs that obtained from several online resources.

V. Course Contents

Theoretical Aspect:

No.	Course Units	Sub-topics	Week due	Contact Hours
	NA			
Total number of weeks and hours				

Second: Practical/Tutorial/Clinical Aspects :

Write up practical/tutorial/clinical topics

No.	Practical/Tutorial/Clinical topics	Week due	Contact Hours
1.	Rheumatology Disorders Gout and Hyperuricemia, Osteoarthritis, Rheumatoid Arthritis, Osteoporosis, Systemic lupus erythematosus (SLE)	1 st week	40
2.	Endocrinology Disorders Diabetes , Thyroid Disorders	2 nd week	40
3.	Neurology Diseases Pain Management, Stroke , Epilepsy	3 rd week	40



4.	Pulmonary Diseases COPD, Asthma,	4 th week	40
5.	Final exam	4 th week	2
Total number of weeks and hours		4 weeks	162

VI. Teaching Strategies

1. Clinical cases studies
2. Small practical session and discussion
3. Tutorial session
4. Seminars
5. Critical analysis and reading
6. Clinical training and decision-making skills
7. Independent study
8. Use of advanced database searches
9. Individual supervision
10. Academic project support
11. Collecting, interpreting, and integrating available information in disease state
12. Review and monitor patient medication regimens
13. Oral presentations.

VII. Tasks and Assignments

No.	Task/Assignment	Week due	Mark
1.	NA		

XII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Rotation attendance	Week 1-4	15	15%
2	Daily evaluation	Week 1-4	15	15%
3	Weekly quiz	Week 2-4	10	10%
4	Formal case presentation	Week 1-4	20	20%
5	Final term examination	Week 4	40	40%
Total			100	100%

VIII. Learning Resources

Textbooks



1. DiPiro, J. T. (2020). Pharmacotherapy: A pathophysiologic approach, 11th edition, New York: McGraw-Hill Medical, United States of America.
2. Koda-Kimble, M. A., & Young, L. Y. (2018). Applied therapeutics: The clinical use of drugs, 11th edition. Baltimore, Md: Lippincott Williams & Wilkins, United States of America.

Essential References:

1. Lexicomp, (2020). Drug Information Handbook, 29th edition, Lexi-Comp, U.S.A
2. DiPiro, J. T. (2020). Pharmacotherapy: Handbook, 11th edition, New York: McGraw-Hill Medical, United States of America.
3. British national formulary (BNF), last edition, Pharmaceutical Press.
4. Philip Wiffen & els, (2017), Oxford Handbook of Clinical Pharmacy, 3rd edition.
5. Marie Chisholm-Burns (January 3, 2019), Pharmacotherapy Principles and Practice, 5th Edit McGraw-Hill Education / Medical, United States of America.

Electronic Materials and Web Sites:

1. www.uptodate.com
2. www.medscape.com
3. www.ncbi.nlm.nih.gov/pubmed
4. <http://www.accp.com>

IX. Course Policies

1.	Class Attendance : Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2.	Tardy : Attendance will be taken every lecture at the first 10 minutes and any student come after that will be considered absent
3.	Exam Attendance/Punctuality: All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4.	Assignments & Projects: All assignments must be done on their time. Late assignments will not be accepted.
5.	Cheating: Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6.	Plagiarism: "To plagiarize is to take ideas or words of another person & pass them off as one's own". Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7.	Other policies: <ul style="list-style-type: none"> Industrial pharmacy training is hosted by local pharmaceutical industry. Keep in mind that your attitude and interaction affect the image of your school and future



training agreements with these factories. Follow the regulations of the establishments and remember that these businesses are investing a lot of effort in your training.

- Dress and act professionally.
- Be attentive to what you are told and interact positively. Reading the theoretical material prior to visits is always a must-do practice.

Every student should have a notebook for the training experience. This notebook should be available for inspection by instructors upon request and will be graded.

3. Clinical training :Pediatrics

تدريب سريري أطفال

I. General information about the course:					
1.	Course Title :	Clinical training :pediatrics			
2.	Course Code and Number:	PHD623			
3.	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
					4
4.	Study Level and Semester:	Sixth Year – Second Semester			
5.	Pre-requisites (if any):	PHD522			
6.	Co-requisites (if any):	NA			
7.	Program in which the course is offered:	Bachelor of PharmD			
8.	Teaching Language:	English			
9.	Instruction location:	UST and USTH			

II. Course Description

Pediatric course gives student opportunity to provide patient-centered care in the pediatric setting. During this course student will understand the therapeutic plan for pediatric patient, emphasis will be on common pediatric disease states, weight-based dosing, therapeutic drug monitoring. This rotation will be taught through attending pediatric rotation, discussing clinical cases based on daily follow-up, monitoring parameters in addition to pharmaceutical care plan evaluation. Completing obligatory and elective courses is prerequisite for this rotation.

III. Course Aims:

1. Develop students' thought processes necessary to promote a rational and systematic approach for identifying, evaluating, and resolving patient-specific drug-related problems.
2. Familiarize student with the etiology, and treatment of disease states commonly found in the pediatric and neonatal patient.
3. Improve communication skills and confidence necessary for student to interact efficiently with health-care providers, as well as with patients and their families.
4. Equip student with experience in collecting and analyzing data and make interventions and recommendations accordingly.



IV. Course Intended Learning Outcomes (CILOs) :

After completing this course, students would be able to:

1. Match medications and their therapeutic uses, safety, optimum use and contraindications with other drug or disease.
2. Recognize the underline causes, contributing factors and clinical manifestations of the pediatric patients along with their data in order to develop antibiotic care plan and effective monitoring plan to ensure efficacy and to reduce the toxicity of a pediatric treatment plan.
3. Design and prioritize complex medical recommendations in a variety of pediatric disease.
4. Analyze the collected data to formulate a specific pediatric treatment regimen taking into account specific dose, frequency, and duration to reduce drug-related problems.
5. Implement evidence-based treatment recommendations and corresponding monitoring plan to the patient or his care giver and other healthcare team in assertive and polite manner.
6. Practice evidence-based treatment strategies and recommendations that improve pediatric.
7. Cooperative effectively with patients and their care givers as well as healthcare professional by using effective verbal and non-verbal communication skills.
8. Evaluate information obtained from different resources and use this information to solve drug-related problem with maintaining the code of practice. patient's outcome.

V. Course Contents

First: Theoretical Aspect

No.	Course Units	Sub-topics	Week due	Contact Hours
1	NA	•		
Total number of weeks and hours			16	

Second: Tutorial Aspects

No.	Tutorial topics	Week due	Contact Hours
1	NA		
Total number of weeks and hours			

Third: Practical Aspects

No.	Practical topics	Week due	Contact Hours
1	Upper and lower respiratory infection, UTI, sepsis, Sickle Cell Disease	1 st -4 th week	40
2	Asthma, cystic fibrosis, whooping cough, DKA, Pediatric enuresis	1 st -4 th week	40
3	Thalassemia, G6PD deficiency ITP, FMF, rheumatic fever	1 st -4 th week	40



4	Febrile seizure, Nephrotic syndrome constipation, Kawasaki, SIDS, vaccination, ADHD	1 st -4 th week	40
	Final exam		2
Total number of weeks and hours		Four weeks	162

VI. Teaching Strategies

1. Clinical cases studies
2. Small practical session and discussion
3. Tutorial session
4. Seminars
5. Critical analysis and reading
6. Clinical training and decision-making skills
7. Independent study
8. Use of advanced database searches
9. Individual supervision
10. Academic project support
11. Collecting, interpreting, and integrating available information in disease state
12. Review and monitor patient medication regimens
13. Oral presentations

VII. Tasks and Assignments

No.	Task/Assignment	Week due	Mark
1	In-Service	3 rd -4 th week	5

VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Rotation attendance	1 st -4 th week	10	10%
2	Daily evaluation	1 st -4 th week	15	15%
3	Weekly quiz	2 nd -3 rd week	10	10%
4	Formal case presentation	2 nd -3 rd week	20	20%
5	In-service	3 rd -4 th week	5	5%
6	Final term examination	4 th week	40	40%
Total			100	100%

IX. Learning Resources



Textbooks:

- Marie Chisholm-Burns. (2022). Pharmacotherapy: principle and practice, 6th edition, New York: McGraw-Hill Medical, United States of America.
- Koda-Kimble, M. A., & Young, L. Y. (2018). Applied therapeutics: The clinical use of drugs, 11th edition. Baltimore, Md: Lippincott Williams & Wilkins, United States of America.

Essential References:

- Lexicomp, (2020). Drug Information Handbook, 29th edition, Lexi-Comp, U.S.A
- DiPiro, J. T. (2021). Pharmacotherapy: Handbook, 11th edition, New York: McGraw-Hill Medical, United States of America.
- British national formulary (BNF), last edition, Pharmaceutical Press.
- Philip Wiffen & els, (2017), Oxford Handbook of Clinical Pharmacy, 3rd edition.
- Marie Chisholm-Burns (January 3, 2019), Pharmacotherapy Principles and Practice, 5th Edition, McGraw-Hill Education / Medical, United States of America.

Electronic Materials and Web Sites:

1. www.uptodate.com
2. www.medscape.com
3. www.aap.org
4. <http://www.accp.com/>

X. Course Policies

Based on university regulations, the following aspects should be figured out:

1.	(Class Attendance) : <ul style="list-style-type: none"> • Students are required to attend all class lectures, tutorials and labs. • Student will not allow attending the final exam if he exceeds the maximum number of absences (15% without excuses and 25% with excuses).
2.	(Tardy) : <ul style="list-style-type: none"> • Attendance will be taken every lecture at the first 10 minutes and any student comes after that will be considered absent.
3.	(Exam Attendance/Punctuality) : <ul style="list-style-type: none"> • Student should be in the examination hall before 15 minutes from the beginning of the exam. • Late students are not allowed to get into the examination hall after the first 30 minutes and will be considered absent. • Makeup exams will be offered to students who miss a scheduled exam because of illness, death in the family or university-sponsored activity, but written documentation must be provided.
4.	(Assignments & Projects) : <ul style="list-style-type: none"> • All assignments must be done on their time. Late assignments will not be accepted. • Projects are assumed to be submitted on or before the dead-lines.
5.	(Cheating) : <ul style="list-style-type: none"> • Cheating is strictly prohibited behavior. • University regulations will be pursued and enforced on any cheating student.
6.	(Plagiarism) :



	<ul style="list-style-type: none"> Plagiarism is defined as “copying or stealing someone else’s words or ideas and claiming or presenting them as if they were your own.” University regulations will be pursued and enforced on any plagiarism attempt.
7.	(Other policies) : <ul style="list-style-type: none"> Students in class, Lab. are required to turn off all cell phones, iPods,

4. Clinical training: Hospital Pharmacy

تدريب سريري صيدلية المستشفى

I. General information about the course:					
1.	Course Title:	Clinical training: Hospital Pharmacy			
2.	Course Code and Number:	PHD624			
3.	Credit Hours:	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
					4
4.	Study Level and Semester:	Sixth Year – Second Semester			
5.	Pre-requisites (if any):	PHD517			
6.	Co-requisites (if any):	NA			
7.	Program in which the course is offered:	Bachelor of PharmD			
8.	Teaching Language:	English			
9.	Instruction location:	UST & UST hospital			

II. Course Description

This rotation will be an orientation to hospital pharmacy, inpatient and outpatient pharmacies, which will include how a pharmacy interfaces with the total hospital operation, pharmacist roles and models of practice, the standards of practice, technology used in pharmacy, and the distributive functions of the pharmacy. This course will cover inpatient and outpatient pharmacies, inventory, purchase and storage.

III. Course Aims

- Enhance student knowledge of the many aspects of hospital or health system pharmacy.
- Enable students to have a much richer institutional advanced pharmacy practice experience.
- Identify the medication use process in health-systems, including how pharmacy impacts the safety of storage, prescribing, transcription, dispensing, and administration and monitoring steps.
- Identify the basic functionality of commonly used automated systems related to the medication use process.



IV. Course Intended Learning Outcomes (CILOs):

1. Describe the medication use process in health-systems, including how pharmacy impacts the safety of storage, prescribing, transcription, dispensing, administration, monitoring steps, ethics, health policy and economics, pharmacy law, and causes and prevention of medical errors.
2. Discuss how medications are prepared and dispensed to specific patient care areas throughout the hospital, and how computer technology is applied for processing inpatient medication orders.
3. Implement, select, and prepare medications to be dispensed to a variety of hospital patient care areas.
4. Review the national standards, guidelines, best practices, and established principles and processes relate to quality and safe medication use.

V. Course Contents

Theoretical Aspect:

No.	Course Units	Sub-topics	Week due	Contact Hours
1.	NA			
Total number of weeks and hours				

Second: Practical/Tutorial/Clinical Aspects :

Write up practical/tutorial/clinical topics

No.	Practical/Tutorial/Clinical topics *	Week due	Contact Hours
1.	Out-patients Pharmacy Methods of drugs orders received, entering patient profile on computer, Selecting and labeling of drugs, Reviewing medication orders, Proper dispensing of drugs to patients, and patient education.	1 st week	40
2.	In-patients Pharmacy Methods of drugs orders received, entering patient profile on computer, Selecting and labeling of drugs, Automated drugs refill, and Delivering of orders to proper patient care area.	2 nd week	40
3.	Emergency Pharmacy Methods of drugs orders received, entering patient profile on computer, Selecting and labeling of drugs, and Proper dispensing of drugs to patients	3 rd week	40
4.	Inventory, purchase and storage of Medications System of purchasing and inventory control,	4 th week	40



	Drug formulary system, Methods of storage and distributions of drugs, Drug product recalls, Return of expired drugs to the manufacturer, and Defective drug product reports		
5.	Final exam	4 th week	2
Total number of weeks and hours		4 weeks	162

VI. Teaching Strategies

1. Practical sessions.
2. Seminars
3. Assignments
4. Small group training and discussion
5. Critical analysis and reading
6. Problem solving
7. Clinical training and decision-making skills
8. Use of advanced database searches
9. Individual supervision
10. Academic project support
11. Review and monitor patient medication regimens

VII. Tasks and Assignments

No.	Task/Assignment	Week due	Mark
1.	NA		

VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Rotation attendance	Week 1-4	20	20%
2	Daily evaluation	Week 1-4	20	20%
3	In-service	Week 2-4	10	10%
4	Weekly quiz	Week 2-4	10	10%
5	Final term examination	Week 4	40	40%
Total			100	100%

IX. Learning Resources

Textbooks

1. DiPiro, J. T. (2020). Pharmacotherapy: A pathophysiologic approach, 11th edition, New York: McGraw-Hill Medical, United States of America.



2. Koda-Kimble, M. A., & Young, L. Y. (2018). Applied therapeutics: The clinical use of drugs, 11th edition. Baltimore, Md: Lippincott Williams & Wilkins, United States of America.

Essential References:

1. Lexicomp, (2020). Drug Information Handbook, 29th edition, Lexi-Comp, U.S.A
2. DiPiro, J. T. (2020). Pharmacotherapy: Handbook, 11th edition, New York: McGraw-Hill Medical, United States of America.
3. British national formulary (BNF), last edition, Pharmaceutical Press.
4. Philip Wiffen & els, (2017), Oxford Handbook of Clinical Pharmacy, 3rd edition.
5. Marie Chisholm-Burns (January 3, 2019), Pharmacotherapy Principles and Practice, 5th Edit McGraw-Hill Education / Medical, United States of America.

Electronic Materials and Web Sites:

1. www.uptodate.com
2. www.medscape.com
3. www.ncbi.nlm.nih.gov/pubmed
4. <http://www.accp.com>

X. Course Policies

1.	Class Attendance : Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2.	Tardy : Attendance will be taken every lecture at the first 10 minutes and any student come after that will be considered absent.
3.	Exam Attendance/Punctuality: All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4.	Assignments & Projects: All assignments must be done on their time. Late assignments will not be accepted.
5.	Cheating: Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6.	Plagiarism: "To plagiarize is to take ideas or words of another person & pass them off as one's own". Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7.	Other policies: <ul style="list-style-type: none"> Industrial pharmacy training is hosted by local pharmaceutical industry. Keep in mind that your attitude and interaction affect the image of your school and future training agreements with these factories. Follow the regulations of the



establishments and remember that these businesses are investing a lot of effort in your training.

- Dress and act professionally.
- Be attentive to what you are told and interact positively. Reading the theoretical material prior to visits is always a must-do practice.

Every student should have a notebook for the training experience. This notebook should be available for inspection by instructors upon request and will be graded.

5. Clinical training Infectious diseases

تدريب سريري الأمراض المعدية

I. General information about the course:						
1.	Course Title :	Clinical training :Infectious diseases				
2.	Course Code and Number:	PHD625				
3.	Credit Hours :	Credit Hours				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
					4	4
4.	Study Level and Semester:	Sixth Year – Second Semester				
5.	Pre-requisites (if any):	PHD522				
6.	Co-requisites (if any):	NA				
7.	Program in which the course is offered:	Bachelor of PharmD				
8.	Teaching Language:	English				
9.	Instruction location:	UST and USTH				

II. Course Description

This rotation expands the knowledge and skills regarding clinical microbiology, designing antibiotics care plan, pharmacokinetic and adverse effects of antibiotics. This course discusses the systematic approach of evaluating infectious diseases regarding pathophysiology, clinical presentation, diagnosis and treatment and monitoring of different infectious diseases of different body systems that acquired either in hospital or community setting. Studying therapeutic courses is prerequisite for this rotation. This course is taught through supervised clinical training.

III. Course Aims:

This course aims to:

1. Help student to collect and organize all patient-specific information needed to prevent, detect, and resolve antibiotic-related problems and to make appropriate evidence-based, patient-centered antibiotic therapy recommendations to their preceptor.



2. Equip student with ability to demonstrate an understanding of the antibiotics that are commonly used to treat hospital acquired and community acquired infections.
3. Enable student to develop an in-depth understanding of the interpretations of laboratory Values.
4. Assist student to design a treatment regime that includes appropriate antibiotics, length of treatment, and surgical or other interventions necessary to treat the infection.

IV. Course Intended Learning Outcomes (CILOs) :

After completing this course, students would be able to:

1. Recognize the drugs and their therapeutic uses, safety, optimum use of antibiotics and their contraindications with other drug or in specific disease
2. Recognize the underline causes, contributing factors and clinical manifestations of infectious disease along with patient data in order to develop antibiotic care plan and effective monitoring plan to ensure efficacy and reduce the toxicity of the antibiotics care plan.
3. Analyze the collected data to formulate the specific antibiotic regimen for specific patient taking into account dose, frequency, duration to reduce drug related problems.
4. Design suitable methods to minimize the risk of infection and antibiotic resistance.
5. Apply academic knowledge and problem-solving skills to make intervention about the effective use of antibiotics.
6. Employ therapeutic plan for a patient based on the recommended treatment strategies and contribute to improve patient's outcome by providing medical intervention to the preceptor.
7. Apply appropriate therapeutic plan based on the site of infection and risk of bacterial resistance.
8. Cooperate effectively with patients and their care givers as well as healthcare professional by using effective verbal and non-verbal communication skills.

V. Course Contents

First: Theoretical Aspect

No.	Course Units	Sub-topics	Week due	Contact Hours
1	NA	•		
Total number of weeks and hours			16	

Second: Tutorial Aspects

No.	Tutorial topics	Week due	Contact Hours
1	NA		
Total number of weeks and hours			

Third: Practical Aspects



No.	Practical topics	Week due	Contact Hours
1	Pneumonia, Skin and soft tissue infections Intra-abdominal infections primary, secondary and tertiary peritonitis and C.difficile diarrhea. Gastrointestinal Infections Sepsis and Septic Shock	1 st -4 th week	40
2	Infective Endocarditis Central nervous system infection, Febrile neutropenic patient	1 st -4 th week	40
3	Common outpatient infections: otitis media, sinusitis, pharyngitis, acute exacerbation of chronic bronchitis and acute bronchitis. Urinary-tract infections, Osteomyelitis	1 st -4 th week	40
4	Superficial Fungal Infections Invasive Fungal Infections Drug fever, Tuberculosis	1 st -4 th week	40
	Final exam	4 th week	2
Total number of weeks and hours		Four weeks	162

VI. Teaching Strategies

1. Clinical cases studies
2. Small practical session and discussion
3. Tutorial session
4. Seminars
5. Critical analysis and reading
6. Clinical training and decision-making skills
7. Independent study
8. Use of advanced database searches
9. Individual supervision
10. Academic project support
11. Collecting, interpreting, and integrating available information in disease state
12. Review and monitor patient medication regimens
13. Oral presentations

VII. Tasks and Assignments

No.	Task/Assignment	Week due	Mark
1	In-Service	3 rd -4 th week	5

VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Rotation attendance	1 st -4 th week	10	10%



2	Daily evaluation	1 st -4 th week	15	15%
3	Weekly quiz	2 nd -3 rd week	10	10%
4	Formal case presentation	2 nd -3 rd week	20	20%
5	In-service	3 rd -4 th week	5	5%
6	Final term examination	4 th week	40	40%
Total			100	100%

IX. Learning Resources

Textbooks:

- Marie Chisholm-Burns. (2022). Pharmacotherapy: principle and practice, 6th edition, New York: McGraw-Hill Medical, United States of America.
- Koda-Kimble, M. A., & Young, L. Y. (2018). Applied therapeutics: The clinical use of drugs, 11th edition. Baltimore, Md: Lippincott Williams & Wilkins, United States of America.

Essential References:

- Lexicomp, (2020). Drug Information Handbook, 29th edition, Lexi-Comp, U.S.A
- DiPiro, J. T. (2021). Pharmacotherapy: Handbook, 11th edition, New York: McGraw-Hill Medical, United States of America.
- British national formulary (BNF), last edition, Pharmaceutical Press.
- Philip Wiffen & els, (2017), Oxford Handbook of Clinical Pharmacy, 3rd edition.
- Marie Chisholm-Burns (January 3, 2019), Pharmacotherapy Principles and Practice, 5th Edition, McGraw-Hill Education / Medical, United States of America.

Electronic Materials and Web Sites:

- www.uptodate.com
- www.medscape.com
- www.ncbi.nlm.nih.gov/pubmed
- <http://www.accp.com/>

X. Course Policies

Based on university regulations, the following aspects should be figured out:

1.	(Class Attendance) :
	<ul style="list-style-type: none"> Students are required to attend all class lectures, tutorials and labs. Student will not allow attending the final exam if he exceeds the maximum number of absences (15% without excuses and 25% with excuses).
2.	(Tardy) :
	<ul style="list-style-type: none"> Attendance will be taken every lecture at the first 10 minutes and any student comes after that will be considered absent.
3.	(Exam Attendance/Punctuality) :
	<ul style="list-style-type: none"> Student should be in the examination hall before 15 minutes from the beginning of the exam. Late students are not allowed to get into the examination hall after the first 30 minutes and will be considered absent.



	<ul style="list-style-type: none"> Makeup exams will be offered to students who miss a scheduled exam because of illness, death in the family or university-sponsored activity, but written documentation must be provided.
4.	(Assignments & Projects) : <ul style="list-style-type: none"> All assignments must be done on their time. Late assignments will not be accepted. Projects are assumed to be submitted on or before the dead-lines.
5.	(Cheating) : <ul style="list-style-type: none"> Cheating is strictly prohibited behavior. University regulations will be pursued and enforced on any cheating student.
6.	(Plagiarism) : <ul style="list-style-type: none"> Plagiarism is defined as “copying or stealing someone else’s words or ideas and claiming or presenting them as if they were your own.” University regulations will be pursued and enforced on any plagiarism attempt.
7.	(Other policies) : <ul style="list-style-type: none"> Students in class, Lab. are required to turn off all cell phones, iPods,

6. Pharmaceutical Researches

ابحاث صيدلانية

I. General information about the course:					
1.	Course Title :	Pharmaceutical Researches			
2.	Course Code and Number :	PHD624			
3.	Credit Hours :	Credit Hours			
		Theoretical	Seminar/Tutorial	Practical	Training
		-	-	2	-
4.	Study Level and Semester:	Sixth Year – Second Semester			
5.	Pre-requisites	BUST10			
6.	Co-requisites	NA			
7.	Program in which the course is offered:	Bachelor of Pharmacy			
8.	Teaching Language:	English			
9.	Instruction location:				

II. Course Description

This course is a broad coverage of research design, data collection, and data analysis. The course focuses on the spectrum of clinical research and research process by reviewing the literature and highlighting epidemiologic methods, study design, proposal and protocol preparation, principles involved in the ethical, legal, and regulatory issues in clinical human subjects research, including the overview of basic biostatistical and epidemiologic methods involved in conducting clinical research.



III. Course Aims

1. Help last year pharmacy students develop the ability to synthesize a research question.
2. Teach the students to appraise the literature related to the research question.
3. Being able to perform search using databases to answer specific medical information questions.
4. Learning the ethics in clinical research and understanding the meaning of Plagiarism
5. Involve the students in teamwork-centered activities throughout research and report defense.

IV. Course Intended Learning Outcomes (CILOs) :

1. Recognize the importance of scientific research in the progress of healthcare.
2. Identify the ethics and professional responsibilities of a researcher.
3. Formulate a research hypothesis.
4. Plan a proper methodology to test the hypothesis.
5. Conduct cases appropriately.
6. Interpret the acquired data obtained in the study.
7. Review literature published in the area of research project.
8. Combine gained knowledge towards the synthesis of a final report.
9. Manage a research project in terms of finance, time, and decision-making.

V. Course Contents

Theoretical Aspect:

No.	Course Units	Sub-topics	Week due	Contact Hours
1	Graduation Project Orientation	Introduction, expected outcomes, relevant concepts, assessment	1 st	4
2	Project concept stage	Ideas brainstorming	2 nd	4
3	Submission of project proposal	Proposal submitted to the scientific committee	3 rd	4
4	Approval of projects	The decision of the scientific committee is announced	4 th	4
5	Carrying out research activities	the period of actual carrying out of project studies	5 th -14 th	40
6	Final report submission		15 th	4
7	Final presentation		16 th	2
Total number of weeks and hours				62

VI. Teaching Strategies



1. Orientation.
2. Assigned reading.
3. Practical applications.
4. Regular group meetings
5. Working in groups.

VII. Tasks and Assignments

No.	Task/Assignment	Week due	Mark
2	NA	-	-

VIII. Learning Assessment:

No.	Assessment Tasks	Week due	Mark	Weight
1	Proposal	4	30	30%
2	Cumulative Assessment by advisor	14	30	30%
3	Final Report	15	20	20%
4	Final Presentation	16	20	20%
Total			100	100%

Learning Resources:

(Author, (Year), Book Title, Edition, Publisher, Country of publishing)

Textbooks-not more than 2

1. A.J. Winfield, J.A, Rees, I. Smith, (2009), Pharmaceutical practice, fourth edition, USA

Essential References-not less than 4

1. A. I. Fathelrahman, M.I.M. Ibrahim, A. Wertheimer, (2016), Pharmacy Practice in Developing Countries

Electronic Materials and Web Sites

1. www.pubmed.com
2. www.sceincedirect..com
3. www.hinari.who.gov (only accessible within university campus)



IX. Course Policies	
Based on university regulations, the following aspects should be figured out:	
1.	(Class Attendance): Attendance is mandatory for all students for credit to be received and will be monitored. The student is excluded from class if absence percentage exceeds 15% with no excuse or 25% with an accepted excuse.
2.	(Tardy) :
3.	(Exam Attendance/Punctuality) : All students registered for the course are required to attend the assigned exams. Dates and locations will be posted prior to the examination date. No re-sit exams are carried out for in-course examinations. If the student misses an in-course examination and his/her excuse was accepted, the missed exam grade will be calculated from the final exam grade. If a student misses the final exam, and unless he/she provides an accepted excuse, a grade of F will be granted. If the excuse was accepted, a student may take the exam as first attempt in the second attempt examinations.
4.	(Assignments & Projects) :
5.	(Cheating) : Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Please refer to the academic regulations of UST for further details.
6.	(Plagiarism) : “To plagiarize is to take ideas or words of another person & pass them off as one’s own”. Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university).
7.	(Other policies) :

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Republic of Yemen

University of Science and Technology

Deanship of Development and Quality Assurance



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