Faculty: Pharmacy **الكلية: الصيدلة**

Department: Pharmaceutical Sciences **القســـــم: العلوم الصيدلانية**
Program: Bachelor of Pharmacy **البرنامج: بكالوريوس صيدلة**

Courses syllabus

Faculty: Pharmacy **الكلية: الصيدلة**

Department: Pharmaceutical Sciences **القســـــم: العلوم الصيدلانية**
Program: Bachelor of Pharmacy **البرنامج: بكالوريوس صيدلة**

Course syllabus وصف المقررات

First Year Courses مقررات السنة الأولى

First Semester الفصل الأول

1. Course Syllabus Islamic Culture خطة مقرر الثقافة الاسلامية

I. General information about the course معلومات عامة عن المقرر:						
1	اسم المقرر Course Title	الثقافة الإسلامية				
2	رمز المقرر ورقمه: Course Code and Number	BUST05				
3	الساعات المعتمدة للمقرر Credit Hours	الساعات المعتمدة Credit Hours				المجموع Total
		نظري Theoretical	سمنار/تمارين Seminar/Tutorial	عملي Practical	تدريب Training	
		4	-	-	-	4
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	كل برامج الجامعة				
8	لغة تدريس المقرر Teaching Language	اللغة العربية				

9	مكان تدريس المقرر Instruction location:	قاعات الجامعة

II. وصف المقرر الدراسي: Course Description
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 (بوسطية). ويتم أخذ هذا المقرر بطريقة الحوار والمناقشة، كما يكلف فيه الطلبة بالبحوث التي تخدم أهداف المقرر. ويتم تقييم الطلبة عن طريق المشاركة الصفية واللاصفية والأعمال التي يكلف بها الطلبة والاختبارات النصفية والنهائية.

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

IV. مخرجات التعلم المقصودة للمقرر: Course Intended Learning Outcomes (CILOs)
بعد الانتهاء من هذا المقرر سيكون الطالب قادراً على: After completing this course, would be able to:
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.

V. محتوى المقرر:				Course Contents
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	4
2	لمحات من عصر الرسالة	-لمحات عن حياة النبي	1	4
3	النظم الإسلامية	-مفهوم النظم الإسلامية. -النظام التشريعي. -النظام الأخلاقي. -النظام الاجتماعي.	1	4
4	إسهامات المسلمين في الحضارة الإسلامية	-معنى الحضارة وأسسها. -لمحة عن أثر الحضارة الإسلامية في الإنسانية. -إسهامات علماء المسلمين	1	4
5	تحديات معاصرة تواجه المجتمع المسلم	-التحديات الداخلية. -التحديات الخارجية.	1	4
6	قضايا سياسية	-الخلافة وقضية فلسطين والأقليات. -الإرهاب والتطرف والجهاد.	1	4
7	قضايا اجتماعية	-قضايا المرأة. -قضايا متفرقة.	1	4
8	مناقشة تكاليف	استعراض تكاليف الطلبة وتقويمها	1	4
9	الاختبار النصفي	-الاختبار. -حل الاختبار	1	4
10	قضايا اقتصادية	-الرباو، المصارف الإسلامية. -التأمين. -الأسواق المالية. -هجرة رؤوس الأموال الإسلامية. -ظاهرة غسيل الأموال.	1	4
11	الشباب ومشكلاته	-مفهوم الشباب وأهمية المرحلة. -الفراغ وآفة البطالة.	1	4
12	الشباب ومشكلاته	-الصحبة وآثارها. -الإسلام والجنس.	1	4
13	قضايا معاصرة	-المحافظة على البيئة والسلامة المهنية. -أحكام عمليات التجميل. -الإجهاض.	1	4
14	قضايا معاصرة	-زراعة الأعضاء ونقلها والتبرع بها. -الخلايا الجذعية، والاستنساخ. -أخلاقية المهنة.	1	4
15	استكمال مناقشة التكاليف		1	4

16	الاختبار النهائي		1	4
إجمالي عدد الأسابيع والساعات		Total number of weeks and hours	16	64

VI. استراتيجيات التدريس Teaching Strategies
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 No.	النشاط/ التكليف Task/Assignment	الأسبوع Week due	الدرجة Mark
.1	تكليف بالبحوث	6+5+4+3+2	%10
.2	مناقشة البحوث	15+8	%10

VIII. تقييم التعلم : Learning Assessment

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

IX. مصادر التعلم: Learning Resources
1. المراجع الرئيسة: Textbooks 1. 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 وكيفيته ونسبته، ومتى يعد الطالب محروماً من المقرر
2.	الحضور المتأخرTardy : 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 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 التكليفات.... الخ

2. Course Syllabus English Language (1) خطة مقرر اللغة الإنجليزي(1)

I. General information about the course:						
1.	Course Title :	English Language (1)				
2.	Course Code and Number :	BUST02				
3.	Credit Hours :	Credit Hours				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		-	-	8	-	4
4.	Study Level and Semester:	Level 1,2 (1st & 2nd 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 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	Personal Information	• Alphabets • Personal information • Numbers • Names, area codes, countries, and phone numbers.	1	8	
2	At School	• Days and dates • Classroom directions. • Months • classroom objects and furniture	1	8	
3	Friends and Family	• location. • Countries and nationalities.	1	8	
4	Health	• health problems. • Simple present tense • Affirmative sentences of all tenses	1	8	
5	Daily Life	• Negative sentences of all tenses. • Interrogative. • People's activities.	1	8	
6	Home Responsibilities	• Asking about family relations • Family chores • Talking about likes and dislikes	1	8	
7	Free Time	• Buildings in the city. • House chores. • Leisure activities.	1	8	

8	Do you like mornings?	• Talking about special Occasions like "birthdays". • One's routine	1	8	
9	It changed my life	• Describing events.	1	8	
10	Trip of a life time	• appointments. • Asking and answering about time and dates.	1	8	
11	Today is Different	• Daily life activities. • Possessive adjectives and Possessive s.	1	8	
12	Small Things	• Rooms in the house • Places in the city • Colors and common adjectives	1	8	
13	Food and Drinks	• 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

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&selLanguage=en&mode=hub

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. • 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) :** • 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) :** • 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) :** • 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) :** • Cheating is strictly prohibited behavior. • ILC regulations will be pursued and enforced on any cheating student.
6.	**(Plagiarism) :** • 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) :** • 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 Communications 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				المجموع
		نظري	سمنار/تمارين	عملي	تدريب	
		1	-	-	-	1
4.	المستوى والفصل الدراسي:	حسب خطة كل برنامج				
5.	المتطلبات السابقة لدراسة المقرر (إن وجدت):	لا يوجد				
6.	المتطلبات المصاحبة لدراسة المقرر (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 جدية تعتمد على التدريب والتقويم المتنوع والفعال، بما يسهم 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 مفهومات 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 بطلاقه 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. مهارات بناء العلاقات مع الآخرين. الإفصاح عن الذات. لمن نفصح عن ذواتنا. قواعد الافصاح عن الذات.	7، 8	2
7	الاتصال في المجموعات الصغيرة	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	9	1
8	الاتصال مع الجمهور	تعريف الاتصال مع الجمهور طبيعة الاتصال مع الجمهور. أهمية العرض والإلقاء مع الجمهور. مقومات العرض الجيد . مهارات العرض والإلقاء .	10	1
9	التعبير عن الذات	تعريف السيرة الذاتية. محتويات السيرة الذاتية. أخطاء السيرة الذاتية. تعريف المقابلة الشخصية. الاستعدادات الضرورية للمقابلة الشخصية.	11، 12	2
10	إعداد وكتابة الرسائل والتقارير	تعريف الرسائل الإدارية. أنواع الكتابة الإدارية. يبين أهمية إعداد الرسائل في الأعمال الإدارية. أنواع المراسلات. كيفية إعداد الرسالة من حيث شكلها ومواصفاتها. تعريف التقارير. الفرق بين ماهية الرسالة والتقرير. أنواع التقارير. وظائف التقارير. خصائص التقرير الجيد. خطوات إعداد التقارير.	13، 14	2
14		**إجمالي عدد الأسابيع والساعات**	**14**	**14**

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

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 والتكليفات:			
الرقم	النشاط/ التكليف	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 التقويم الجامعي	60	%60
	المجموع		**100**	**%100**

IX. مصادر التعلم:

المراجع الرئيسية:

1. (د.محمد سرحان علي المحمودي،(2014م) ،مهارات الاتصال ،الاولى ، ، اليمن)

المراجع المساعدة (لا تقل عن أربعة):

مهارات الاتصال، (2012م)، الجامعة السعودية الالكترونية، الطبعة الأولى

1. د/جمعان سعيد القحطاني،(2009م)، مهارات الاتصال، السنة التحضيرية، جامعة الملك سعود
2. د/ طارق السويدان، (1429هـ)، فن الإلقاء الرائع، شركة الإبداع للنشر والتوزيع، الكويت
3. د/ سعد بن بركي حمدي المسعودي، (2007م)، مهارات الاتصال، الطبعة الأولى، جامعة الملك عبد العزيز، المملكة العر السعودية.
4. 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 المتأخرTardy : 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 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 التكليفات.... 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				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		2	-	1	-	3
4	Study Level and Semester:	First year and first Semester				
5	Pre-requisites (ifany):	Non				
6	Co-requisites (if any):	Non				
7	Program in which the course is offered:	Bachelors				
8	Teaching Language:	English				
9	Instruction location:	Sana'a				

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	No. of Weeks	Contact Hours
1	Introduction	History of evolution	2	4
2	Macromolecules	carbohydrates , lipids , proteins and nucleic aid	3	6
3	Cells	prokaryotes , eukaryotes , cell organelles	2	4
4	Midterm exam.		1	2
5	Transport	active , passive , and bulky	3	6
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**	**32**

Second: Practical/Tutorial/Clinical Aspects :

Write up practical/tutorial/clinical topics

No.	Practical/Tutorial/Clinical topics	No. of Weeks	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.Overhead 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				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		2	2	-	-	3
4	Study Level and Semester:	1st level , 1st 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:	Faculty of Engineering				

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	• Linear Equations • Quadratic Equations • Linear Inequalities • Quadratic Inequalities • Absolute Value	4	8
2	Power and Logarithm	• laws of power and it's problems • laws of Logarithm and it's problems • power and Logarithm equations	3	6
3	Real Functions	• principles of Functions • description of Functions • Types of Functions	3	6
4	Limit and Continuity	• Limited of Functions • Continuity of Functions	4	8
Total number of weeks and hours			**14**	**28**

Second: Tutorial

No.	Practical/Tutorial/Clinical topics	No. of Weeks	Contact Hours
1	• Linear Equations • Quadratic Equations • Linear Inequalities • Quadratic Inequalities • Absolute Value	4	8
2	• laws of power and it's problems • laws of Logarithm and it's problems • power and Logarithm equations	3	6
3	• principles of Functions • description of Functions • Types of Functions	3	6
4	• 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. Rhonda Huetenmueller , (2005), Pre-calculus , McGraw-Hill Companies ,USA.

Essential References:

1. James Stewart , (2008) , Calculus, Early Transcendental , Thomson, 5th Edition , Internationa 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 University USA .
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) :** • 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 come 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) :** • 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) :** • Students in class, Lab. are required to turn off all cell phones, IPods, ….

6.Course Syllabus General Chemistry (1) خطة مقرر كيمياء عامة (1)

I. General information about the course:						
1.	Course Title :	General Chemistry (1)				
2.	Course Code and Number :	PHS112				
3.	Credit Hours :	Credit Hours				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		2		2		3
4.	Study Level and Semester:	Year 1 /Semester 1				
5.	Pre-requisites (if any):	None				
6.	Co-requisites (if any):	None				
7.	Program in which the course is offered:	Bachelor of Pharmacy				
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 stoichiomtery concept to solve the problems related to chemical calculations.
5. Handle chemicals in their various forms in a safe manor.
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	- The study of chemistry - Classification of mater - properties of mater - Unit of measurements - Uncertainly in the measurement - Dimension analysis	2	4
2	Atom, molecule and ion	- 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	2	4
3	Stoichiometry, Calculation with chemical formula and equations	- chemical equations - Some simple patterns of chemical reactivity - Formula weight - The mole - Empirical formula from analysis - quantitative information from balanced chemical equation - Limiting reagent	3	6

4	Aqueous Reaction and Solution stoichiometry	- general properties of aqueous reactions - Precipitation reaction - Acid base reactions - Oxidation reduction reactions - Concentration of solutions - Solution stoichiometry and chemical analysis	2	4
5		Med-Term	1	2
6	Electronic structure of atoms	- the wave nature of light - 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	2	4
7	Periodic properties of the elements	- 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	3	6
8	Final Exam		1	**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.	Lab. safety	1	2
2.	Laboratory Equipments and uses	1	2
3.	Identification of carbonate and bicarbonate	1	2
4.	Identification of chloride and Iodide	1	2
5.	Identification of sulphate and borate	1	2
6.	Scheme for identification of unknown salts	1	2
7.	Midterm exam	1	2

8.	Identification of silver , mercuric and cupric ions	1	2
9.	Flame Tests of Metal Cations (Na^{+},K^{+},Li^{+},Ca^{+2},Ba^{+2},Cu^{+2})	1	2
10.	Solutions a- Nature of Solute and Solvent b- Effect of Temperature on Solubility c- Super Saturation	1	2
11.	Properties of Acids and Bases	1	2
12.	Scheme for identification of unknown salts	1	2
13.	Final practical Exam	1	2
Total number of weeks and hours		**13**	**26**

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		20	20%
2	Assignment		10	10%
3	Practical Part		30	30%
4	Final Exam		40	40%
	Total		**100**	**100%**

VIII. 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 Nelso 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

I. General information about the course	معلومات عامة عن المقرر:	
مهارات تلاوة القرآن الكريم وتجويده	اسم المقرر: Course Title	1.
BUST01	رمز المقرر ورقمه: Course Code and Number	2.
الساعات المعتمدة Credit Hours: نظري Theoretical: - ; سمنار/تمارين Seminar/Tutorial: - ; عملي Practical: 2 ; تدريب Training: - ; المجموع Total: 1	الساعات المعتمدة للمقرر: Credit Hours	3.
الأول (الفصل الثاني)	المستوى والفصل الدراسي: Level and Semester	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.
جميع برامج الجامعة	البرنامج/ البرامج التي يتم فيها تدريس المقرر: Program in which the course is offered:	7.
العربية	لغة تدريس المقرر: Teaching Language	8.
قاعات الجامعة	مكان تدريس المقرر: Instruction location:	9.

II. وصف المقرر الدراسي: Course Description

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 الآداب 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 النصفي والنهائي.

III. أهداف المقرر: Course Aims

يهدف هذا المقرر إلى:

1- حفظ نصف جزء عمَ 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.

IV. مخرجات التعلم المقصودة للمقرر Course Intended Learning Outcomes (CILOs)
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 مرققة -
- يطبق أنواع المدود المختلفة أثناء قراءته للقرآن الكريم.
- يستخرج أحكام التجويد من النصوص القرآنية .
- يلتزم بالآداب التي تعلمها خلال دراسته للمقرر
- يستشعر أهمية قراءة القرآن الكريم مجوداً
- يقرأ القرآن قراءة صحيحة خالية من اللحن الجلي والخفي .

V. محتوى المقرر:	Course Contents

الجانب النظري: Theoretical Aspect

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

الجانب العملي / تمارين / سريري: Second: Practical/Tutorial/Clinical Aspects

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 No. of Weeks	الساعات الفعلية Contact Hours
1	تلقين من الناس – الكافرون+ الاستماع لقراءة الطلاب	1	1

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

VI. استراتيجيات التدريس	**Teaching Strategies**
الالقاء.	
الطريقة الاستنباطية.	
التعلم الذاتي.	
الحوار والمناقشة.	

VII. الأنشطة والتكليفات: **Tasks and Assignments**

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

VIII. تقييم التعلم Learning Assessment				
الرقم No.	أنشطة التقييم Assessment Tasks	موعد التقييم/ اليوم والتاريخ Assessment day & date	الدرجة Mark	الوزن النسبي (نسبة الدرجة إلى درجة التقييم النهائي) Weight
1	تسميع المحفوظ من الناس - اليل		5	%5
2	تكليفات		5	%15
3	امتحان نصفي		20	%20
4	الاختبار النهائيFinal Exam		60	%60
	المجموعTotal		100	%100

IX. مصادر التعلم Learning Resources:
المراجع الرئيسة:Textbooks 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 باوربوينت 2. سيدي تعليمي مرفق.

X. الضوابط والسياسات المتبعة في المقرر Course Policies	
1.	الحضور والغيابClass Attendance: **:** تحدد سياسة الحضور ومتى يعتمد الغياب وكيفيته ونسبته، ومتى يعد الطالب محروماً من المقرر
2.	الحضور المتأخرTardy : يتم تحديد السياسة المتبعة في حالات تكرار تأخر الطالب عن حضور الفعاليات التعليمية
3.	ضوابط الاختبارات والامتحاناتExam 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 والمشاريعAssignments & Projects: تحديد السياسات المتبعة في حالات تأخير تسليم التكاليف والمشاريع ومتى يجب أن تسلم إلى الأستاذ.
5.	الغشCheating: 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 التكليفات..... 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				المجموع Total
		نظري Theoretical	سمنار/تمارين Seminar/Tutorial	عملي Practical	تدريب Training	
		2	-	4	-	4
4	المستوى والفصل الدراسي: Level and Semester:	المستوى الأول –الفصل الثاني				
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:	كل برامج الجامعة				
8	لغة تدريس المقرر Teaching Language:	اللغة العربية				
9	مكان تدريس المقرر Instruction location:	قاعات الجامعة				

II. وصف المقرر الدراسي: Course Description
يهتم المقرر بتنمية المهارات اللغوية الأساسية للطالب كونه من متطلبات الجامعة ويتناول جملة من النشاطات الاتصالية والدروس اللغوية والإملائية والتركيبية ويحتوي على معارف ونصوص وتدريبات لغوية، ويتألف من كتابين: **الأول** يتضمن مهارتي الاستماع والتحدث، **والثاني** يتضمن مهارتي القراءة و الكتابة، 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.

III. أهداف المقرر :	Course Aims
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 المبنيات والمعربات 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 التراكيب النحوية واللغوية في التطبيقات العملية.	
7. أن يتواصل لغويا بشكل فعال مع الآخرين	

محتوى المقرر: Course Contents

الرقم No.	وحدات/ موضوعات المقرر Course Topics/Units	المواضيع التفصيلية Sub-topics	عدد الأسابيع No. of Weeks	الساعات الفعلية Contact Hours
1	الوحدة الأولى (مهارة الاستماع+المبني والمعرب+الهمزة الابتدائية)	- مقدمة عامة عن المادة -العلاقة بين الفكر واللغة -تعريف القدرة والمهارة -أنواع القدرات -أساسيات مهارةالاستماع -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	أسبوع	3
4	الوحدة الثانية (مهارة الاستماع+المبنيات والمعربات+الهمزة المتوسطة والمتطرفة)	-أساسيات مهارة الاستماع التحليلي الناقد -أنواع الأفكار والمدعمات - أنواع رسائل الاستدعاء - نص استماعي (آيات سورة الحشر)		3
5		-المبنيات والمعربات - تطبيقات على المبنيات والمعربات	أسبوع	3

6		-الهمزة المتوسطة والمتطرفة - تطبيقات على الهمزتين المتوسطة والابتدائية - حل تدريبات الوحدة الثانية		3
7	الوحدة الثالثة (مهارة التحدث +الإعراب بالعلامات الأصلية والفرعية)	-مهارة التحدث -أهمية مهارة التحدث -مواطن الضعف في أدائنا التواصلي وكيفية المعالجة. - كيف أكون متصلا فاعلا.	أسبوع	3
8		- تطبيقات مهارة التحدث		3
9		- استكمال تطبيقات مهارة التحدث	أسبوع	3
10		- نص الأمثال العربية - الإعراب بالعلامات الأصلية والفرعية مع التطبيق عليها - حل تدريبات الوحدة الثالثة		3
11	الوحدة الرابعة (مهارة الكتابة+ الإعراب التقديري+ الممنوع من الصرف)	- نص (أنا والطفل) - علامات الترقيم(1,2) - الإعراب التقديري	أسبوع	3
		-الممنوع من الصرف - حل تدريبات الوحدة الرابعة		3
12	الاختبار النصفي			
13	**الوحدة الأولى** (مهارة القراءة+الجملة الاسمية+ قواعد إملائية)	– أساسيات مهارة القراءة – نص (احترام المرأة) – تدريبات على الأداء القرائي	أسبوع	3
14		– نص (مقتطفات من الاستبداد والمجد) – تدريبات على الأداء القرائي – الجملة الاسمية		3
15		– تطبيقات على مهارة القراءة – حل تدريبات الوحدة الأولي (نص سنوات الطفولة)		3
16	**الوحدة الثانية** (التدرب على مهارة القراءة في النصوص العلمية + الأفعال والحروف الناسخة+ قواعد كتابية)	– نص (الأشعة) – التدرب على مهارة السرعة القرائية – الأفعال الناسخة	أسبوع	3

17		– الأحرف المتشابهة في الكتابة – الحروف الناسخة – حل تدريبات الوحدة الثانية	أسبوع	3
18	**الوحدة الثالثة** (التدرب على مهارة القراءة في النصوص الشعرية+ الألف اللينة في الكتابة العربية)	– نص المتنبي – نص السياب (غريب على الخليج)		3
19		– تطبيقات على مهارة القراءة	أسبوع	3
20		– الألف اللينة في الكتابة العربية – حل تدريبات الوحدة الثالثة		3
21	**الوحدة الرابعة** (الجملة الفعلية+التدرب على مهارات التحليل القرائي+ ما يحذف من الحروف وما يزاد في الكتابة العربية)	– الجملة الفعلية (الفاعل وصوره- المفعول به وصوره- البناء للمجهول) – تدريبات على الجملة الفعلية	أسبوع	3
22		– التدرب على مهارات التحليل القرائي		3
23		– ما يحذف من الحروف وما يزاد في الكتابة العربية – حل تدريبات الوحدة الرابعة	أسبوع	3
24	**الوحدة الخامسة** (تطبيقات مهارية مكثفة+ أنواع الرسائل+السيرة الذاتية+مهارة التلخيص)	– أنواع الرسائل – تطبيقات على الرسالة الإدارية – كيفية إعداد سيرة ذاتية		3
25		– مهارة التلخيص	أسبوع	3
26		– مراجعة لما سبق		3
27	الاختبار النهائي			3
81	**إجمالي عدد الأسابيع والساعات Total number of weeks and hours**			

V. استراتيجيات التدريس	**Teaching Strategies**
▪ الإلقاء. ▪ حل المشكلات. ▪ التعليم التعاوني. ▪ التعليم الذاتي. ▪ الطريقة الاستنباطية ▪ تدريبات تطبيقية لغوية ▪ العصف الذهني ▪ زيارات وتطبيقات علمية	

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

VII. تقييم التعلم Learning Assessment				
الرقم No.	أنشطة التقييم Assessment Tasks	الأسبوع Week due	الدرجة Mark	نسبة الدرجة إلى درجة التقويم النهائي Proportion of Final Assessment
1	الواجبات / الأنشطة / التكاليف 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			
	المجموع Total		100	100%

VIII. مصادر التعلم Learning Resources
(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 الرئيسة: (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 عبدالله 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. السيدي المرفق مع الكتاب 3. شبكة الفصيح، شبكة ويكيبديا، 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 المتأخرTardy : 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 التكاليف 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 التكاليف 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				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		-	-	8	-	4
4	Study Level and Semester:	Level 1 , 2 (1st & 2nd 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	No. of Weeks	Contact Hours
1	Life at the end of the world	• Word order in questions • Can/can't • Common verbs • Weekdays and weekends • Fee time activities • Countries and nationalities.	1	8
2	What are they doing?	• Present continuous • Present simple • Verb phrases • The weather • Writing a letter and an email.	1	8
3	In the jungle of Guatemala	• There is /there are • There was /there were • Hotels language • Prepositions of place1 • Prepositions of place 2 • Simple past • Simple past :regular verbs	1	8
4	Before they were stars	• Simple past: irregular verbs • Common verbs • Daily routine verbs • Sentence stress • Past events	1	8
5	It changed my life	• Object pronouns • Simple past :review • Common verbs 3 • Expressing opinion	1	8
6	Trip of a lifetime	• 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	• Verb to be (affirmative) • Subject pronouns I, you, etc. • Verb to be (negative and interrogative). • Possessive adjectives.	1	8
8	What a life	• Classroom language • Days of the week, numbers • Greetings in the world • Sentence stress • Classroom language	1	8
9	Are you the next American idol	• Adjectives • Colors, modifiers • Imperatives • Plurals • Expressing feelings • Long and short vowels • Connected speech • American VS British differences.	1	8
10	Reading in English	• 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	• Sentence stress. • possessive's • prepositions of time • everyday activities • adverbs and expressions of frequency. • Linking and sentence stress.	1	8
12	Times we love	• 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	• 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**	**112contact 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

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

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)

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:

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) :** • 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) :** • 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) :** • 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) :** • 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) :** • Cheating is strictly prohibited behavior. • ILC regulations will be pursued and enforced on any cheating student.
6	**(Plagiarism) :** • 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) :** • 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

I. معلومات عامة عن المقرر	General information about the course					
.1	اسم المقرر: Course Title	التفكير الناقد				
.2	رمز المقرر ورقمه: Course Code and Number	BUST08				
.3	الساعات المعتمدة للمقرر: Credit Hours	الساعات المعتمدة				المجموع
		نظري	سمنار/تمارين	عملي	تدريب	
		1	-	-	-	1
.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:	كل برامج الجامعة				
.8	لغة تدريس المقرر: Teaching Language	اللغة العربية				
.9	مكان تدريس المقرر: Instruction location:	قاعات الجامعة				

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 استنادا إلى المهارات الذهنية المنظمة ، والمهارات المعرفية والخبرات والتجارب. يتضمن العديد من الموضوعات الرئيسة كمفهوم التفكير الناقد وفائدته العملية والتعليمية و في الفصل الدراسي ، ومعاييره ، 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 شخصا 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 سهلا في فهمه واستيعابه ، كما أنها تحسن وتطور من مقدرته على فهم محتوى المقرر الدراسي.

4- تؤسس الطالب تأسيسا متينا على كيفية كتابة البحوث والرسائل العلمية مستقبلا، من خلال ما يتعلمه من ضرورة تقييم آراء وأفكار الآخرين وإبراز شخصية الباحث من خلال تقويمه النهائي لآراء الغير استنادا إلى الأسباب والمقدمات والبراهين، كما تمنح الطالب القدرة على كتابة المقالات الهادفة التي تقنع الآخرين ولا تجبرهم على تقبلها جبرا.

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 لاحقا وقد يؤذي بها الآخرين.

6- من خلال استيعاب مادة التفكير الناقد يتجنب الطالب أن يكون (إمَّعَه) يسير مع آراء الآخرين دون فحص وتمحيص وتحليل واستيثاق، فالطالب يتدرب من خلالها أن يكون وقافا تجاه أي رأي أو فكرة، وبالذات ونحن في عصر تزاحمت 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 مؤخرا على بعض المؤلفات التي تحمل عناوينا ظاهرها الرحمة وباطنها العذاب، وأيضا بعض المجلات والمواقع الإلكترونية على شبكة الانترنت التي قد تبث من الافكار 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، وأيضا 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 ، وأيضا فهم المقصود بالمغالطات والخدع البلاغية والوقوف على انواعها وصورها الشائعة .

3. مراعاة الضوابط السلوكية عند إبداء رأيه في موضوع ما، وتحليل النصوص إلى جزئياتها المكونة لها، وأيضا تقييم الآراء والأفكار ووزنها استنادا 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، وادراك توجهات واتجاهات المتحدث أو الكاتب، وأيضا 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، وأيضا القدرة على بناء آراء جديدة في حياته أو

الإضافة على الآراء المعروضة عليه أو تعديلها ، أو تفنيدها استنادا إلى معايير التفكير الناقد.

6. مناقشة محتويات المقررات الدراسية مع أساتذته وزملائه استنادا إلى المهارات الذهنية المنظمة، وأن يكون لديه استقلالا فكريا 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 وأيضا الصحف والمجلات ومواقع الانترنت، مع تجنب اتخاذ قرارات سريعة يندم عليها لاحقا في الظواهر والمشكلات الحياتية دون التفكير في نتائجها، علاوة على اكتشاف المغالطات والخدع البلاغية التي قد يدسها الكتاب أو المتحدثون عمدا 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،	1	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	1	1
3	مقومات التفكير الناقد	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.	2	2

4	الاستدلال الناقد	(مفهومه)، تحليل الحجج، بناء الحجج، تصنيف الحجج، صحة الحجة، اللغة والحجة، تقييم الحجج، كيف تعرض حججا مقنعة.	1	1
5	الخدع البلاغة و المغالطات	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	1	1
6	تطبيق مهارات التفكير الناقد	مهل حل المشكلات ، مهارة بناء العلاقات ، مهارة القراءة الناقدة ، مهارة التعامل مع برامج التلفاز.	1	1
إجمالي عدد الأسابيع والساعات			**7**	**7**

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
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	2013/11/15م	5	%5
2.	الاستدلال الناقد	2013/11/20م	20	%30
3.	المغالطات والخدعة البلاغية	2013/12/15م	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.critical thinking.org.
2- www.studygs.net/crtth.htm.
3- www.kcmetro,cc,mo,us/congviewlctac/point.htm.

X. الضوابط والسياسات المتبعة في المقرر	**Course Policies**
1.	الحضور والغيابClass Attendance: **:** تحدد سياسة الحضور ومتى يعتمد الغياب وكيفيته ونسبته، ومتى يعد الطالب محروماً من المقرر
2.	الحضور المتأخرTardy : يتم تحديد السياسة المتبعة في حالات تكرار تأخر الطالب عن حضور الفعاليات التعليمية
3.	ضوابط الاختبارات والامتحاناتExam 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 والمشاريعAssignments & Projects: تحديد السياسات المتبعة في حالات تأخير تسليم التكاليف والمشاريع ومتى يجب أن تسلم إلى الأستاذ.
5.	الغشCheating: 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 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	Total
		-	-	6	-	3
4.	Study Level and Semester:	Level 1 or 2 / Semester 1 or 2				
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	No. of Weeks	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 Safety.	2	4

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.) – Mange Storage Devices (Partitioning, Formatting, Maintaining)	3	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	4	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.	2	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.	2	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)	2	4
7	Final Exam	Final Exam	1	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 account, Send and receive emails).	1	4
Total number of weeks and hours		**13**	**52**

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

- 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:

	- 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:** - 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:** 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. 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.
5	**Cheating**: 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. 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.
6	**Plagiarism**: 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. Plagiarism is also the use or copy of other students' work (with, or without payment) to 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				Total	
		Theoretical	Seminar/Tutorial	Practical	Training		
		2		1		3	
4	Study Level and Semester:	Year 1 /Semester 1					
5	Pre-requisites (if any):	PHS112					
6	Co-requisites (if any):	None					
7	Program in which the course is offered:	Bachelor of Pharmacy					
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, collegative 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 follw the octet rule.- bond length an bond energy- alkenes and alkynes	2	**4**
2	Bonding Theory and Molecular structure	VSEPR- polar molecules and dipole moment- molecular shape - atomic orbital overlap- Hybridization	2	**4**
3	State of matter and intermolecular forces	Vaporazition and vapor pressure- intermolecular forces: van der Waals, hydrogen bonding	3	**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.	2	**4**
5		Med-Term	1	**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	2	**4**
7	Nuclear chemistry	Radioactive and nuclear equations Naturally occurring radioactive Radioactive decay rate-Applications of radioactive nuclides	3	**6**
8	Final Exam		1	**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	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

VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	**Midterm**		20	20%
2	**Assignment**		10	10%
3	**Practical Part**		30	30%
4	**Final Exam**		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 Nelso 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 علم أحياء (2)

I. General information about the course:						
1	Course Title :	Biology (2)				
2	Course Code and Number :	PHF121				
3	Credit Hours :	Credit Hours				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		2	-	2	-	3
4	Study Level and Semester:	First year and first Semester				
5	Pre-requisites (if any):	Non				

6	Co-requisites (if any):	Non
7	Program in which the course is offered:	Bachelors
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	No. of Weeks	Contact Hours
1	The plant kingdom ; seedless plants	There are four major groups of plants	2	2

2	Plant structure, growth, and differentiation	Roots, stems, leaves, flowers, and fruits made up the plant body. is composed of cells and tissues	2	4
3	Leaf structure and function	The leaf consists of an epidermis, ground tissue, and vascular tissue. leaf structure differs in dicots and monocots .	2	4
4	Stems and plant transport	-Water and minerals are transported in xylem, while sugars are transported in phloem.	2	4
5	Midterm exam.		1	2
5	Roots and mineral nutrition	-There are two basic types of root systems	2	4
6	Reproduction in flowering plants	Fertilization is followed by seed and fruit development	2	4
7	Growth responses and regulation of growth	External and internal factors affect germination and early growth	2	4
8	Final exam.		1	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	No. of Weeks	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 — **الكلية: الصيدلة**

Department: Pharmaceutical Sciences — **القســـــم: العلوم الصيدلانية**
Program: Bachelor of Pharmacy — **البرنامج: بكالوريوس صيدلة**

Course syllabus — **وصف المقررات**

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				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		2		2		3
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				
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. 1.Provide the students fundamental principle of organic chemistry.
2. 2.Train the student to naming organic compounds.
3. 3. Enable the student to synthesize new organic compounds.
4. 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	• Chemical bonds and shapes of molecules. • Polar and non polar molecules. • Orbital hybridization	3	6

		and Isomerism, Types of reaction, intermolecular force. • Classification of organic compounds, Nucleophilicity and basicity.		
2	Stereochemistry	Stereoisomers.	3	6
3	Alkanes and cycloalkanes	Nomenclature, Synthesis, Physical properties and Chemical Reaction.	1	2
4	Midterm		1	2
5	Alkenes and polyenes	Nomenclature, Synthesis, Physical properties and Chemical Reaction.	2	4
6	Alkynes	Nomenclature, Synthesis, Physical properties and Chemical Reaction.	1	2
7	Alkyl Halides	Nomenclature, Synthesis, Physical properties and Chemical Reaction.	1	2
8	Alcoholes and Ethers	Nomenclature, Synthesis, Physical properties and Chemical Reaction.	1	2
9	Phenols	Nomenclature, Synthesis, Physical properties and Chemical Reaction.	1	2
10	Aldehyde and Ketons	Nomenclature, Synthesis, Physical properties and Chemical Reaction.	1	2
11	Final Exam		1	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	20
2	Assignment	12	10
3	Practical Part	14	30
4	Final Exam	16	40

IX. Learning Assessment:

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

X. Learning Resources

Textbooks 1. T.W.G. Solomon' s, Organic Chemistry. 2. Morrison and Boyed, 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, North 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				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		2	-	-	-	2
4	Study Level and Semester:	1st semester				
5	Pre-requisites (if any):	PHF110				
6	Co-requisites (if any):					
7	Program in which the course is offered:	Bachelor of Pharmacy				
8	Teaching Language:	English				
9	Instruction location:					

II. Course Description :

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.

III. Course Aims

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.

2- To describe the principles and mechanisms of membrane transport.

3-To describe the electrical and ionic events that underline the excitation of nerves, muscles as well as 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	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)	1	2
3	1-Composition and functions of the blood. 2- RBCs, Formation and general functions. - Heamoglobin 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	2	4
4	Midterm	———	1	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	2	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	2	4

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	1	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	3	6
8	Final exam		1	2
Total number of weeks and hours			**14**	**28**

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

V. Tasks and Assignments

No.	VI. Assessment Tasks	Week due	Mark	Proportion of Final Assessment
1	Homework/Tasks/Assignments	3, 6, 8, 11	5	10%
2	Quiz	4	5	5%
3	Midterm Exam	7	30	20%
5	Final Exam		60	60%
Total			100	100%

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, 2012Human 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

VIII. 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	Total
		2		2		3
4.	Study Level and Semester:	2nd year /1st semester				
5.	Pre-requisites (if any):	NO				
6.	Co-requisites (if any) :	No				
7.	Program in which the course is offered	Bachelor of Pharmacy				
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	2
2.	Amino acids	General structure, functions, classification of amino acids (chemical, nutritional, Metabolic) , derived amino acids and Properties of Amino Acids	1	2
3.	Proteins	Peptide formation, Biologically Active Peptides, protein classification according to (function, shape, and chemical classification), protein denaturation	2	4
4.	Enzymes	Definition and distribution of enzymes, enzyme names, active	2	4

		sites, Cofactors, Zymogens, Lysozymes, factors affecting reaction velocity, inhibition n of enzyme activity, regulation of enzyme activity, enzymes and isoenzymes in clinical diagnosis		
5.	Nucleic acids	Function, nucleotide structure, Structure of DNA, Structure and types of RNA	1	2
6.	Carbohydrates	Definition, importance, Classification, derivatives of monosaccharides, disaccharides, polysaccharides	3	6
7.	Lipids	Definition, functions, classification, fatty acids, steroids	3	6
8.	Vitamins	Definition, functions, classification, clinical indications	2	4
Total number of weeks and hours			**15**	**30**

Second: Practical/Tutorial/Clinical Aspects

Write up practical/tutorial/clinical topics

No.	Practical/Tutorial/Clinical topics	No. of Weeks	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	30
2	**Practical exam**	14	30
3	**Final Exam**	16	40
	Total		100

VIII. Learning Assessment:				
No.	**Assessment Tasks**	**Assessment day & date**	**Mark**	**Weight**
1	**Midterm Exam1**	5	15	15%
2	**Midterm Exam2**	10	15	15%
3	**Practical exam**	14	30	30%
4	**Final Exam**	16	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				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		2	-	2	-	3
4	Study Level and Semester:	2nd year /1st semester				
5	Pre-requisites (if any):	NA				
6	Co-requisites (if any):	NA				
7	Program in which the course is offered:	Bachelor of Pharmacy				
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	2
2	Skeleton:	Parts. Function & types of bones, parts of long bones. Structure of bones	2,3	4
3	Skin & gla**nds** Fascia: Structure & types.	Structure ,appendages of skin	4	2
4	Muscles & its types Joints & its types. Serous membranes.		5	2
5	Nervous system:	Brain (Parts), Cranial nerves, Spinal cord (parts) & Spinal nerves.	6’7	4
6	Cardiovascular system:	Heart (Position & parts), Blood vessels (Types) & Great vessels (Nomenclature).	9’10	4
7	Lymphatic system (Overview)		11	2
8	different body system		12’13’14	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	1,2	4	
		Short bones ,irregular, sesamoid and pneumatic bones			
		Compact and cancellous bones			
2	Skin and fascia	Glands	3	2	
		Superficial , deep fascia			
3	Muscles & joints	Skeletal muscle	4	2	
		Fleshy and tendinous parts			
		Fibrous ,cartilaginous , synovial joints			
4	Nervous system	Brain	5,6	4	
		Spinal cord			
		preipheral nerves			
5	Cardiovascular system	Heart	7	2	
		Blood vessels			
6	Respiratory system	larynx	8	2	
		Trachea			
		bronchi			
7	Gastrointestinal tract	Lungs	9,10	4	
		Oral cavity			
		Esophagus			
		stomach			
		Small intestine			
		Large intestine			
		Anal canal			
		Liver and bleary system			
		Spleen			
		pancreas			
9	Urogenictal system	Kidneys	11,12,13	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	20
.3	Final term	16	40
.4	practical	15	30
.5	Total		100

IX. Learning Assessment:				
No.	**Assessment Tasks**	**Assessment day & date**	**Mark**	**Weight**
1	**Homework/Tasks/Assignments**			
2	**Quiz 1**		**5**	**5%**
3	**Midterm Exam**	6	20	20%
4	**Quiz 2**		5	5%
5	**Final Exam**	13	40	40%
	Practical	15	30	30%
	Total		**100**	

X. Learning Resources

Textbooks:

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

Essential References:

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

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:
1. http://www.Nomina anatomy 2. American society of anatomy. 3. Free medical journals.com

XI. Course Policies (To be determined by Faculty Deanship)	
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 عقاقير (1)

I. General information about the course:						
1	Course Title :	Pharmacognosy (1)				
2	Course Code and Number :	PHS214				
3	Credit Hours :	Credit Hours				Total
		Theoretical	Seminar/Tutorial	Practical	Training	

		2	-	2	-	3
4	Study Level and Semester:	Second level, first semester				
5	Pre-requisites (if any):	PHF121				
6	Co-requisites (if any):					
7	Program in which the course is offered:	Bachelor of Pharmacy				
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 genuinety 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	Introduction: Processing of herbal drugs	*Definition *Nomenclature of drugs *Classification of drugs *Cultivation : *Collection *Drying *Preservation and protection of crude drug *Adulteration *Chemistry of the active constituents.	4	8
2	Medicinal leaves	Introduction to morphological and anatomical description of the leaves. Study of selected medicinal leaves.	3	6
3	Mid term		1	2
4	Medicinal leaves	Study of selected medicinal leaves.	2	4
5	Medicinal barks	Introduction to morphological and anatomical description of the bark. Study of selected medicinal barks	2	4
6	subterranean organs	Introduction to roots, rhizomes, bulbs, corms, stem tubers and root. Study of selected medicinal subterranean organs	1	2
7	subterranean organs	Study of selected medicinal subterranean organs	2	4
8	Final exam		1	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	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	5
2	**Quiz**	7	5
3	**Midterm Exam**	7 &13	20
4	**Practical**	14	30
5	**Final Exam**	16	40

VIII. Learning Assessment:				
No.	**Assessment Tasks**	**Assessment day & date**	**Mark**	**Weight**
1	**Assignment and quizzes**		**10**	**10%**
2	**practical**		**30**	**30%**
3	**Written exam " mid + final"**		**60**	**60%**
	Total			

IX. Learning Resources :
(Author, (Year), Book Title, Edition, Publisher, Country of publishing)
Textbooks-not more than 2
1. 1-Trease G. E. and Evan W. C, 2009, pharmacognosy, 16 th edition, Edinburgh ; New York. 2. 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 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 مهارت 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				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		1	-	-	--	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				
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	Sub-topics	Week due	Contact Hours
1	Introduction to professional pharmacy	No applicable	1	1
2	Organization of pharmacy	No applicable	2	1
3	Introduction to medical terminology	No applicable	3	1
4	Pharmaceutical terms	No applicable	4	1
5	Therapeutic terms	No applicable	5	1
6	Diseases	No applicable	6	1
7	Pharmacological terms	No applicable	7	1
8	Respiratory system terms	No applicable	8	1
9	**Mid-term Exam**	**Mid-term Exam**	9	1
10	Cardiovascular System terms	No applicable	10	1
11	Nervous System terms	No applicable	11	1
12	Genitourinary System terms	No applicable	12	1
13	Diagnostic term	No applicable	13	1
14	Anatomical terms	No applicable	14	1

15	Dental terms	No applicable	15	1
16	**Final-term Exam**	**Final-term Exam**	16	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**	**5**
2.	Assignment 2	**11**	**5**

VIII. Learning Assessment:

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

IX. Learning Resources

Textbooks

1. Gerhard Nahler, (2009), Dictionary of Pharmaceutical Medicine, 2nd edition, Springer Wien New York
2. Ann Ehrlich and Carol L. Schroeder, (2009), Medical Terminology for Health Professions, Sixth Edition, Delmar Cengage Learning, United States of America.

Essential References:

1. Barbara A. Gylys, Mary Ellen Wedding., (2009), Medical Terminology Systems A Body Systems Approach, Sixth Edition, F. A. Davis Company
2. Beverley Henderson & Jennifer Dorsey, (2009), Medical Terminology For Dummies, Wiley Publishing, Inc., Indianapolis, Indiana
3. Handout notes of course

Electronic Materials and Web Sites:

1. Word Document or Portable Data Files (PDF) for Lectures Delivery.
2. http://www.medilexicon.com/medicalabbreviations.php
3. 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:						
1.	اسم المقرر:	تنميـة المهـارات القيــادية				
2.	رمز المقرر ورقمه:	BUST04				
3.	الساعات المعتمدة للمقرر:	نظري	سمنار/تمارين	عملي	تدريب	المجموع
		1				1
4.	المستوى والفصل الدراسي:	حسب خطة كل برنامج				
5.	المتطلبات السابقة لدراسة المقرر(إن وجدت):	لا يوجد				

6.	المتطلبات المصاحبة لدراسة المقرر(إن وجدت):	لا يوجد
7.	البرنامج/ البرامج التي يتم فيها تدريس المقرر:	كل برامج الجامعة
8.	لغة تدريس المقرر:	العربية
9.	مكان تدريس المقرر:	قاعات الجامعة

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، اضافة الى تنمية بعض مهارات وأخلاقيات القيادة والإدارة المتعلقة بالتخطيط وادارة 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 والتمييز 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 اساليب 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 الأخرين ومعرفة أدب الخلاف.

V. محتوى المقرر:

الجانب النظري:

الرقم	وحدات المقرر	المواضيع التفصيلية	الأسبوع	الساعات الفعلية
1	القيـــادة	– تعريف القيادة. – اهمية دراسة تنمية المهارات القيادية. – عناصر القيادة. – انماط القيادة ونظرياتها.	1	2
2	الإدارة	– تعريف الادارة. – أهمية الادارة. – مستويات الإدارة – وظائف الإدارة.	1	2

		– أنواع الإدارة.		
3	**منهجية التغيير في حياة الأفراد والمنظمات**	- تعريف التغيير واهدافه. – اهمية التغيير. – انواع التغيير. – مواجهة مقاومة التغيير. – قواعد التغيير. – خطوات التغيير.	1	2
4	**ادارة الذات واهميتها في تنمية المهارات القيادية والإدارية**	– تعريف إدارة الذات. – اسئلة الذات. – اكتشاف الذات. – تقييم الذات. – تطوير الذات	1	2
5	**صناعة القائد**	– مصادر صناعة القائد. – أماكن صناعة القائد. – مراحل صناعة القائد.	1	2
6	**اخلاقيات القيادة والإدارة**	– مفهوم اخلاقيات الإدارة. – اهداف أخلاقيات الإدارة. – أخلاقيات القيادة والإدارة في الإسلام. – العناصر والممارسات المؤثرة على أخلاقيات الإدارة.	1	2
7	**التخطيط وإدارة الأزمات**	– التخطيط الشخصي. – التخطيط الاستراتيجي. – إدارة الأزمات.	1	2
8	**صناعة القرار والتعامل مع المشكلات**	– صناعة القرار. – حل المشكلات.	1	2
9	**إدارة الوقت**		1	2
10	**مهارات الاتصال**		1	2
11	**مهارات وصفات القائد الناجح**		1	2
12	**تقييم الأداء للأفراد والمنظمات**		1	2
	إجمالي عدد الأسابيع والساعات		**12**	**24**

VI. استراتيجيات التدريس
1- المحاضرات 2- التكليفات الفردية 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 والانضباط، 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 والانضباط	موزعة على أسابيع الفصل	10	%10
.5	اختبار نصف الفصل	منتصف الفصل الدراسي	20	%20
.6	اختبار نهاية الفصل	نهاية الفصل الدراسي	60	%60
المجموع			**100**	**%100**

IX. مصادر التعلم:

المراجع الرئيسة:

1. د. مدحت محمد أبو النصر، (2012)، قادة المستقبل، القيادة المتميزة الجديدة، المجموعة العربية للتدريب والنشر، القاهرة.

المراجع المساعدة:

1. د. طارق السويدان، (2011)، صناعة القائد، الطبعة السابعة.
2. د. إبراهيم الفقي (2008)، سحر القيادة، دار اليقين لنتشر 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 والغيابClass Attendance: : تحدد سياسة الحضور ومتى يعتمد الغياب وكيفيته ونسبته، ومتى يعد الطالب محروماً من المقرر
.2	الحضور المتأخرTardy : يتم تحديد السياسة المتبعة في حالات تكرار تأخر الطالب عن حضور الفعاليات التعليمية
.3	ضوابط الاختبارات والامتحاناتExam 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 والمشاريعAssignments & Projects: تحديد السياسات المتبعة في حالات تأخير تسليم

	التكاليف والمشاريع ومتى يجب أن تسلم إلى الأستاذ.
.5	الغشCheating: 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 التكليفات..... الخ

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	-	3
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				
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	3
2	Aromaticity, Nomenclature ,Reactions of Benzene; Electrophilic Substitution.	Naming, physical and chemical properties, preparation and reaction	3	6
3	Alkyl benzene and aryl benzene	Naming, physical and chemical properties, preparation and reaction	1	2
4	First Test		1	2
5	Orientation of electrophilic reactions	preparation and reaction	1	3
6	Aryl halides and Aromatic nucleophilic substitutions	Naming, physical and chemical properties, preparation and reaction	1	2
7	Aromatic and aliphatic amines	Naming, physical and chemical properties, preparation and reaction	1	2
8	Aromatic Diazonium salts, Aromatic Nitro-Compounds	Naming, physical and chemical properties, preparation and reaction	1	2
9	Aromatic sulphonic acids,	Naming, physical and	1	2

	sulphonamides and Aromatic aldehydes and ketones	chemical properties, preparation and reaction		
10	Second exam		1	2
11	Aromatic carboxylic acids	Naming, physical and chemical properties, preparation and reaction	1	2
12	Heterocylic chemistry	Naming, physical and chemical properties, preparation and reaction	1	2
13	Polynuclear aromatic compounds	Naming, physical and chemical properties, preparation and reaction	1	2
14	Final Exam		1	**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	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	10

VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	**Midterm exam**	6,11	20	20%
2	**Assignment**	6,12	10	10%
3	**Practical Part**	14	30	30%
4	**Final Exam**	16	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 Boyed, 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				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		2	-	2	-	4
4.	Study Level and Semester:	Level 2 2nd semester				
5.	Pre-requisites (if any):	PHF211				
6.	Co-requisites (if any):					
7.	Program in which the course is offered:	Bachelor of Pharmacy				
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	No. of Weeks	Contact Hours
1	Introduction to cardiovascular system Heart and its properties Blood pressure	- 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.	2	4
2	Lymph system	Lymph and lymphatic: formation and functions.	1	2
3	Introduction to respiratory system.	- mechanism of respiration and lung compliance. - Exchange and transport of gases, regulation of respiration and hypoxia.	2	4
4	Midterm	———	1	2
5	The kidney and its units	Functional anatomy of the kidneys. Mechanisms of urine formation. renal clearance and glomerular filtration rate (GFR). Regulation of acid-base balance by the kidneys.	2	4
6	Endocrine system	Introduction to endocrine system: endocrine glands and their functions.	2	4
7	Reproductive system	Introduction to reproductive: male and female reproductive system. Menstrual cycle	2	4

	Central nervous system	Introduction to central nervous system. Physiology of pain.	1	2
8	Final exam		1	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, 6, 8, 11	10	10%	
2.	**Quiz 1**	4	5	5%	
3.	**Midterm Exam**	7	20	20%	
4.	**Quiz 2**	12	5	5%	
5.	**Practical work**		30	30%	
6.	**Final Exam**		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, 2012Human 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				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		2	-	2	-	3
4.	Study Level and Semester:	2nd year /2nd semester				
5.	Pre-requisites (if any):	PHF212				
6.	Co-requisites (if any):					
7.	Program in which the course is offered:	Bachelor of Pharmacy				
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 carbohydrate	1. Glycolysis 2. Gluconeogenesis 3. Krebs cycle	1 2 3	2 2 2

		4. Glycogenesis 5. Glycogenolysis 6. Metabolism of Galactose and fructose 7. Pentosephosphate pathway	4 4 5 5	1 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 7 8 8 9 9	1 1 1 1 1 1
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 10 10 11 12 12	1 1 2 1 1
4	Nucleic acid metabolism	1. Biosynthesis of purine nucleotides 2.Biosynthesis of pyrimidines nucleotides 3. Catabolism of Purina and pyrimidines	13 14 15	2 2 2
Total number of weeks and hours			**15**	**28**

Second: Practical/Tutorial/Clinical Aspects :			
Write up practical/tutorial/clinical topics			
No.	**Practical/Tutorial/Clinical topics**	**No. of Weeks**	**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	10
2	**Quiz 1**	3	5
3	**Midterm Exam**	6	10
4	**Quiz 2**	9	5
5	**Practical exam**	15	20
6	**Final Exam**	16	50
			100

VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	**Homework/Tasks/Assignments/**	2,8,10 &12	10	10%
2	**Quiz 1**	3	5	5%
3	**Midterm Exam**	6	10	10%
4	**Quiz 2**	9	5	5%
5	**Practical exam**	15	20	20%
5	**Final Exam**	16	50	50%
	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 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				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		2		2		3
4.	Study Level and Semester:	Year 1 /Semester 1				
5.	Pre-requisites (if any):	PHS120				
6.	Co-requisites (if any):	NA				
7.	Program in which the course is offered:	Bachelor of Pharmacy				
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:

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	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	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	2	4
4	MID Exam		1	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-	2	4

		Line Calibration Curves		
6	Errors in analytical chemistry	Systematic Errors, their sources unsystematic errors Effect of unsystematic errors on analytical data Q-test	1	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 lon-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	2	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	2	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	2	4

		Titration curves		
10	Final Exam		1	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 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)	3,5	3
2	Assignments(2)	7,10	3
3	Work Semester	11	4

VIII. Learning Assessment:				
No.	**Assessment Tasks**	**Assessment day & date**	**Mark**	**Weight**
1	Homework/Tasks/Assignments	4,5,6,10	10	10
2	Midterm Exam	5,10	20	20
3	Practical Exam	13	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 Harvery, McGraw-Hill Higher Education, 2004.
4. D. A. Skoog and d. M. west, "Fundamentals of Analytical Chemistry", 7th ed CBS Publishing Asia Itd (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 مقررعقاقير (2)

I. General information about the course:						
1.	Course Title :	Pharmacognosy (2)				
2.	Course Code and Number :	PHS224				
3.	Credit Hours :	Credit Hours				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		1	-	1	-	2
4.	Study Level and Semester:	Second level, first semester				
5.	Pre-requisites (if any):	PHS214				
6.	Co-requisites (if any):					
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 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 genuinety 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	• Introduction of flower • Example of medicinal flower	4	4
2	Seeds	• Introduction of seeds. • Example of medicinal	2	2

		seeds		
3	Seeds	• Introduction of seeds. • Example of medicinal seeds	2	2
4	Mid term 1		1	1
5	fruits	• Introduction of fruits. • Example of medicinal fruits	4	4
7	herbs	Study of some medicinal herbs	1	1
	unorganized drug	Study of some unorganized drug.	1	1
8	Final exam		1	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	No. of Weeks	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	20

4	**Practical**	14	30
5	**Final Exam**	16	40

VIII. Learning Assessment:				
No.	**Assessment Tasks**	**Assessment day & date**	**Mark**	**Weight**
1	**Assignment and quizzes**		**10**	**10%**
2	**practical**		**30**	**30%**
3	**Written exam " mid + final"**		**60**	**60%**
	Total			

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 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				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		2	-	2	-	3
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				

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
6. Handle chemicals properly and safely.
7. 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**	▪ 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	1,2 &3	6
2	**Rheology**	▪ Principles of rheology. ▪ Measuring methods in the rheology.	4	2
3	**Surface tension**	▪ 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 additive Concentration of solubilizates (MAC) ▪ Pharmaceutical applications of surfactants	5,6 &7	6
4	**Midterm exam**		8	2
5	**Adsorption**	▪ 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	4
6	**Complexation**	▪ Metal complexes ▪ Organic molecular complexes ▪ inclusion compounds ▪ methods of analysis ▪ crystalline structure of complexes, ▪ Identification of comlexation ▪ Pharmaceutical applications of	11 &12	4

		complex		
7	**Drug and formulation stability**	▪ 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	4
8	Partition Coefficient	• Association of the solute molecules • Dissociation of the solute molecules	15	2
9	Final exam		16	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.	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	13th week	10
2.	Partition Coefficient	14th week	10

II. Learning Assessment:				
No.	**Assessment Tasks**	**Assessment day & date**	**Mark**	**Weight**
1	**Mid Exam**	7	20	20%
3	**Assignment**	13-14	10	10%
4	**Practical Part**	14	30	30%
5	**Final Exam**	16	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 Livingston, 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				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		1	-	-	-	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
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	Sub-topics	Week due	Contact Hours
1	Interpretation of the prescription and medication orders	prescription, responsibilities of a prescriber, components		1
2	Introduction and the metric and common systems and formulas conversion	number and numerals, Roman letters, international system of units, common systems of measurements, Intersystem conversion		2
3	Pharmaceutical measurements	measurement of volumes and weights, aliquot method, percentage of error		1
4	Density and specific gravity	difference, pycnometer method, displacement method, specific volume		2
5	Strength calculations	percentage, ratio strength, parts per million		2
6	Midterm			1
7	Calculations of doses (General considerations)	concepts, dose measurements, general dose calculations		1
8	Calculations of doses (patient parameters)	pediatric patients, dosage based on age, dosage based on body weight and surface area, Nomograms		2
9	Dilution and Concentration of formulations	stock solution, conversion factor method,		2
10	Parenteral admixtures	definition, admixtures types, flow rate of infusions		1
11	Final exam			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**		30	30%
2	**Assignment**		10	10%
3	**Final Exam**		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, Lippi 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**) :**

انتهي م2

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Faculty: Pharmacy — **الكلية: الصيدلة**

Course syllabus — **وصف المقررات**

Department: Pharmaceutical Sciences — **القســـــم: العلوم الصيدلانية**

Program: Bachelor of Pharmacy — **البرنامج: بكالوريوس صيدلة**

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				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		2	-	-	-	2

4.	Study Level and Semester:	3
5.	Pre-requisites (if any):	PHF213,PHF221
6.	Co-requisites (if any):	PHF315
7.	Program in which the course is offered:	Bachelor of Pharmacy
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 autocoids 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 autocoids.
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				
No.	**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	3	6
2	Autonomic Nervous System (A.N.S)	Sympathomimetic agents ,sympatholytic agents, parasympathomimetic agents, parasympatholytic agents, drugs acting on ganglia	4	8
3	Midterm Exam.		1	1
4	Cardiovascular system (C.V.S)	Diuretic agent, antihypertensive drugs, antianginal agents, drugs for heart failure ,antiarrhythmic agents	4	10
6	Autocoids	Histamine and antihistamines, serotonin receptors agonist & antagonists Eicosanoids, and their uses, PAF, bradykinin	2	4
7	Final exam.		1	1
	Total		**16**	

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	5
2	Reports	Every 2 weeks	5

VII. Learning Assessment:				
No.	**Assessment Tasks**	**Assessment day**	**Mark**	**Weight**
1	**Assignment**	**10**	**5**	**5%**
2	**Reports**	**Every 2 weeks**	**5**	**5%**
3	**Midterm Exam**	**8**	**30**	**30%**
4	**Final Exam**	**16**	**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 LIVINGSTON London
3. Laurence DR, Bennett PN and Brown MJ (2010). Clinical pharmacology. Ninth ed. CHURCHI 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				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		2	-	2	-	3
4.	Study Level and Semester:	Third Year – First Semester				
5.	Pre-requisites (if any):	PHS120				
6.	Co-requisites (if any):	NA				

7.	Program in which the course is offered:	Bachelor of Pharmacy
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		**2**
2	Pharmaceutical Solutions	Advantages and disadvantages, Choice of solvents, Formulation additives, Types of liquid preparations, , Manufacture of solutions, Filling of solutions		**6**
3	Pharmaceutical Suspensions	Pharmaceutical applications of suspensions, Formulation and stability of suspensions, Formulation additives, Quality control of suspensions		**4**
4	Emulsions	Types of emulsions, Formulation of emulsions, HLB value, Emulsifying agents, Stability of emulsions, Manufacture of emulsions		**4**
5	Midterm			**2**
6	Parenteral Preparations	Types, Advantages and disadvantages, Vehicles used, Formulation additives, Sterilization of parenterals, Containers and closures, Formulation issues, Quality control		**6**
7	Ophthalmic Products	Characteristics, Types, Formulation of eye drop, Packaging		**4**
8	Aerosols	Principle, Pharmaceutical applications, Aerosol systems, Metered dose inhalers, Dry powder inhalers, Nebulizers		**2**
9	Final exam			**2**

Total number of weeks and hours		32

Second: Practical/Tutorial/Clinical Aspects :			
Write up practical/tutorial/clinical topics			
No.	**Practical/Tutorial/Clinical topics**	**No. of Weeks**	**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**	**10**

VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	**Midterm**		20	20%
2	**Assignment**		10	10%
3	**Practical Part**		30	30%
4	**Final Exam**		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 Livingston, 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 Livingston - 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				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		2	-	-	-	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:	None
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.Aquire 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**	**No. of Weeks**	**Contact Hours**	
1	Review of heterocyclic compounds	5-member ring,6-member ring, fused rings	1	2	
2	Introduction to medicinal chemistry	Definition,objective,clssification methods	1	2	
3	Physicochemical properties and drug design	patitioncoeffeient,MR, solubility, bonds, Adsorption, Dissociation degree at the PH of the body,others	1	2	
4	Drug metabolism	Introduction, phase -1 metabolism ,oxidation,reduction, Hydrolysis phase -2 metabolism,conjugation Factors affecting drug metabolism	3	6	
5	Sympathomimetic drugs	Definition,SAR,DAS,IDAS,MAS, ,synthesis,uses	1	2	
6	Midterm		1	2	
7	Sympatholytic drugs	α-blokers , β-blokers,αβ-bloker, SAR,uses ,synthesis	1	2	
8	Parasympathomimetic drugs	Direct, indirect(reversible irreversible),SAR, synthesis	1	2	
9	Parasympatholytic drugs	Natural,semisynthetic ,synthetic	1	2	
10	Ganglionic & Neuromuscular blockers	Natural, ,synthetic	1	2	
11	Diuretics , Local anesthetics	Sulfonamide , high ceiling diuretics, thiazide,potasum sparing diuretic, uses, synthesis factors affecting on LA, benzoic acid and aniline derivative of LA	1	2	
12	Histamines and Antihistamines	H1agonist and antagonist, H2 antagonist, SAR, synthesis, uses	2	4	
13	Final exam			2	
Total number of weeks and hours			**16**	**32**	

VI. Tasks and Assignments :				
No.	**Task/Assignment**		**Week due**	**Mark**
1	Activities		12	10

VII. Teaching Strategies
Lectures
Interactive class discussions
Activities

VIII. Learning Assessment:

No.	Assessment Tasks	Week due	Mark	Wight
1	Assignment	10	5	5%
2	Reports	Every 2 weeks	5	5%
3	Midterm Exam	8	30	30%
4	Final Exam	16	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-Mikhlafi (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	Total
		2		-		2
4.	Study Level and Semester:	Level 3, semester 1				
5.	Pre-requisites (if any):	PHS224				
6.	Co-requisites (if any) :	-				
7.	Program in which the course is offered	Bachelor of Pharmacy				
8.	Teaching Language:	English				
9.	Study System :	Semester based				
10.	Prepared 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	No. of Weeks	Contact Hours	
1	Glycosinolate glycosides	Definition, hydrolysis, medicinal plants.	1	2	
2	Cyanogenetic glycosides	Definition, hydrolysis, medicinal plants	1	2	
3	Anthracen glycosides	distribution, classification, structures, biosynthesis, extraction, chemical and physical properties, characterization, pharmacological properties,	1	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,	2	4	
5	Midterm exam 1		1	2	
6	Saponin-glycosides	Definition, distribution, classification, structures, biogenesis, extraction, chemical and physical properties, Characterization biological and pharmacological properties, drugs as expectorant and antitusive, anti-exudative, Adaptogens and as diuretic	1	2	
7	Tannin	Classification, types, plants contain tannins	1	2	
8	Terpenoids	Introduction (definition, classification,	3	6	

		biosynthesis and distribution, Monoterpens, Sesquiterpens, Diterpenes			
9	Midterm exam 2		1	2	
10	Flavonoids	classification, biological activity, plant contain flavonoids	1	2	
11	Final exam		1	2	
Total number of weeks and hours				**28**	

VI. Tasks and Assignments :				
No.	**Task/Assignment**		**Week due**	**Mark**
1	Assignment and presentation		6	10
2	Quizzes		4,10	10

VII. Learning Assessment:					
No.	**Assessment Tasks**	**Week due**	**Mark**	**Proportion of Final Assessment**	
1	**Assignments, seminar**	6	5	5%	
2	**Quiz 1**	4	2.5	2.5%	
3	**Midterm Exam**	6,12	30	30%	
4	**Quiz 2**	10	2.5	2.5%	
5	**Final Exam**	16	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				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		2	-	2	-	3
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				
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	2	4
2	Bacterial Structure	Size of bacteria, morphology, different structures	1	2
3	Bacterial physiology and growth	Physical and Chemical Properties, Growth and Proliferation Metabolism and Cultivation Method	2	4
4	Bacterial genetics	Definitions, DNA process and RNA	1	2
5	Midterm	-	1	2
6	An introduction to viruses	Definitions, virus characters, replication, classification diagnosis and treatment	2	4
7	An introduction to fungi	Definitions, fungal characters, replication, classification diagnosis and treatment	1	2
8	Host-microbe interaction – introduction to infectious diseases	Definitions , normal flora and infections	2	4
9	Pathogenesis of infections	Definitions, portal of infections entry and type of toxins	1	2

10	Introduction to parasitology	Definitions, parasitic characters, replication, classification diagnosis and treatment	2	4
11	Final exam	-	1	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 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	10

VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	**Midterm**	Week 8	20	20%
2	**Assignment**	Week 12	10	10%
3	**Practical Part**	Week 12	30	30%
4	**Final Exam**	Week 16	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				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		2	-	-	-	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				
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	2
2	Adaptation	Atrophy Hypertrophy Hyperplasia Metaplasia Dysplasia Carcinoma in-sito	2	2
3	Inflammation	Acute inflammation Chronic inflammation Repeair	3&4	4
4	Circulatory disturbance	Thrombosis Clot	5&6	4

		Embolism Ischaemia Infarction Congestion Oedema		
5	Immunology	Hypersensitivity Autoimmune disease.	7	2
6	Mid Exam		8	2
7	Neoplasia	Classification Benign malignant	9&10	4
8	Cardiovascular system	Rheumatic fever Hypertension Ischaemic heart disease	11	2
9	Haemopoietic and lymphatic system	Aanaemia Classification of leukaemia and lymphoma	12	2
10	Respiratory system	Pneumonia Bronchial asthma COPD	13	2
11	Gastrointestinal system	Peptic ulcer	14	2
12	Genito-urinary system	UTI Acute renal failure Benign prostatic hyperplasia	15	2
13	Final exam		16	2
Total number of weeks and hours			**16**	**32**

VII. Tasks and Assignment

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

VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	**Mid Exam**	8	30	30%
2	**Assignment & Seminars**	10	10	5 %
3	**Final Exam**	16	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				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		2	-	2	-	3
4.	Study Level and Semester:	Year 3 /Semester 1				
5.	Pre-requisites (if any):	PHS223				
6.	Co-requisites (if any):	NA				
7.	Program in which the course is offered:	Bachelor of Pharmacy				
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 an 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	No. of Weeks	Contact Hours
1	Introduction	Course syllabus and course policy.	1	2
2	Analytical Methods	Classification of Analytical Methods Types of Instrumental Methods Instruments for Analysis	1	2

		Selecting an Analytical Method		
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 /	2	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) / 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: Asymetry 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	4

		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	1	2
	Med term exam			
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	4	6
6	UV-Vis spectrophotometry problem solving		1	2
7	IR SPECTROPHOTOMETRY	3 Instrumentation 3.2 Selection Rules and Hooke's Law 3.3 Characteristic Group Vibrations Note: Ch 3 + animation+ hand out	3	6
8	IR problem solving		1	2
9	Final Exam			
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

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	8	20	20%
3	Practical Exam	13	30	30

5	**Final Exam**	**15**	**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, 7th 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				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		1	-	-	-	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				
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)		3
2	Drug Information	Introduction to drug information,		5

		Role or 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		
3	Midterm			1
4	Referencing and citation	Citation, Compiling a reference list, Plagiarism		3
5	Medication errors	Introduction to medication errors, Classifications and types of errors, Why do errors occur, Error prevention		3
6	Final exam			1
Total number of weeks and hours				**16**

VI. Teaching Strategies

Lectures
Interactive class discussions
Assignments

VII. Tasks and Assignments

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

VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	**Midterm**		30	30%
3	**Assignment**		10	10%
4	**Final Exam**		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**) :**

Second Semester **الفصل الثاني**

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				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		3	-	-	-	3
4.	Study Level and Semester:	Year 3- semester 2				
5.	Pre-requisites (if any):	PHS310				
6.	Co-requisites (if any):	-				
7.	Program in which the course is offered:	Bachelor of Pharmacy				
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**	**No. of Weeks**	**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	6	18
2	Midterm exam.1		1	
3	Respiratory system	Cough therapy , Bronchial asthma ,antimycobacterium agents	2	6
4	Gastrointestinal system	GI secretions & peptic ulceration, antiemetic drugs, liver disease and gallstones Constipation & laxatives ,Diarrhea & antidiarrheal agents, inflammatory bowel disease (IBD	5	15
6				
7	Final exam.		1	
Total number of weeks and hours				**16**

VI. Tasks and Assignments			
No.	**Task/Assignment**	**Week due**	**Mark**
1.	**Assignment and presentation**	**10**	**5**
2.	**Reports**	**Every 2 weeks**	**5**

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

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. 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				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		2	-	2	-	3
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				
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		14
2	Midterm			2
3	Solid dosage forms	Powders, Granules, Tablets, Capsules		14

4	Final Exam		2
Total number of weeks and hours			**32**

Second: Practical/Tutorial/Clinical Aspects :			
Write up practical/tutorial/clinical topics			
No.	**Practical/Tutorial/Clinical topics**	**No. of Weeks**	**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**	**10**

VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	**Midterm**		20	20%

2	**Assignment**		10	10%
3	**Practical Part**		30	30%
4	**Final Exam**		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, t edition, Churchill Livingston, 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 Livingston - 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				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		2	-	-	-	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:	None				
8.	Teaching Language:	English				
9.	Instruction location:					

II. Course Description
This course includes basic and specific science in order to well understan 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.Aquire 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	No. of Weeks	Contact Hours	
1.	Cardiovascular drugs	Angina, nitrates Arrhythmia, calcium channel blockers Hypertension, ACEI, vasodilators Hyperlipidemia, resins, fib rates, statins Anticoagulants, coumarins, Cardiac glycosides	5	10	
2.	Oral Hypoglycemic agents	sulfonylureas, biguanides	1	2	
3.	Sulfonamides Quinolones	Classification,SAR,chemical synthesis,Ph affecting, Uses	1	2	
4.	Midterm exam		1	2	
5.	β-lactam antibiotics	Introduction ,definition,spectrum,stability	3	6	

		resistance , allergencity of penicillin,cephalosporins			
6.	Tetracyclines, Macrolides	spectrum ,MOA, resistance chemical modefication,SAR, uses	1	2	
7.	Antiprotozoal ,Antiviral	Properties, classification ,chemical synthe types of protozoa & treatment	1	2	
8.	Anticancer	Introduction Alkylating agents antimetabolites natural products hormones	2	4	
9.	Final exam		1	2	
	Total number of weeks and hours		**16**	**32**	

VI. Tasks and Assignments:

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

VIII. Teaching Strategies

VII. Learning Assessment:

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

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-Mikhlafi (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				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		2		2		3
4.	Study Level and Semester:	Level 3, semester 2				
5.	Pre-requisites (if any):	PHS313				
6.	Co-requisites (if any):					
7.	Program in which the course is offered:	Bachelor of Pharmacy				
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 chromatographyical 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	No. of Weeks	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**	**4**	
2	**Alkaloids**	**5**	**10**	
3	**Chromatography**	**5**	**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	3	3 %	
2	**Quiz 1**	4	1	1 %	
3	**Practical evaluation**	12	30	30 %	
4	**Midterm Exam**	6,12	30	30 %	
5	**Quiz 2**	10	1	1 %	
6	**Final Exam**	16	35	35 %	

Total		100	100 %	

VIII. Tasks and Assignments :				
No.	**Task/Assignment**		**Weekdue**	**Mark**
1	Assignment and presentation		**6**	**10**
2	Quizzes		**4,10**	**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				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		2	-	2	-	3
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				
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	2	4
2	Antibodies	Definition, Size, morphology and structures, different types	1	2
3	Hypersensitivity	Definition, types and diseases	2	4
4	Viral Hepatitis	Definitions, types and diseases	2	4
5	Midterm	-	1	2
6	Respiratory tract infections	Definitions, causes, diagnosis and treatment	2	4
7	Gastrointestinal tract infections	Definitions, causes, diagnosis and treatment	1	2
8	Disinfection and sterlizations	Definitions , different methods use and type of disinfections	2	4

9	Vaccines	Definitions,history and type of vaccines	1	2
10	Retroviral infection	Definitions, and different causes	1	2
11	Final exam	-	1	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	10

VIII. Learning Assessment:

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

IX. Learning Resources

Textbooks

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

Essential References:

3. Kathleen, 2002, Foundation in Microbiology, 4th ed, Mc Graw Hill, USA
4. 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 Pathophysiology (1) خطة مقررعلم 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				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		2			2	
4.	Study Level and Semester:	3rd LEVEL, 2nd SEMESTER				
5.	Pre-requisites (if any):	PHF315				
6.	Co-requisites (if any):					
7.	Program in which the course is offered:					
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	1st & 2nd weeks	4
2		Tissue Adaptation and Injury and inflammation I & II	3rd & 4th weeks	4
3	GIT system	Gastrointestinal diseases I & II	5th & 6th weeks	4
	Mid Term Exam		7th week	2
5	CVS system	i-Alterations in Blood Pressure	8th week	2
6		ii-Alteration in cardiac	9th to 11th	6

		function -Coronary Heart Disease -Myocardial and Endocardial Disease	weeks	
7	Endocrine system Skin	Alterations in the Endocrine System **i**-Alterations in Pituitary, Thyroid, Parathyroid, and Adrenal Function	12th week	2
8		ii-Diabetes Mellitus	13th week	2
9		Alterations in Skin Function and Integrity I & II	14th week	4
FINAL EXAM			**15TH WEEK**	**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.		**3rd week**	**5**
2	Discuss the changes of different body system in diabetic patients		**9th week**	**5**

VIII. Learning Assessment:

No.	Assessment Tasks	Week due	Mark	Proportion of Final Assessment	
1	**Homework/Tasks/Assignments**	3rd & 9TH weeks	10	10%	
3	**Midterm Exam**	7th week	20	20%	
5	**Final Exam**	15th week	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 Patho Basis of Disease, 8th edition, Saunder, USA 2. Charles Simon Herrington, 2014, Muir's Textbook of Pathology, 6th edition, Wiley, UK
Essential References-not less than 4
1. Kathryn L. McCance, Sue E. Huether (2010), Pathophysiology: The Biologic Basis for Disea Adults and Children, 6th edition, Mosby Elsiever, USA 2. Vinay Kumar, Abul K. Abbas, Jon C. Aster, (2012), Robbins Basic Pathology. 9th edition, Sau USA 3. Joseph DiPiro, Robert L. Talbert, Gary Yee, Barbara Wells (2008),Pharmacotherap Pathophysiologic Approach, 9th edition, Mc Grew Well, 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				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		2	-	-	-	2
4.	Study Level and	Level three ,Second semester				

	Semester:	
5.	Pre-requisites (if any):	PHF222
6.	Co-requisites (if any):	
7.	Program in which the course is offered:	Bachelor of Pharmacy
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	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 (SPA Estimation of energy requirements	2	4
3	Carbohydrates	Carbohydrates in foods (nutritive value and (source Health effects and diseases associated	2	4

		Recommended intakes of sugars, starch and fiber Definition and calculation of Glycemic index Glycemic load Glycemic index in different types of food		
4	Lipids	Lipids in foods (source and nutritive value) Health effects and disease associated Recommended intakes of lipids	2	4
5	Proteins	Protein in the body (Protein in foods (source and nutritive value Health effect and diseases associated Recommended intakes of protein	1	2
6	Midterm		1	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 Vitamin C and its roles in human body, food source, Deficiency and recommendation	2	4
8	Fat soluble vitamins	fat soluble vitamins Names and their role in human body Food sources, deficiency, toxicity and recommendations	1	2
9	Major minerals Trace elements	Names and their role in human body Food sources, deficiencies. Toxicity and recommendation	1	2
10	Drugs and	Food and Drug Interactions		2

	Nutrition	Effects of Food on Drugs Effects of Drugs on Food Food and Drug Incompatibilities Clinical Implications	1	
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	1	2
12	Final exam		1	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**	**5**

VII. Learning Assessment:				
No.	**Assessment Tasks**	**Assessment day**	**Mark**	**Weight**
1	**Assignments Group report Midterm Exam Final Exam Final Exam**	**8**	**5**	**5%**
2	Quizzes	**every 2 weeks**	**5**	**5%**

3	**Mid term**	**6**	**30**	**30%**
4	**Final exam**	**16**	**60**	**60%**
	Total		**100**	**100%**

VIII. Learning Resources

Textbooks

1-Whitney, Ellie&Rolfes, Sharon.R.(2008). Understanding Nutrition.11TH ed. Canada, Thomoson 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 KingdomCopyright © 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				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		1	-	-	-	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
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
3. organizations, such as employment interviews, performance evaluation interviews, disciplinary and counseling interviews, and exit interview.
4. Formulate and produce responses to given statements and situations that communicate accurate, empathic listening.
5. Demonstrate interactive communication techniques including open-ended questions, reflective responses, nonverbal communication, active listening and verifying understanding.

6. Apply patient education techniques to help ensure that information is provided in an understandable way.
7. 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.

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	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	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	1
4	Nonverbal communication in pharmacy	Verbal vs. non-verbal communication. Components of non-verbal communication. Dimensions of Nonverbal Communication	4	1
5	Barriers in Communication	Common barriers to communication. Type of barriers. How to overcome barriers	5	1
6	Listening and Empathic Responding	Styles of listening and the listening skills. Empathy aspect and define	6	1
7	Midterm exam.		7	1
8	Evaluation of information	Collection, organization and presentation of drug information to patient	8	1
9	Patient interview and Assessment	Component of an effective interview Skills in effective interviewing	9 &10	2
10	Patient education and counseling	Patient counseling , Definition, Methods. Outcome of patient counseling. Communication during drug therapy. Interactive communication skills	11 &12	2
11	Effective presentation skills.	Preparation Skills, Design Concepts, Visual Aids , Verbal &Nonverbal Presentation Skills	12 &13	2

12	Final exam		14	
Total number of weeks and hours			15	15

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**	**10**
2	video critique	**6**	**5**
3	Patient interviewing	**7,9,11**	**5**
4	Patient counseling	**7,9,11**	**5**
5	Patient education	**10,12&13**	**5**

VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Midterm		**10**	10%
2	Assignments		**30**	30%
3	Final test		**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 م3

Faculty: Pharmacy — **الكلية: الصيدلة**

Course syllabus — **وصف المقررات**

Department: Pharmaceutical Sciences — **القســـــم: العلوم الصيدلانية**

Program: Bachelor of Pharmacy — **البرنامج: بكالوريوس صيدلة**

Fourth Year Courses — **مقررات السنة الرابعة**

First Semester — **الفصل الأول**

Course Syllabus Bio pharmaceutics — **خطة مقرر صيدلة حيوية**

I. General information about the course:

1.	Course Title :	Bio pharmaceutics				
2.	Course Code and Number :	PHS415				
3.	Credit Hours :	Credit Hours				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		2	-	-	-	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				
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. Unable 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
3. and pathological factors affect on absorption
4. Discusses the various aspects of bioavailability and bioequivalence studies
5. investigate the effect of different formulation, different pathological factors affecting on absorption
6. Explore the appropriate dosage form for a specific absorption
7. Advice patients and other health care professionals about safe and effective use of drugs and medicines.
8. Choose rationally the appropriate dosage form and route of drug administration for specific bioavailability
9. Demonstrate critical thinking, synthesis and interpretation of pharmaceutical information, and responsibility.
10. 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		2
2	Mechanisms of GIT drug absorption	Mechanisms of GIT drug absorption		2
3	Physiological factors affecting drug absorption:	1. GIT anatomy 2. GI components		2
4	Physiological factors affecting drug absorption:	• Consistency		2

		• pH • gastric emptying		
5	Physico-chemical factors affecting absorption:	• chemical form • partition coefficient • pKa • **C**rystal form		2
6	Physico-chemical factors affecting	- Particle size - Solvation - Complexation - Adsorption - Stability		2
7	Mid term			2
8	Pathological conditions affecting absorption	-malabsorption -partial or total gastroenteritis		2
9	Pathological conditions affecting absorption	- thyroid disorders - liver and renal diseases		2
10	Influence of various dosage forms and their excipients on the bioavailability of drugs	-		6
11	Influence of various routes of administration on the bioavailability of drugs	-		6
12	Bioavailability	- definitions - methods of determination of bioavailability using blood and urine - protocol design of bioavailability assessment - methods of bioequivalence determination		2
13	Final exam			**2**
Total number of weeks and hours				**34**

VI. Tasks and Assignments

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

VII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	**First Test**	5	20	20%
2	**Second Test**	10	20	20%
3	**Assignment**	12	10	10%
5	**Final Exam**	16	35	50%
	Total		75	

VIII. 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 Livingston, 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.

1. Loyd V. Allen, Jr., 2005, Remington: The Science and Practice of Pharmacy, twenty first edition. Lippincott Williams & Wilkins, 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**) :**

Course Syllabus Therapeutics (1) خطة مقرر علم المداواة (1)

I. General information about the course:						
1.	Course Title :	Therapeutics (1)				
2.	Course Code and Number :	PHB414				
3.	Credit Hours :	Credit Hours				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		2				2
4.	Study Level and Semester:	Fourth year/First semester				
5.	Pre-requisites (if any):	PHS320-PHF325				
6.	Co-requisites (if any):	NA				
7.	Program in which the course is offered:	Bachelor Of Pharmacy				
8.	Teaching Language:	English				
9.	Instruction location:	UST				

II. Course Description

This course provides students with therapeutic knowledge on cardiovascular disorders and respiratory, gastrointestinal, endocrinal diseases. The diseases that will be covered are GIT disorders, CVD, endocrine disorders, and Respiratory disorders. 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 and interactive class discussions.

III. Course Aims:

1. Give student knowledge about the pathophysiology of GIT, CV, endocrine and rheumatic diseases.
2. Equip student with the analysis of treatment aims and algorithms, drug interactions, dose calculations and optimization.
3. Help student to choose the most appropriate drug therapy for each condition and to suggest the correct dosage form, dose and dose intervals.
4. Help student to recognize the safety of drugs in special groups like children, elderly and pregnancy.

IV. Course Intended Learning Outcomes (CILOs) :

1. Recognize the drugs and their therapeutic uses, safety, optimum use in medication and contraindications.
2. Describe the principals of, patho-physiology, lifestyle habits, underlying causes contributing factors, and clinical manifestations that relevant to gastrointestinal and cardiovascular diseases.
3. Establish treatment plan and take special considerations when designing for some populations.
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 medicines and implement an appropriate plan for therapeutic drug monitoring.
7. Cooperate effectively with patients, public and health care professionals; includes communication both written and oral.
8. Assess the scientific information about diseases and drugs that obtained from several online sources.

V. Course Contents

Theoretical Aspect:

No.	Course Units	Sub-topics	Week due	Contact Hours
1	**Gastrointestinal tract**	Peptic ulcer, Gastroesophageal, reflux disease (GERD)	3	6
2	**Cardiovascular diseases**	Hypertension (HTN), Ischemic heart disease, heart failure (HF), Venous thromboembolism	5	10
3	**Mid-term Exam**		1	1
4	**Endocrinology**	Diabetes mellitus,	3	6

	Disorders	Hypo/Hyperthyroidism,		
5	**Respiratory disease**	Asthma COPD	2	4
6	**Kidney diseases**	chronic kidney disease	1	2
7	**Final-term Exam**		1	2
Total number of weeks and hours			**16**	**31**

VI. Teaching Strategies

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

VII. Tasks and Assignments

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

VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	**Homework/Tasks/Assignments**	5,11	10	10 %
2	**Midterm Exam**	9	40	40 %
3	**Final Exam**	16	50	50 %
	Total		**100**	

IX. Learning Resources

Textbooks

1. Marie A. Chisholm-burns and others, (2016), Pharmacotherapy: Principles & practice, 4nd edition, McGraw-Hill Companies, Inc., United States of America.
2. Joseph Dipiro, (2017), Pharmacotherapy: pathophysiologic approaches, 10th edition, McGraw-Hill Companies, Inc., United States of America.

Essential References:

1. Walker and Edwards, (2012), Clinical Pharmacy and Therapeutics, 5th edition.
2. Koda-Kimble, and others, (2012), Applied Therapeutics: The Clinical Use Of Drugs, 10th edition, Lippincott Williams & Wilkins , Philadelphia, United States of America.
3. Drug Information Handbook: A Clinically Relevant Resource for All Healthcare

Professionals 25th Edition Lexi Comp; 25 edition (May 2, 2016). 4. Pharmacotherapy Casebook: A Patient-Focused Approach, Tenth Edition (Pharmacy) 10th Edition,McGraw-Hill Education / Medical; 10 edition (January 4, 2017)
Electronic Materials and Web Sites: 1. Word Document or Portable Data Files (PDF) for Lectures Delivery. 2. American College of Clinical Pharmacy (ACCP) 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**) :**
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 Pathophysiology (2) خطة مقرر علم وظائف الأعضاء المرضي (2)

I. General information about the course:						
1	Course Title :	Pathophysiology (2)				
2	Course Code and Number :	PHF413				
3	Credit Hours :	Credit Hours				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		2			*2*	
4	Study Level and Semester:	4th Level, 1st semester				
5	Pre-requisites (if any):	PHF325				
6	Co-requisites (if any):					
7	Program in which the course is offered:					
8	Teaching Language:	English				
9	Instruction location:					

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 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.

IV. 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

V. Course Contents

Theoretical Aspect:

No.	Course Units	Sub-topics	Week due	Contact Hours
1	Blood and Hematopoietic System	Alterations in Hemostasis and Blood Coagulation	1st week	2
2		Neoplastic Disorders of Hematopoietic and Lymphoid Origin	2nd week	2
3	Respiratory System	Alterations in the Respiratory System during Infectious Disorders and Neoplasia	3rd week	2
4		Alterations in the Respiratory System during Obstructive Airway Disorders	4th week	2
5	Urinary System	Alterations in the Urinary System during Acute Renal Failure	5th week	2
6		Alterations in the Urinary System during Chronic Renal Failure	6th week	2
7	Nervous System	Alterations in the Nervous System during Seizure Disorders	7th week	2
8		**Mid Term Exam**	**8th week**	**2**
9		Alteration in The Organization and Control of Motor Function	9th week	2
10		Alteration in Dementias	10th week	2
11	Infections	Viral Infection	11th week	2
12		Bacterial Infection	12th week	2
13		Protozoa Infection	13th week	2
14		Helminthes Infection	14th week	2
15		**Final Exam**	**15th week**	**2**
Total number of weeks and hours			**15**	**30**

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 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**

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

I. 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, 8th edition, Saunder, USA.
2. Charles Simon Herrington, 2014, Muir's Textbook of Pathology, 6th 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 Elsiever, 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 Grew 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:

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	Total
		2	-	1	-	3
4.	Study Level and Semester:	Year 4- semester 1				
5.	Pre-requisites (if any):	PHS320				
6.	Co-requisites (if any) :	NA				
7.	Program in which the course is offered	Bachelor of Pharmacy				
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:

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	**4**	**8**
2	**Endocrine**	Endocrine system: Hypothalamic & pituitary Hormones, Thyroid & antithyroid drugs Parathyroid & regulation of calcium metabolism,	**3**	**6**
3	**Midterm Exam.**		**1**	**2**
4	**Endocrine**	Pancreatic hormones & antidiabetic drugs ,Adrenocorticosteroids & adrenocortical antagonists, The gonadal hormones & inhibitors Contraceptive agents	**2**	**4**
5	**Chemotherapeutic agents**	Introduction, Antibacterial agents, antifungal and antiviral	**4**	**8**
6	**Final exam.**		**1**	**2**
Total number of weeks and hours				**16**

Second: Practical/Tutorial/Clinical Aspects
Write up practical/tutorial/clinical topics

No.	Practical/Tutorial/Clinical topics	Week due	Contact Hours
1	Animal handling	1	3
2	Study of drug absorption and excretion in man	1	3
3	Study the action of drugs on the rabbit's eye	1	3
4	Allergy test	1	3
5	Effect of saline purgative on animal intestine and the use of oral rehydration solution	1	3
6	Study the effect of different diuretic groups on human	1	3
7	Midterm exam	1	3
8	Study the effect of anticoagulants on animals	1	3
9	Study the side effects of anticancer drugs	1	3
10	Study the effect of oral antidiabetic agents on animals	1	3
11	Study the effect of analgesics on animals	1	3
12	Study the effects of unknown drugs on isolated animal organs 1	1	3
13	Study the effects of unknown drugs on isolated animal organs 2	1	3
14	Study the effects of unknown drugs on isolated animal organs 3	1	3
15	Study the effects of unknown drugs on isolated animal organs 4	1	3
16	Final exam	1	3
Total number of weeks and hours		**16**	**48**

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

VI. Tasks and Assignments :			
No.	**Task/Assignment**	**Week due**	**Mark**
1	**Assignment and presentation**	**10**	**10**
2	**Practical reports**	**weekly**	**10**

VII. Learning Assessment:				
No.	**Assessment Tasks**	**Assessment day & date**	**Mark**	**Weight**
1	**Midterm Exam**	**8**	**20**	**20%**
2	**Assignment and presentation**	**10**	**10**	**10%**
3	**Practical reports**	**weekly**	**10**	**10%**
4	**Practical midterm exam.**	**7**	**10**	**10%**
5	**Practical exam.**	**15**	**10**	**10%**
6	**Final written Exam**	**16**	**40**	**40%**
Total		**16**	**100**	**100%**

VIII. 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.
2. Jaju BP (1989). Pharmacology practical exercise book. JAYPEE BROTHERS. 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**) :**

1. Course Syllabus 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 :	PHS412				
3.	Credit Hours :	Lecture	Seminar/Tutorial	Practical	Training	Total
		2		1		3
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	None				
8.	Teaching Language:	English				
9.	Study System :	Semester-based				
10.	Prepared by :					

I. 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, NSAI 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-1and II.

II. 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

III. 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.

VI. 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	No. of Weeks	Contact Hours	
1	CNS stimulant Drugs	sympathomimetic agents , analeptic agents TCA depressant, SSRI , MAOI , hallucinogens	3	6	
2	CNS Depressant drugs	General anesthetics sedative & hypnotics anxiolytic antipsychotic Antiepileptic drugs	3	6	
3	Midterm exam		1	2	

4	Vitamins	Lipids soluble vitamins Water soluble vitamins	1	2	
5	Steroids	Classification Sex hormones Glucocorticoids Mineralocoticoids Modification,SAR,use	2	4	
7	NSAIDS	Classification,SAR,chemical synthesis	1	2	
8	Opioid analgesics	Classification Uses,synthesis,metabolism	2	4	
	Drug design	Introduction ,Methods of drug design Types of drug design	2	4	
9	Final exam			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	Identification of mefenamic acid Identification of codeine Identification of diazepam Identification of phenobarbitone Identification of chlorpromazine Identification of imipramine Identification of fluoxetine Identification of vitamin D Identification of hydrocortisone Identification of ampicillin Identification and assay of vitamin C injection	11	22	
2	Synthesis and evaluation of diazepam	1	2	
3	Final Exam	1	2	
Total number of weeks and hours		**13**	**26**	

VII. Tasks and Assignments :				
No.	**Task/Assignment**		**Week due**	**Mark**
1	Assignment		12	10

VII. Teaching Strategies
Lectures
Interactive class discussions
Practical sessions
Activities

VII. 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%**	

VIII. 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. Wilson and Gisvold's(2011) "Textbook of organic Medicinal and Pharmaceutical chemistry, Twelfth edition" ,Lippincott Williams and Wilkins USA. 2. Zuhair Muhi-Eldeen(2005)"Essential Of Medicinal Chemistry" first edition Dar AL-Esra Jordan. 3. Sadik AL-Mikhlafi (2014)"Medicinal Chemistry" fourth edition,ALmutafawk,Yemen
E
1.www.pharmchem.ku.edu/

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**)** 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 Pharmaceutical Technology (3) خطة مقرر تقنية صيدلانية (3)

I. General information about the course:

1	Course Title :	Pharmaceutical Technology (3)				
2	Course Code and Number :	PHB411				
3	Credit Hours :	Credit Hours				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		2	-	1	-	3
4	Study Level and Semester:	Fourth Year – First Semester				
5	Pre-requisites (ifany):	PHS321				
6	Co-requisites (if any):	NA				
7	Program in which the course is offered:	Bachelor of Pharmacy				
8	Teaching Language:	English				
9	Instruction location:					

II. Course Description

This course familiarizes the students with the different unit operations encountered in pharmaceutical industry as well as the principles of preformulation and good manufacturing practice (GMP). This course integrates the basic scientific background to pharmaceutical practice regarding unit operations through classes and practical experiments. A prior knowledge of the different dosage forms is crucial for this course.

III. Course Aims:

1. Introduce the students to the principles of preformulation.
2. Acquaint students to the basics of good manufacturing practice (GMP).
3. Provide knowledge and practical skills for the students in carrying out unit operations (particle size analysis, reduction, and enlargement, powder flow, mixing, drying, and filtration)
4. Equip the students with team-work and problem solving skills.

IV. Course Intended Learning Outcomes (CILOs) :

1. Identify the different drug properties in preformulation studies.
2. Recognize the unit operations and machinery regarding particle size, powder flow, mixing, drying, and filtration.
3. Recall the principles of Good Manufacturing Practice (GMP).
4. Design preformulation flow charts for investigated drugs.
5. Choose the appropriate unit operations of active ingredient and excipients for a specific dosage form.
6. Exercise professional good laboratory practice (GLP) during practical sessions.
7. Operate machinery used properly.
8. Implement proper unit operations towards preparing medicines.
9. Manage time effectively.
10. 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	Preformulation	API physical properties, drug properties, stability	2	4
2	Unit Operations	Particle size analysis, particle size reduction, particle size separation, powder flow	5	10
3	Midterm		1	2
4	Unit Operations (continued)	Mixing, drying and dryers, filtration and centrifugation	4	8
5	Good Manufacturing Practice (GMP)	GMP glossary, basics of GMP, types of GMP inspection, components of GMP	3	6
6	Final exam		1	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.	Preformulation	**3**	**6**
2.	Particle size analysis and reduction	**3**	**6**
3.	Powder flow	**2**	**4**
4.	Mixing	**2**	**4**
5.	Filtration and centrifugation	**2**	**4**
6.	Final Exam	**1**	**2**
Total number of weeks and hours		**13**	**26**

VI. Teaching Strategies
Lectures Interactive class discussions Practical sessions Project

VII. Tasks and Assignments			
No.	**Task/Assignment**	**Week due**	**Mark**
.3	Project	**12**	**10**

VIII. Learning Assessment:				
No.	**Assessment Tasks**	**Assessment day & date**	**Mark**	**Weight**
1	**Midterm**		20	20%
2	**Assignment**		10	10%
3	**Practical Part**		30	30%
4	**Final Exam**		40	40%
	Total		**100**	**100%**

IX. Learning Resources

Textbooks

Michael. E. Aulton, (2007), **Aulton's Pharmaceutics: The Design and Manufacture of Medicines**, third edition, Churchill Livingston, USA

Essential References:

1. Loyd V. Allen Jr., Nicholas G. Popovich, Howard C. Ansel, (2011), Ansel's Pharmaceutical
2. Dosage

   Forms and Drug Delivery Systems, ninth edition. Lippincott Williams & Wilkins, USA.
3. Leon Lachman, Herbert A. Lieberman, Joseph L. Kanig, (1986), **The Theory and Practice of Industrial Pharmacy**, third edition, Lea & Febiger, USA.
4. Loyd V. Allen, Jr., (2005), **Remington: The Science and Practice of Pharmacy**, twenty first edition. Lippincott Williams & Wilkins, USA.
5. A.J. Winfield, J.A, Rees, I. Smith, (2009), **Pharmaceutical practice**, fourth edition, Churchill Livingston - 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

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 Professional skills (5) خطة مقرر مهارات مهنية (5)

I. General information about the course:						
1	Course Title :	Professional skills (5)				
2	Course Code and Number :	PHB417				
3	Credit Hours :	Credit Hours				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		1	-	-	-	1
4	Study Level and Semester:	Fourth Year – Second Semester				
5	Pre-requisites (if any):	PHS327				
6	Co-requisites (if any):	NA				
7	Program in which the course is offered:	Bachelor of Pharmacy				
8	Teaching Language:	English				
9	Instruction location:					

II. Course Description

The objective of this course is to enhance student knowledge of the many aspects of community pharmacy practice. The course includes the activities of the community pharmacist in processing prescription, care of patients or clinical pharmacy, monitoring and utilization, small-scale manufacture of medicines, responding to symptoms of minor ailments (OTC drug), informing health care professionals and the public health promotion. The prerequisite for this course is BPH17and BPH18. The lectures will be conducted informally with participation by the student's seminars.

III. Course Aims:

1. Provide the student with roles of community pharmacist
2. Explain to the student the difference between business and professional services.
3. Describe to the student the activities carried out by a Community Pharmacy.
4. Unable students to define and describe the social aspects of pharmacy
5. Equip the students with team work

IV. Course Intended Learning Outcomes (CILOs) :

1. Explain the roles of community pharmacist, organization of community pharmacy and Classification of drug safety during pregnancy and controlled drugs
2. Recognize 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 and role of community pharmacy	• Objectives of community pharmacy • Distinguishing characteristics of a community pharmacy • The pharmacist and patient's behavior relationship. • Activities of a community pharmacy.	2	2
2	Structure Organization of community pharmacy	• Community pharmacy organization • Structure of retail and wholesale drug store- • Types of drug stores and design • Legal requirements for establishment • Maintenance of drug store • Dispensing prescriptions • Maintenance of records of retail and whole sale	2	2

3	Pharmaceutical care	• Patient's Drug-Related Needs • Drug therapy problem • How to practice pharmaceutical care	2	2
	Mid term		1	1
4	Non-prescription drugs	• Introduction, OTC drugs and self-care • Over-the-Counter Medications and Pregnancy	2	2
5	Measuring and regulating medicines use	• Adverse drug reactions and drug interactions • Controlled drugs • Health economics	2	2
6	Health, illness and medicines use	• drug misuse and drug abuse (Drug misuse and the community pharmacist) • Misuse of over-the-counter medicines • Generic medicine • Medicine safety • Health promotion • Medication errors • Disposal of unwanted Medicines	4	4
7	Final exam		1	1
Total number of weeks and hours			**16**	**16**

VI. Tasks and Assignments			
No.	**Task/Assignment**	**Week due**	**Mark**
.4	Generic medicine		**11th week**
.5	Medicine safety		**12th week**
.6	Health promotion		**13th week**
.7	Medication errors		**14th week**
.8	Disposal of unwanted Medicines		**15th week**

VII. Learning Assessment:				
No.	**Assessment Tasks**	**Assessment day & date**	**Mark**	**Weight**
1	**First Test**	7	30	30%

2	**Assignment**	11, 12, 13, 14, 15	10	10%
3	**Final Exam**	16	60	60%
	Total		**100**	

VIII. Learning Resources

Textbooks

1. A.J. Winfield, J.A, Rees, I. Smith, 2009, Pharmaceutical practice, fourth edition, Churchill Livingston – Elsevier, USA

Essential References

1. McGraw-Hill/Appleton & Lange.9, Pharmaceutical practice, fourth edition, Churchill Livingston - Elsevier, USA
2. Loyd V. Allen, Jr., 2005, Remington: The Science and Practice of Pharmacy, twenty first edition. Lippincott Williams & Wilkins, USA.
3. M.A. Khan, 2000, pharmaceutical and clinical calculation, 2th edition by CRC Press LLC, USA
4. C. Weiner, 2009, Drugs for pregnant and lactating women. Maryland Elsevier, USA.

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**) :**

Course Syllabus Public Health — خطة مقرر الصحة العامة

I. General information about the course:

1	Course Title :	Public Health				
2	Course Code and Number :	PHF416				
3	Credit Hours :	Credit Hours				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		1				1
4	Study Level and Semester:	Fourth Year : Second Semester				
5	Pre-requisites (if any):	NA				
6	Co-requisites (if any):	NA				
7	Program in which the course is offered:	Bachelor of Pharmacy				
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 heath 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**	**1**
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&3**	**2**
3	Healthcare system in Yemen	Health systems profile- Yemen National health strategy. Public sector health care delivery network. Pharmacy profession in healthcare system and patient	**4**	**1**

		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**	**1**
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**	**1**
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**	**2**
7	**Midterm Exam.**		**9**	**1**
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**	**1**
9	Medicine access and affordability	Drug prices, WHO/HAI study on medicine prices, Yemen pricing situation, patent, and generic issues.	**11**	**1**
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**	**1**
11	Rationale drug use	National and international quality use of medicines programme. Components of rationale drug use. Role of different key stakeholders	**13**	**1**
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**	**1**
13	Evaluation of pharmacy practice	The evaluation cycle need assessment process evaluation, outcome and impact evaluation	**15**	**1**

		implication for pharmacists and pharmacy practice		
14	**Final exam**		**16**	**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	Patient education	8-14	5
	Evaluation of pharmacy practice	8-14	5

VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	**Tasks/Assignments**	8-14	10	10%
2	**Midterm Exam**	**9**	30	30%
3	**Final Exam**	**16**	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. Krska, 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
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.
7	**(**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).
8	**(**Other policies**) :**

second Semester **الفصل الثاني**

4. Course Syllabus Pharmaceutical Technology (4) خطة مقرر تقنية صيدلانية (4)

I. General information about the course:						
1.	Course Title :	Pharmaceutical Technology (4)				
2.	Course Code and Number :	PHB421				
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):	-				
6.	Co-requisites (if any):	NA				
7.	Program in which the course is offered:	Bachelor of Pharmacy				
8.	Teaching Language:	English				
9.	Instruction location:					

II. Course Description

This course familiarizes the students with the science and art of formulation in pharmaceutical industry as well as the principles, types, operation, and troubleshooting of pharmaceutical machinery. This course integrates the basic scientific background to pharmaceutical practice regarding manufacturing of different dosage forms. A prior knowledge of the different dosage forms and unit operations is crucial for this course.

III. Course Aims:

1. Introduce the students to the art of dosage forms formulation.
2. Acquaint students to the machinery and quality control (QC) tests used in pharmaceutical industry.

3. Provide students with the ability to independently propose formulations for different dosage forms.

IV. Course Intended Learning Outcomes (CILOs) :

1. Recognize the different materials used in formulation.
2. List machinery and quality control tests used in pharmaceutical industry.
3. Choose the appropriate formulation of active ingredient and excipients for a specific dosage form.
4. Operate machinery and analytical apparatus properly.
5. Implement proper techniques towards preparing medicines and determination of its quality.
6. Manage time effectively.

V. Course Contents

Theoretical Aspect:

No.	Course Units	Sub-topics	Week due	Contact Hours
1	Liquid dosage forms	Formulation, machinery, and QC of liquid dosage forms including oral, parenteral, inhalations and ophthalmic products	1-4	8
2	Semisolid dosage forms	Formulation, machinery, and QC of semisolid dosage forms including ointments, creams, gels, pastes, and suppositories	5-8	8
3	Midterm		9	2
4	Solid dosage forms:	Formulation, machinery, and QC of solid dosage forms including tablets and hard and soft gelatin capsules	10-15	12
5	Final exam		16	2
Total number of weeks and hours			**16**	**32**

VI. Teaching Strategies

Lectures
Interactive class discussions
Project

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

VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	Midterm		30	30%
2	Assignment		10	10%
3	Final Exam		60	60%
	Total		100	100%

IX. Learning Resources

Textbooks

1. 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. Leon Lachman, Herbert A. Lieberman, Joseph L. Kanig, (1986), The Theory and Practice of Industrial Pharmacy, third edition, Lea & Febiger, USA.
2. Michael. E. Aulton, (2007), Aulton's Pharmaceutics: The Design and Manufacture of Medicines, third edition, Churchill Livingston, 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 Livingston - Elsevier, USA

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**) :**

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				المجموع
		نظري	سمنار/تمارين	عملي	تدريب	
		2	-	-	-	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 توثيقا صحيحا، وينمي الاتجاهات الإيجابية لدى المتعلم تجاه البحث العلمي،
ولتحقيق ذلك يتم اتباع العديد من الأنشطة الفاعلة (طرائق وأساليب التدريس) 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 النصفي 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، وتقريرا بحثيا.
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، وتقريرا بحثيا.
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.	2	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:	2	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.	2	4
4.	عينة البحث	* العينة العشوائية (الاحتمالية): -العينة العشوائية البسيطة. -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	4
5.	امتحان نصفي	• امتحان نصفي	1	2
6.	أدوات جمع المعلومات	• الاستبيان. • المقابلة. • الملاحظة. • الاختبارات.	2	4
7.	استخدام المكتبة والمصادر والمراجع	• 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.	1	2
8.	التوثيق العلمي	• تعريف التوثيق العلمي.	1	2

		• التوثيق في متن البحث. • التوثيق في المصادر والمراجع: - التوثيق العلمي للكتب. - التوثيق العلمي للرسائل العلمية. - التوثيق العلمي للدوريات والمجلات العلمية. - التوثيق العلمي للإنترنت.		
9.	خطوات إعداد البحث العلمي	- توضيح ماهية المشكلة. - مراجعة الدراسات السابقة. - تصميم البحث وتحديد خطواته الإجرائية. - جمع المعلومات وتحليلها وتفسيرها. - ملخص البحث وأهم نتائجه، وتوصياته، وبحوث مقترحة للدراسة.	2	4
إجمالي عدد الأسابيع والساعات			15	30

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 / التكاليف 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 الرئيسة:

1. عبد الغني محمد اسماعيل العمراني (2011): مناهج البحث العلمي ،ط (1)، جامعة العلوم والتكنولوجيا، صنعاء.
2. 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 خيري كاظم (2002): مناهج البحث في التربية وعلم النفس، دار النهضة العربية. القاهرة، مصر

X. الضوابط والسياسات المتبعة في المقرر :

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 التكليفات..... الخ

Course Syllabus Pharmacology (4) خطة مقرر علم الأدوية (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	Total
		2	-	-	-	2
4.	Study Level and Semester:	Year 4- semester 2				
5.	Pre-requisites (if any):	PHS310				
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 :	Semester based				

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 and sub-topics with contact hours

Topics/Units of Course Contents					
First: Theoretical Aspects					
No.	**Course Topics/Units**	**Sub-topics**	**No. of Weeks**	**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	**5**	**10**	
2	**Chemotherapeutic drugs**	Antimycobacterial Drugs, Antifungal Agents, Antiviral Agents, Miscellaneous Antimicrobial Agents; Disinfectants, Antiseptics, & Sterilants,	**3**	**6**	
3	**Midterm Exam.**		**1**	**2**	
	Chemotherapeutic drugs	Clinical Use of Antimicrobial Agents Antiprotozoal Drugs, Clinical Pharmacology of the	**6**	**12**	

		Antihelminthic Drugs, Cancer Chemotherapy, immunosuppressant agents			
7	**Final exam.**		**1**	**2**	
Total number of weeks and hours			**16**	**32**	

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

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

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

VIII. 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
1. Rang HP, Dale MM and Ritter JM (2014). Pharmacology. 7th ed. CHURCHILL LIVINGSTONE. London

2. Laurence DR, Bennett PN and Brown MJ (2014). Clinical pharmacology. Ninth ed. CHURCHILL LIVINGSTONE. London
3. 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.

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) :

Course Syllabus Professional skills (6) **خطة مقرر مهارات مهنية (6)**

I. General information about the course:						
1	Course Title :	Professional skills (6)				
2	Course Code and Number :	PHB426				
3	Credit Hours :	Credit Hours				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		1				1
4	Study Level and Semester:					
5	Pre-requisites (if any):	PHB417				
6	Co-requisites (if any):					
7	Program in which the course is offered:	Bachelor of Pharmacy				
8	Teaching Language:	English				
9	Instruction location:					

II. Course Description

The objective of this course is to enhance student knowledge of the many aspects of hospital or health system pharmacy. This course will include pharmacy organization, medication distribution system, intravenous admixture system, and drug use management. The course will also cover the functional elements of clinical pharmacy practice and monitoring drug therapy. The prerequisite for this course is professional skills 2. The lectures will be conducted informally with participation by the student's seminars.

III. Course Aims:

1. Make students identify and understand the concept of hospital pharmacy practice.
2. Unable students to describe organization of pharmaceutical services in the hospitals.
3. Introduce the students into the pharmaceutical services, which provided by the hospital pharmacist.
4. Provide the students with minimal and essential requirements for location, and the area of the

pharmacies inside the hospitals.

5. Equip the students with team work

IV. Course Intended Learning Outcomes (CILOs) :

1. Explain hospital organization/committee functions, and drug distribution.
2. Describe the steps involved in preparation of infusions, total parenteral nutrition, 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 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, Budget preparation and Implementation, Hospital formulary Contents, preparation and revision of hospital formulary.	2	2
2	**Drug Store Management and Inventory Control:**	Organization of a drug store, Types of materials stocked, Storage conditions, Purchase and Inventory Control - Principles - purchase procedures - Purchase order - Procurement and stocking	3	3
3	**Inpatient pharmacy services**	Dose adjustment, Intravenous admixture (TPN), Therapy drug monitoring (TDM)	5	5

	Mid term		1	**1**
4	**Drug Distribution Systems in Hospitals:**	Outpatient dispensing - methods adopted, Dispensing of drugs to inpatients, Types of drug distribution systems	2	2
5	Pharmaceutical services	Clinical Function of Hospital Pharmacists, Pharmaceutical procurement & control services, Manufacturing & compounding, Rational Use of Drugs And Essential Drug List, Educational Activities	2	2
	Final exam		**1**	**1**
Total number of weeks and hours			**16**	**16**

X. Tasks and Assignments

No.	Task/Assignment	Week due	Mark
2.	Storage conditions, Purchase and Inventory Control	4	**10**
3.	Intravenous admixture	7	**10**
4.	Types of drug distribution systems	11	**10**
5.	Essential Drug List	14	**10**

XII. 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**	

XIII. Learning Resources

Textbooks

1. M. C. Allwood and J. T. Fell, 1980, "Textbook of Hospital Pharmacy" Blackwell Scientific Publications, Oxford.
2. W.E. Hassan, 1974, "Hospital Pharmacy" 3rd ed. Lea and Febiger, Philadelphia.

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 Livingston - Elsevier, USA
3. Clinical Pharmacy - Jankins, Superandio and Laticlasis.
4. M. A. Khan, 2000, pharmaceutical and clinical calculation, 2th edition by CRC Press LLC, USA Livingston – Elsevier, USA

	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**) :**

Course Syllabus of Structured Practical Experiential Program (1) | **خطة مقرر برنامج التدريب التجريبي المهيكل (1)**

I. General information about the course:						
1	Course Title :	Structured Practical Experiential Program (1)				
2	Course Code and Number :	PHB425				
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):	PHS310/ PHS320/ PHS410/ PHB417.				
6	Co-requisites (if any):	PHS420				
7	Program in which the course is offered:	Bachelor of Pharmacy				
8	Teaching Language:	English				
9	Instruction location:					

II. Course Description

Structured Practical Experiential Program I (SPEPI) is an experience and supervised training program for pharmacy students in their fourth year of the program. This credit hour of community pharmacy practice course consists of 300 hours of pharmacy experience in a community pharmacy setting. This course will introduce the students to the funda-mentals of pharmacy practice in the community pharmacy environment. 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 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
3. Help the students to participate in and manage medication use and medication therapy management Systems
4. Allow students to communicate with professional colleagues and patients regarding the selection and/or use of Non-prescription

IV. Course Intended Learning Outcomes (CILOs) :

1. Identify relevant laws and standards in the field of community pharmacy
2. Identify different services pharmacy technicians provide and the role they play in community
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. 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
.6	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 300 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.
- Behave in a professional manner at all times. Students are also expected to wear appropriate, professional attire suitable to their experiential site.
- A training site issued certificate confirms the completion of required number of hours.
- Training notebook.

VIII. Learning Assessment:					
No.	**Assessment Tasks**	**Week due**	**Mark**	**Proportion of Final Assessment**	
1	Completion of required hours		20	50%	
4	Notebook		25	50%	
Total			100	100%	

IX. Learning Resources:
(Author, (Year), Book Title, Edition, Publisher, Country of publishing)
Textbooks-not more than 2
None unless otherwise specified by the individual preceptor.

X. Course Policies :	
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**) :** • 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.

1. Course Syllabus Therapeutics (2) خطة مقرر علم المداوة (2)

I. General information about the course:						
1	Course Title :	Therapeutics (2)				
2	Course Code and Number :	PHB422				
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):	PHB414				
6	Co-requisites (if any):	NA				
7	Program in which the course is offered:	Bachelor Of Pharmacy				
8	Teaching Language:	English				
9	Instruction location:					

II. Course Description
This course deals essentially with chronic diseases and their pharmacotherapy and treatment algorithm, especially in the individualization of drug usages. The topics that will be covered are infectious diseases, neurology, psychiatry, skin diseases, and woman's health. 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.

III. Course Aims:

1. Give student knowledge about the pathophysiology of diseases.
2. Enable student to explain the signs, symptoms and complications of the diseases.
3. Help student to identify key therapeutic decision points and to discuss nonpharmacologic & pharmacologic treatments for clinical disease.
4. Help student to recognize the safety of drugs in special groups like children, elderly and pregnancy.

IV. Course Intended Learning Outcomes (CILOs) :

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
3. Explain an appropriate lifestyle modifications and pharmacotherapy for patients.
4. Formulate special dosage schedule to meet patient individualization therapy.
5. Construct an appropriate monitoring plan to assess the treatment of disease.
6. Practice suitable advises for the patients and others on the safe and effective use of medicines.
7. Implement an appropriate plan for therapeutic drug monitoring.
8. Cooperate effectively with patients, public and health care professionals; includes communication both written and oral.

V. Course Contents

Theoretical Aspect:

No.	Course Units	Sub-topics	Week due	Contact Hours
1	**Infectious diseases**	Antimicrobial Regimen Selection, Lower/Upper respiratory tract infection, Urinary Tract Infections, Superficial fungal infections/ Vulvovaginal candidiasis,	5	10
2	**Mid-term Exam**		1	2
3	**Woman's Health**	Pregnancy & lactation: therapeutic considerations, Contraception ,Breast Cancer, Anemia	4	8
4	**Neurologic and Psychiatric Disorders**	Major depressive disorder, Headache, Epilepsy	3	6
5	**Dermatologic Disorders**	Acne, psoriasis	2	4
6	**Final-term Exam**		1	2

Total number of weeks and hours	16	32

VI. Teaching Strategies

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

VII. Tasks and Assignments

No.	Task/Assignment	Week due	Mark
1.	Assignment 1	5	4
2.	Assignment 2	11	4

VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	**Homework/Tasks/Assignments**	5,11	10	10 %
2	**Midterm Exam**	6,11	40	40 %
3	**Final Exam**	16	50	50 %
	Total			

IX. Learning Resources

Textbooks

1. Marie A. Chisholm-burns and others, (2016), Pharmacotherapy: Principles & practice, 4nd edition, McGraw-Hill Companies, Inc., United States of America.
2. Joseph Dipiro, (2017), Pharmacotherapy: pathophysiologic approaches, 10th edition, McGraw-Hill Companies, Inc., United States of America

Essential References:

1. Walker and Edwards, (2012), Clinical Pharmacy and Therapeutics, 5th edition.
2. Koda-Kimble, and others, (2012), Applied Therapeutics: The Clinical Use Of Drugs, 10th edition, Lippincott Williams & Wilkins , Philadelphia, United States of America.
3. Drug Information Handbook: A Clinically Relevant Resource for All Healthcare Professiona 25th Edition Lexi Comp; 25 edition (May 2, 2016).
4. Pharmacotherapy Casebook: A Patient-Focused Approach, Tenth Edition (Pharmacy) 10th Edition,McGraw-Hill Education / Medical; 10 edition (January 4, 2017).

Electronic Materials and Web Sites:

1. Word Document or Portable Data Files (PDF) for Lectures Delivery.
2. American College of Clinical Pharmacy (ACCP) 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 :**
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 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				
8	Teaching Language:	English				

9	Study System :	Semester- based
10	Prepared by :	Associate Prof. Dr . Ahmed Sabati

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:

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

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

Topics/Units of Course Contents

Theoretical Aspects

No.	Course Topics/Units	Sub-topics	No. of Weeks	Contact Hours	
1	**Introduction and definitions**	-	2	4	
2	**Pharmacokinetics of drug administered by intravenous route**	- Pharmacokinetics Model - One compartment open model	2	4	
		- Two compartments open model	2	4	
3	**Pharmacokinetics of drug administered by oral route**	- Pharmacokinetics of drug absorption - Determination of Ka	2	4	
		- Extra-Vascular multiple dose administration	2	4	
		Models of oral absorption	2	4	
4	**Renal excretion and clearance:**	-	2	4	

5	**Selected topics:**	- Therapeutic drug monitoring - Determination of doses - Nonlinear pharmacokinetics - Protein binding of drugs	2	4	
Total number of weeks and hours			**16**	**32**	

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

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:**

Toxicology 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	5th year pharmacy students – second semester				
5.	:Pre-requisites (if any)	PHS410				
6.	:Co-requisites (if any)					
7.	Program in which the course is offered	Bachelor of Pharmacy				
8.	:Teaching Language	English				
9.	:Study System	Semester- based				
10	:Prepared by	Professor. Nabil H. Al-Hamadi nblhamadi@yahoo.com				
11	:Approval date	2014				
12	:Approved by	The University & Ministry of Higher Education				

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)

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. Perform an immediate action to save the life of patient through medical intervention and urgent referral as needed.
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 and sub-topics (theoretical and practical) with contact hours

Topics/Units of Course Contents					
First: Theoretical Aspects					
No.	**Course Topics/Units**	**Sub-topics**	**No. of Weeks**	**Contact Hours**	
1	Introduction to Occupational Environmental & Medical Toxicology	Definitions, types & mode of poisoning	1	2hrs	
2	General diagnosis of poisoning	Clinical & laboratory approach	2	2hrs	
3	General treatment of poisoning	ABC, decontamination & antidotes	3	2hrs	
4	Corrosive poisons	Household acids and alkalis	4	2hr	
5	Metallic poisons	Toxicology of heavy metals	5	2hr	
6	Non metallic poisons	Insecticides, rodenticides and biocides	6	2hr	
7	Analgesics	Non-steroidal anti-inflammatory drugs	7	2hr	
8	Hypnotics	Barbiturates & benzodiazepines	8	2hr	
9	Narcotics	Opium, opiates & drug addiction	9	2hrs	
10	Hallucinogens	Cannabis, LSD & datura	10	2hr	
11	Stimulants	Amphetamine& khat	11	2hr	
12	Volatile poisons	Alcohols, CO, Petroleum distillates	12	2hr	
13	Animal Envenomation	Snakes, scorpions, insects & rabies	13	2hrs	

14	Harmful effects of drugs on organs.	CNS, CVS and renal intoxicants	14	2hrs	
15	Allergic reactions to drugs		15	2hrs	
16	Free radicals and antioxidants		16	2hrs	
Total number of weeks and hours			**16weeks**	**32**	

Second: Practical/Tutorial/Clinical Aspects				
Write up practical/tutorial/clinical topics				
No.	**Practical/Tutorial/Clinical topics**	**No. of Weeks**	**Contact Hours**	
1	**Planned next year 2015**			
2				
Total number of weeks and hours				

VI. Teaching Strategies

1. Lectures
2. Discussion
3. Problem solving

VII. Tasks and Assignments :

No.	Task/Assignment		Week due	Mark
1	-			
2	-			
3	-			

VIII. Learning Assessment:

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

IX. 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

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 م4

Faculty: Pharmacy — **الكلية: الصيدلة**

Course syllabus — **وصف المقررات**

Department: Pharmaceutical Sciences — **القســـــم: العلوم الصيدلانية**

Program: Bachelor of Pharmacy — **البرنامج: بكالوريوس صيدلة**

Fifth Year Courses — **مقررات السنة الخامسة**

First Semester — **الفصل الأول**

Course Syllabus Biostatistic — **خطة مقرر الاحصاء الحيوي**

I.General information about the course :						
1.	Course Title:	Biostatistic				
2.	Course Code and Number :	PHF511				
3.	Credit Hours :	Lecture	Seminar/Tutorial	Practical	Training	Total
		2	-	-		*2*
4.	Study Level and Semester:	5th Level, 1st 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 Medecine and Bachelor of Dentistry				
8.	Teaching Language:	English				
9.	Study System :	Semester-based 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

VI. 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.

VII. 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	No. of Weeks	Contact Hours	
1	Introduction to Biostatistics	Type of variables	1	2	
2	Data presentation	Tables Graphs	2	4	
3	Central tendency measurements	Mean Median Mode	1	2	
4	Dispersion measurements	Range Standard deviation Inter-quartile range Standard error	2	4	
5	SPSS overview	Data coding and entry	1	2	
6	Inferential Statistics	Estimation Hypotheses testing Selecting Suitable Statistical Tests	4	8	
7	Statistical Tests	Independent t-test Paired t-test Chi-square	5	10	

		Correlation and regression			
Total number of weeks and hours			**16**	**32**	

VIII. Tasks and Assignments :				
No.	**Task/Assignment**		**Week due**	**Mark**
1	Perform data presentation in table and graph		**3rd week**	**2.5**
2	Calculate central tendency measurements		**4th week**	**2.5**
3	Calculate dispersion measurement		**5th week**	**2.5**
4	Summarize and present statistical tests findings		**10th week**	**2.5**

IX. Learning Assessment:					
No.	**Assessment Tasks**	**Week due**	**Mark**	**Proportion of Final Assessment**	
1	**Homework/Tasks/Assignments**	As mentioned above	10	10	
2	**Midterm Exam**	8th week	30	30	
3	**Final Exam**	15th week	60	60	
Total			100	100	

X. 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, 2009.
2. Lecture notes

Electronic Materials and Web Sites

1. www.medicalstatistical.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**) :**

Course Syllabus Drug Delivery Systems **خطة مقرر أنظمة إيصال الدواء**

I. General information about the course:						
1.	Course Title :	Drug Delivery Systems				
2.	Course Code and Number :	PHB 510				
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):	PHB411				
6.	Co-requisites (if any):	NA				
7.	Program in which the course is offered:	Bachelor of Pharmacy				
8.	Teaching Language:	English				
9.	Instruction location:					

II. Course Description

This course outlines different recent topics in the field of drug delivery. The challenges, rationale, and remedy for drug delivery issues are covered in this course. Several novel drug delivery systems and their mechanisms of controlling the drug release will be discussed throughout the course. The course will be taught through a combination of interactive class lectures and self-directed assignments. The

successful completion of PBH29 is a pre-requisite for this course.

III. Course Aims:

1. Introduce the students to the rationale, importance, and concepts of controlled delivery systems.
2. Familiarize students with the mechanisms of drug release from such systems and how to control the release patterns.
3. Enable students to propose remedies for different drug delivery challenges.
4. Equip the students with team-work, researching papers, and paper writing skills.

IV. Course Intended Learning Outcomes (CILOs) :

1. Describe the different factors affecting drug release and drug delivery systems performance.
2. Discuss the different aspects and procedures of preparation of drug delivery systems.
3. Hypothesize a suitable delivery system for a specific drug and therapeutic situation.
4. Differentiate between different types of drug delivery systems.
5. Choose drug delivery route and system according to drug properties.
6. Evaluate the literature from different information resources.
7. Manage time effectively to meet deadlines.

V. Course Contents

Theoretical Aspect:

No.	Course Units	Sub-topics	Week due	Contact Hours
1	Fundamentals of Novel Drug Delivery Systems	rationale for drug delivery, barriers to drug delivery, factors affecting design of a delivery system	2	4
2	Oral Modified Drug Delivery Systems	membrane and matrix delivery systems, osmotic pumps	3	6
3	Transdermal Drug Delivery Systems	percutaneous absorption, criteria for drug selection, TDDS types, chemical and physical enhancers	2	4
4	Midterm		1	2
5	Polymeric Drug Delivery Systems	diffusion and erosion controlled delivery systems, smart polymers, microspheres	3	6
6	Liposomes	structure, preparation, types, applications	1	2

7	Gastro-retentive Systems	mechanism, types, challenges	**1**	2
8	Protein Drug Delivery System	challenges, requirements, strategies, new trends	**2**	4
9	Final Exam		**1**	2
Total number of weeks and hours			**16**	**32**

VI. Teaching Strategies

Lectures
Interactive class discussions
Assignment

VII. Tasks and Assignments

No.	Task/Assignment	Week due	Mark
.1	Paper	**12**	**10**

VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	**Midterm**		30	30%
2	**Assignment (Paper)**		10	10%
3	**Final Exam**		60	60%
	Total		**100**	**100%**

IX. Learning Resources:

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

Textbooks-not more than 2

1. N.K. Jain, (2008), **Controlled and Novel Drug Delivery**, First edition, CBS Publishers & Distributors, USA.

Essential References-not less than 4

1. 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.

2. Yie Chien , (1991), **Novel Drug Delivery Systems** , Second edition, CRC Press , USA.

3. Binghe Wang, Teruna J. Siahaan, Richard A. Soltero, (2005), **Drug Delivery: Principles and Applications,** First edition, Wiley-Interscience, USA.

4. Joseph Robinson, Vincent H. L. Lee, (1987), **Controlled Drug Delivery: Fundamentals and Applications,** first edition. CRC Press, USA.

Electronic Materials and Web Sites

- Controlled Release Society (http://www.controlledreleasesociety.org/Pages/default.aspx)
- Journal of Controlled Release (www.journals.elsevier.com/journal-of-controlled-release)

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**) :**

1. 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				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		1				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				
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	– 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**	1
2	Bioethics	– The birth of bioethics – Health and disease as values – Principles of bioethics – Ethics committees – Medical professionalism	**2**	1
3	Bioethical principles concepts	– 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&4**	**2**
4	Professional values in pharmacy practice	– 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**	**1**

5	Foundations of ethical decision making	– Traditional ethical theories applied to pharmacy practice – Commonly held virtues among pharmacists(fair dealing and equity, patient-centered services, faithfulness.) – Ethical principles applied to pharmacy practice – Rights and duties in the practice of pharmacy	**6**	**1**
6	Ethical considerations in professional communications	– 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**	**1**
7	Midterm Exam		**8**	**1**
8	The pharmacist-patient relationship	– The nature of the pharmacist-patient relationship – The moral basis of the pharmacist-patient relationship – Beneficence vs. Nonmaleficence, justice, autonomy, fidelity,veracity – Conflicts among role obligations	**9**	**1**
9	The principle of informed consent	– 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**	**1**
10	Research Ethics	– History of research ethics – Contemporary issues in research ethics – Balancing the benefits and harms of participation in research – Ethical issues in study design – Informed consent in research – Research sponsorship – Research Ethics Committees – Context of Research Involving Human Subjects	**11**	**1**
11	Codes of ethics	– WHO ethical criteria for medicinal drug promotion – Middle East &Africa Regional Code of pharmaceutical promotional practices – Code of conduct for pharmacy students	**12**	**1**
12	Pharmacy legislation in Yemen	– Regulation of pharmacy and other drug acts in Yemen legislative positions on ethical issues	**13**	**1**
13	Ethical issues of current pharmacy practice	– Ethical considerations in drug distribution – Refusal to provide services – Limits to autonomy – Alternative medicines	**14**	**1**

		– Truth disclosure		
14	Conflicts of interest	– Understanding financial conflicts of interest – Pharmacists, pharmaceutical manufacturers, and conflicts of interest. – Ethics in advertising and marketing of pharmaceutical products	**15**	**1**
	Final exam		**16**	**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/fxid-85.html

	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**) :**

Course Syllabus Pharmacy Administration — خطة مقرر إدارة الصيدلة

I. General information about the course:

1	Course Title :	Pharmacy Administration				
2	Course Code and Number :	PHS512				
3	Credit Hours :	Credit Hours				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		1				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				
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 mangers 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	2	2
2	Management Functions	Planning, organizing, staffing, directing, control and decision making- a preliminary idea of concepts, processes and techniques	2	2
3	Planning Cycle	Situation analysis, problem solving, preparation of the work plan and health planning	3	3
4	First Test		1	1
5	Monitoring and Evaluation	Definition, steps in evaluation, indicator of monitoring and evaluation	1	1
6	Leadership and Motivation	Influence power and authority, managers power Life cycle theory of leadership, factors effecting leadership Motivation and organization theories	3	3
7	Supervision and	Good supervision involves,	1	1

	Coordination	how to supervise and approaches to supervision coordination skill		
8	Management of drugs	National health & drug policy, drug management cycle; selection of drugs, procurement, storage and distribution	2	2
9	Final exam		1	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	Draft of annual plan	**7**	**10**

VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	**Tasks/Assignments**	**7**	10	10%
2	**Midterm Exam**	**6**	30	30%
3	**Final Exam**	**15**	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 fin Jones & Bartlett Learning.

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**) :**

Course Syllabus Structured Practical Experiential Program (2)

خطة مقرر برنامج التدريب التجريبي المهيكل (2)

I. General information about the course:						
1	Course Title :	Structured Practical Experiential Program (2)				
2	Course Code and Number :	PHB516				
3	Credit Hours :	Credit Hours				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
				2		2
4	Study Level and Semester:	Fifth year/First semester				
5	Pre-requisites (if any):	PHB414/PHB422/PHB426				
6	Co-requisites (if any):	NA				
7	Program in which the course is offered:	Bachelor Of Pharmacy				
8	Teaching Language:	English				
9	Instruction location:					

II. Course Description

This course focuses on practicing collaborative patient centered pharmaceutical care and medication use process in health systems. During hospital training, student will learn how a pharmacy deal with the total hospital operations, the standard of pharmacy practice, and the technology used for distributive function in addition to what have been studied in therapeutics. Completion of therapeutics courses should be finished before this course. This course is primarily taught through supervised training.

III. Course Aims:

1. Enable students to implement effective verbal, non-verbal and written communication skills through interactions with patients, their caregivers and other health care professionals.
2. Identify the medication use process in health-systems, including how pharmacy impacts the safety of storage, prescribing, transcription, dispensing, and administration and monitoring steps.
3. Identify the basic functionality of commonly used automated systems related to the medication use process.
4. Equip students to practice professionally during all interactions with patients, caregivers and other health care professionals.

IV. Course Intended Learning Outcomes (CILOs) :

1. Discuss the role of pharmacist on the practice of drug preparation and distribution, non-prescription medication counseling, and provision of information under the supervision of pharmacist preceptors
2. Establish patient-focused care in partnership with patients and other health care providers, to achieve positive health outcomes and/or to maintain or improve quality of life for the patient. . Design special dosage schedule to meet patient individualization therapy.
3. Analyze the data collected and determine if there are any drug-related problems.
4. Apply their academic knowledge, problem solving and decision making skills to deliver pharmaceutical care under the supervision of their preceptor.
5. Implement a patient specific monitoring plan clearly indicating what should be monitored, how frequently, and for how long.
6. Communicate effectively and efficiently in a variety of media choosing strategies that are appropriate to the purpose of the interaction and to the ideas, values and the background of the audience.

V. Course Contents

Theoretical Aspect:

No.	Course Units	Sub-topics	Week due	Contact Hours
1	Not applicable			
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	**In patient, Out-patients and Emergency 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, Entering patient profile on computer and Delivering of orders to proper patient care area.	**Four weeks**	**12**

2	**Inventory, purchase and storage of Medications :** System of purchasing and inventory control, Drug formulary system, Methods of storage and distributions of drugs, Drug product recalls, Return of expired drugs to the manufacturer	**Two weeks**	**6**
3	**Wards training:** Cardiovascular diseases, Respiratory diseases, Gastrointestinal tract, Endocrinology Disorders and infectious disease.	**Six weeks**	**18**
Total number of weeks and hours		16	36

VI. Teaching Strategies
Informal case Daily evaluation Assigned readings Assignments Wards rotations Patient counselling seminar Quizzes

VII. Tasks and Assignments			
No.	**Task/Assignment**	**Week due**	**Mark**
1.	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 **30 hours** of hospital training at UST hospital and/or UST medical complex.
- Submit **a training notebook at the end of the training reflecting the whole training experience in a daily report format.**
- 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 during the course of their rotation. 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.
-patient counseling
-quizzes

Visit reports in training notebook should be filled immediately after the visit and should include:

- Date, time, and duration of the rotation
- Establishment where rotation took place
- Objectives of the rotation
- Department/ unit/ ward

VIII. Learning Assessment:

No.	Assessment Tasks	Week due	Mark	Proportion of Final Assessment	
1	Completion of required hours		20	20%	
2	Daily evaluation of site coordinator		20	20%	
3	Evaluation of college coordinator		15	10%	
4	Informal cases		15	15%	
5	Seminar		15	15%	
6	Patient counseling		10	10%	
7	Quizzes		5	5%	
Total			100	100%	

IX. Learning Resources

Textbooks

1. Marie A. Chisholm-burns and others, (2016), Pharmacotherapy: Principles & practice, 4nd edition, McGraw-Hill Companies, Inc., United States of America.
2. Pharmacotherapy Casebook: A Patient-Focused Approach, Tenth Edition (Pharmacy) 10th Edition,McGraw-Hill Education / Medical; 10 edition (January 4, 2017).

Essential References:

1. Walker and Edwards, (2012), Clinical Pharmacy and Therapeutics, 5th edition.
2. Koda-Kimble, and others, (2012), Applied Therapeutics: The Clinical Use Of Drugs, 10th edition, Lippincott Williams & Wilkins , Philadelphia, United States of America.
3. Drug Information Handbook: A Clinically Relevant Resource for All Healthcare Professionals 25th Edi Lexi Comp; 25 edition (May 2, 2016).
4. Joseph Dipiro, (2017), Pharmacotherapy: pathophysiologic approaches, 10th edition, McGraw-Companies, Inc., United States of America.

Electronic Materials and Web Sites:

1. American College of Clinical Pharmacy (ACCP) http://www.accp.com
2. Lexi comp available at:http://www.lexi.com/
3. 4.Medscape available at :http://www.medscape.com/

XI. Course Policies :

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**) :** 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.

1. Course Syllabus Applied Pharmacognosy خطة مقرر علم العقاقير التطبيقي

I. General information about the course :						
1	Course Title:	Applied Pharmacognosy				
2	Course Code and Number :	PHB515				
3	Credit Hours :	Lecture	Seminar/Tutorial	Practical	Training	Total
		2				2
4	Study Level and Semester:	First or second semester				
5	Pre-requisites (if any):					
6	Co-requisites (if any) :					
7	Program in which the course is offered	Bachelor of Pharmacy				
8	Teaching Language:	English				
9	Study System :	Semester based				

II. Course Description :

This course is designed to acquire the students knowledge about the different methods used for evaluation and preparation of herbal drugs, in addition to the different methods for used for structure elucidation of natural products as spectroscopical and chromatographical methods.

III. Course Aims

1. Acquire Knowledge about the different dosage and doses preparation of herbal medicine.
2. Prescribing the suitable herbal drugs
3. Acquired information about the suitable method of preparations of herbal drugs, detection of insecticides, pesticides in the herbal drugs.
4. Acquired a knowledge about the different chemical methods used to identify the major constituents present in the plants and also how they can detect adulterations.
5. Different methods to increase the yield of the A. C.
6. Giving an idea about the different methods used to identify the compounds isolated from plants

IV. Course Intended Learning Outcomes (CILOs) :

1. identification the Isolated compounds using different methods
2. Identification the best method of cultivation, collection, drying, storage and preparation of herbal drugs, and changes that occur during drying and storage.
3. Microscopical features of different plant organs and different methods used for determination of numerical values.
4. Identification the Isolated compounds using different methods.
5. To acquired a knowledge about the preparation of the different dosage forms of natural products.
6. To get knowledge about the resent uses and advanced studies about the drugs and preparing a research article.
7. To acquired a knowledge about the preparation of the different dosage forms of natural products.
8. The student can prepare different dosage forms of herbal drugs
9. Solving of problems of herbal drugs related to their uses and preparation
10. Identify of compounds isolated from plants using different methods of analysis.
11. Acquire skills to criticize any supplied natural drug, increasing its products, assessing its validity for treatment purposes or as food supplement, and suitable dosage forms.
12. Skills about carrying different physical, chemical, spectral, and chromatographic methods for identification of the newly isolated A.C.
13. To acquire skills to identify medicinally active compounds.
14. Skills to compound herbal teas for therapeutic use
15. Acquire skills to detect adulteration or contamination of any supplied natural drugs.
16. Skill about how to identify adulteration and contamination.
17. Skill to compound some herbal preparation for different ailments
18. Communication skills.
19. Skill of writing a report for criticizing a herbal drugs and identify their constituents

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	No. of Weeks	Contact Hours	
1	Evaluation of herbal drugs	• Physical methods • Chemical methods • Physicochemical methods • Biological methods • Chromatographical methods	6	12	
2	Mid term 1		1	2	
3	Structure elucidation of natural products	• U.V • I.R • HNMR • CNMR • Mass spectroscopy	6	12	

4	Mid term 2		1	2	
5	Extraction and Preparation of herbal dosage form	Solid, liquid and semisolid dosage form	2	4	
Total number of weeks and hours			**16**	**32**	

VI. Learning Assessment					
No.	**Assessment Tasks**	**Week due**	**Mark**	**Proportion of Final Assessment**	
1	**Presentation**	8	5	5%	
2	**Quiz 1**	6	5	5%	
3	**Midterm Exam**	7,13	40	40%	
4	**Final Exam**	16	50	50%	
	Total		100	100%	

I. Teaching Strategies
Lectures
independent study
Seminars and small group discussions
presentation

II. Tasks and Assignments :				
No.	**Task/Assignment**		**Week due**	**Mark**
1	Assignment and presentation		**8**	**5**
2	Quizzes		**6**	**5**

III. Learning Resources :
(Author, (Year), Book Title, Edition, Publisher, Country of publishing)
Textbooks-not more than 2
1- Trease G. E. and Evan W. C. " Pharmacognosy", 2002. 2- Wallis, T.A. "Textbook in Pharmacognosy", 1967.
Essential References-not less than 4
1. Balbaa,S., et. al. Practical Notebook in "Chemistry of Natural Products", 1976. 2. Barnes, J., Anderson, A.L. and Philipson, J.D. " Herbal Medicine", 2002. 3. Jackson, B.P. and Snawdon, D.W. " Atlas of Microscopy of Medicinal Plants", 1990. 4. De smet.P.A;Keller, K, Hausel,R. and Chander, R.F. 'Dvers effects of herbal drugs", 1993.

Electronic Materials and Web Sites
1. WWW.Hinari.com."journal of Phytochemistry, Ethnopharmacology"
2. WWW.PubMed.com.

IV. 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) :

1. 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				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		2				2

4	Study Level and Semester:	Fifth Year / First Semester
5	Pre-requisites (if any):	NA
6	Co-requisites (if any):	PHF314
7	Program in which the course is offered:	Bachelor of Pharmacy
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) :

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	2
2	**Protein structure and genetics**	Primary, secondary, tertiary, and quaternary structures of proteins, Genes and encoding process.	2	2
3	**Fermentation**	basics, instruments, applications	3	2
4	**Recombinant DNA technology**	basics, steps, applications	4	2
5	**Cloning**	Types and applications	5	2
6	**Therapeutic hormones in biotechnology: Insulin**	Production of insulin, formulation of insulin Products, engineered insulin	6	2
7	**Cytokines**	Functions, interleukins, interferons	7-8	4
8	**Midterm**		9	2
9	**Vaccinestechnology**	Types, interleukins, vaccine vectors	10	2
10	**Tissue culture**	Cell and tissue culture, classifications, Procedure	11	2
11	**Monoclonal antibodies**	Production, hybridoma, uses in cancer	12	2
12	**Gene therapy**	Genes, milestones, antisense therapy, viral and non-viral vectors	13	2
13	**Journal Club Seminars**		14-15	4
	Final Exam		16	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	**10**

VIII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	**Midterm**		30	30 %
2	**Assignments**		10	10 %
3	**Final Exam**		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:

1. Center for Pharmaceutical Biotechnology and Nanomedicine, Northeastern University (www.northeastern.edu/pharmsci/research/centers/center-for-pharmaceutical-biotechnology-and-nanomedicine/)

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) : Chesting 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) :**

second Semester **الفصل الثاني**

Course Syllabus Complementary and Alternative Medicine **خطة مقرر الطب المكمل والطب البديل**

I. General information about the course:						
1.	Course Title :	Complementary and Alternative Medicine				
2.	Course Code and Number :	PHS521				
3.	Credit Hours :	Credit Hours				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		1				1
4.	Study Level and Semester:	Level five, second semester				
5.	Pre-requisites (if any):	PHS224				
6.	Co-requisites (if any):					
7.	Program in which the course is offered:	Bachelor of Pharmacy				
8.	Teaching Language:	English				
9.	Instruction location:					

II. Course Description

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.

III. Course Aims

On completion of the course the student will be able to:
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	1
2	CAM Therapies: Chiropractic	Principle and methods	1	1
3	CAM Therapies: Naturopathy	Principle and methods	1	1
4	CAM Therapies: Traditional Chinese Medicine	Principle and methods	1	1
5	CAM Therapies: Homeopathic Medicine	Principle and methods	1	1
6	CAM Therapies: Mind-Body/Energy Medicine	Principle and methods	1	1
7	CAM Therapies: Ayurvedic	Principle and methods	1	1

	Medicine			
8	Mid term exam		1	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	6	6
Total number of weeks and hours				**14**

VI. Tasks and Assignments :

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

VIII. Teaching Strategies

Lectures
independent study
Seminars
Presentation

VII. Learning Assessment:

No.	Assessment Tasks	Assessment day & date	Mark	Weight
1	**Assignments, seminar**	6	5	5%
2	**Quiz 1**	4	2.5	2.5%
3	**Midterm Exam**	6,12	30	30%
4	**Quiz 2**	10	2.5	2.5%
5	**Final Exam**	16	60	60%
Total		16	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., Randorn 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 evalua 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:
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 Graduation project — خطة مقرر مشروع التخرج

I. General information about the course:

1	Course Title :	Graduation Project				
2	Course Code and Number :	PHB525				
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):	BUST10,PHF511				
6	Co-requisites (if any):	NA				
7	Program in which the course is offered:	Bachelor of Pharmacy				
8	Teaching Language:	English				

II. Course Description

Graduation project provides students with opportunities to implement the skills gained during previous courses studied in the program toward providing a solution to a specific problem. This course correlates what has been taught in research design and biostatistics and integrates all developed skills into the completion of a self-directed supervised group project focused on a pharmacy – related research task.

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. Assist students to develop skills needed for data collection, analysis, and interpretation appropriately.
4. Empower students to express advanced oral and written communication skills including the presentation of a research report.
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 experiments 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	2
2	Project concept stage	Ideas brainstorming	1	2
3	Submission of project proposal	Proposal submitted to the scientific committee	1	2
4	Approval of projects	The decision of the scientific committee is announced	1	2
5	Carrying out research activities	the period of actual carrying out of project studies	10	20
6	Final report submission		1	2
7	Final presentation		1	2
Total number of weeks and hours			**16**	**32**

VI. Tasks and Assignments			
No.	**Task/Assignment**	**Week due**	**Mark**
.2	NA	-	-

VII. Teaching Strategies
1. Orientation. 2. Assigned reading. 3. Practical applications. 4. Regular group meetings 5. Working in groups.

VIII. Learning Assessment:				
No.	**Assessment Tasks**	**Assessment day & date**	**Mark**	**Weight**
1	**Proposal**		30	30%
2	**Cumulative Assessment by advisor**		30	30%
3	**Final Report**		20	20%
4	**Final Presentation**		20	20%
	Total		**100**	**100%**

IX. Learning Resources:
(Author, (Year), Book Title, Edition, Publisher, Country of publishing)
Textbooks-not more than 2
NA Reading will be assigned according to the research project
Essential References-not less than 4
NA
Electronic Materials and Web Sites
www.pubmed.com www.sceincedirect..com www.hinari.who.gov (only accessible within university campus)

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**) :**

Course Syllabus OTC drugs **خطة مقرر الادوية بدون وصفة طبية**

I. General information about the course :						
1.	Course Title:	OTC drugs				
2.	Course Code and Number :	PHB524				
3.	Credit Hours :	Lecture	Seminar/Tutorial	Practical	Training	Total
		1	-	-	-	1
4.	Study Level and Semester:	Year 5- semester 2				
5.	Pre-requisites (if any):	PHS420				
6.	Co-requisites (if any) :	-				
7.	Program in which the course is offered	Bachelor of Pharmacy				
8.	Teaching Language:	English				
9.	Study System :	Semester based				
10	Prepared by :	Dr. Doa'a Anwar Ibrahim				

II. Course Description

The aim of this course is to provide students with the important guidelines in treatment of different disorders such as hair loss, hemorrhoids, weight loss. etc by using nonprescription drugs 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 meaning of OTC drugs.
2. Differentiate between prescription and nonprescription drugs.
3. Enable student to choose suitable nonprescription drugs for the disorder exactly.
4. Develop the ability to communicate with others in a team

IV. Course Intended Learning Outcomes (CILOs) :

1. Define the meaning of non-prescription drugs
2. Classify the different OTC drugs according to selected disorder.
3. Recall the side effects of OTC medications when its choose

4. Appraise the mechanism of action and doses of OTC drugs for selected ailments
5. Choose the suitable OTC drug for the different diseases
6. Prescribe the safest OTC drug for the selected disorder.
7. Evaluate required scientific information from available sources.

V. Course topics and sub-topics with contact hours

Topics/Units of Course Contents					
First: Theoretical Aspects					
No.	**Course Topics/Units**	**Sub-topics**	**No. of Weeks**	**Contact Hours**	
1	**Over the counter medicine (OTC)**	Definition, Acne, Antiprespirants, Corns and Calluses, Dandruff	**5**	**5**	
2	**Over the counter medicine (OTC)**	Eczema, Hair loss, Haemorrhoids, Halitosis, Mouth ulcers	**5**	**5**	
3	**Midterm Exam.**		**1**	**1**	
	Over the counter medicine (OTC)	Scabies, Shingles, Warts, weight loss.	**4**	**4**	
7	**Final exam.**		**1**	**1**	
Total number of weeks and hours			**16**	**16**	

VI. Learning Assessment:

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

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

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

IX. Learning Resources :
(Author, (Year), Book Title, Edition, Publisher, Country of publishing)
Textbooks-not more than 2
1. Li Wan A and Li Wan G. OTC medications Symptoms and Treatments of Common Illness. Second Edition, Blackwell Science, the UK.
Essential References-not less than 4
1. The OVER-THE-COUNTER DRUG BOOK . Michael Brodin 1st edition. 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. Journal of Clinical Pharmacy Therapeutics (2017) 2-Journal of Substance Use (2017). 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**) :**

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				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		2				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				
8	Teaching Language:	English				

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 a nd 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	– Principles of marketing; needs, wants, demand, and value. – Marketing mix (product, price, place, and promotion) – Unique aspects of pharmaceutical marketing and sales.	1	2
2	Market segmentation	– Methods of market segmentation, problems associated with market segmentation, identifying market segments; Target market selection	2	2
3	Communication strategy	– Communication strategy –integrated communication ,personal selling , advertising and public relations with sales promotion	3	2
4	Pharmaceutical marketing in the 21st century	– The shift in marketing mix – Social media & E-pharma marketing: opportunities and challenges. – Changing aspects of training	4	2
5	Promotional marketing activities & practices	– 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	2
6	Prescribers, health care	– Factors affecting consumer behavior; direct and	6	2

	practitioners, & marketing's role in practice	indirect factors that influence physicians' prescribing decisions and the role of pharmaceutical marketing firms		
7	Midterm exam.		**7**	**2**
8	Physicians' interactions with medical representatives	– 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**	**2**
9	DTC prescription & drug advertising	– Direct to consumer (DTC) advertising growth and DTC advertising regulation. – The quantity and quality of scientific graphs in pharmaceutical advertisements	**9**	**2**
10	Drug development and the marketing research	– Products in the pharmaceutical industry: trends, identification, approval, and monitoring. – Marketing research – risk of research, information needed, marketing information system	**10**	**2**
11	Pharmaceutical marketing and the industry environment	– Economics of the pharmaceutical industry. – Prescription drug expenditures – Drug price competition and patent term. Drug pricing policies and regulations.	**11**	**2**
12	Regulatory affair	– 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**	**2**
13	An assessment of the promotional techniques and materials.	– Assessing promotional techniques, – Assessing promotional materials: Leaflet, Journal and TV advertising.	**13&14**	**4**
14	Final exam		**15**	**2**
		Total number of weeks and hours	**15**	**30**

VI. Teaching Strategies

1. Lectures
2. Interactive class discussions
3. Group work
4. Assignments

VII. Tasks and Assignments			
No.	**Task/Assignment**	**Week due**	**Mark**
1	– Assessing promotional techniques,	9 &10	10
2	– Assessing promotional materials: Leaflet, Journal and TV advertising.	9 &10	10

VIII. Learning Assessment:				
No.	**Assessment Tasks**	**Assessment day & date**	**Mark**	**Weight**
1	**Tasks/Assignments**	**9 &10**	10	10%
2	**Midterm Exam**	**7**	30	30%
3	**Final Exam**	**15**	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:Haw 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
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 Pharmacoepidemiology & Pharmacoeconomics خطة مقرر علوم إنتشار إستخدام 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				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		1	-		-	1
4	Study Level and Semester:	Fourth Year – Second Semester				
5	Pre-requisites (if any):	PHS310- BUST10				
6	Co-requisites (if any):	NA				
7	Program in which the course is offered:	Bachelor of Pharmacy				
8	Teaching Language:	English				
9	Instruction location:					

II. Course Description

This course introduces students to the basic concepts of pharmacoeconomics and pharmacoepidemology. I presents the importance of utilizing Pharmacoeconomic and Pharmacoepidemiology results when evaluati 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.

III. Course Aims

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) :

1. Define the concept of pharmacoeconomics, pharmacoepidemiology, adverse drug reactions and pharmacoviglence
2. Identify and discuss the different types of economic and the pharmacoepidemological 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		2	2
2	- Cost determination - Evaluating outcomes-effectiveness - Methods of data collection and analysis (decision analysis modeling)		3	3
3	-Cost benefit analysis - Cost utility analysis (quality of life)		2	2
4	Mid term		1	1
5	-Principles of pharmacoepidemology - Study designs available for pharmacoepidemiology		2	2
6	-Regulatory agencies and pharmacoepidemiology - Safety profiles of new drugs at the time of initial marketing		1	1
7	- Pharmacoviglence and spontaneous reporting systems		3	3
8	- The drug approval process and the information it provides		1	1
9	-Risk analysis and pharmaceuticals - Standards of postmarketting surveillance (PMS)		1	1
Total number of weeks and hours			**16**	**16**

VI. Tasks and Assignments			
No.	**Task/Assignment**	**Week due**	**Mark**
.1	Cost benefit analysis -Cost utility analysis (quality of life)	**7th week**	**10**
.2	Pharmacoviglence and spontaneous reporting systems	**12th week**	**10**

VII. Learning Assessment:				
No.	**Assessment Tasks**	**Assessment day & date**	**Mark**	**Weight**
1	**Mid Term**	8	30	30%
3	**Assignment**	7, 12	10	10%
5	**Final Exam**	16	60	60%
	Total		**100**	

VIII. Learning Resources

Textbooks

1. F. Randy, Phd Vogenberg, Randy Vogenberg. Introduction to Appiled 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.
2. Joyce A. Cramer, Bert, Ph.D. Spilker. Quality of Life and Pharmacoeconomics, An introduction.
3. 2nd. edition (1998). Lippincott Williams & Wilkins Publishers.
4. Brenda Waning, Michael Montagne, William W. McCloskey, Rebecca A. Maki.
5. pharmacoepidemiology: Principles & Practice. (2000).
6. McGraw-Hill/Appleton & Lange.9, **Pharmaceutical practice**, fourth edition, Churchill Livin; - Elsevier, USA

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**) :**

Course Syllabus Seminars in Pharmaceutical Sciences | **خطة مقرر حلقات دراسية في العلوم الصيدلانية**

I. General information about the course:						
1	Course Title :	Seminars in Pharmaceutical Sciences				
2	Course Code and Number :	PHB522				
3	Credit Hours :	Credit Hours				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		-	2	-	-	2
4	Study Level and Semester:	Fifth Year				
5	Pre-requisites (if any):	BUST10-PHF511				
6	Co-requisites (if any):	NA				
7	Program in which the course is offered:	Bachelor of Pharmacy				
8	Teaching Language:	English				

II. Course Description

This course is an open-discussion journal club course where all participants present scientific papers in the field of pharmaceutical sciences. This course aims to cover few selected reports and discussion of pertinent research and literature in a disciplinary area of the pharmaceutical sciences. The students are required to prepare seminars, participate in discussions, evaluate research and criticize presented papers.

III. Course Aims:

1. Acquaint students with recent research in the field of pharmaceutical sciences.
2. Help students develop the ability to evaluate and criticize published literature.
3. Equip students with the skills of preparation and presentation of seminars.
4. Enlighten students regarding the importance of research in development of science and wealth of community.

IV. Course Intended Learning Outcomes (CILOs) :

1. List the typical components of a scientific presentation.
2. Recognize the importance of research in progress of science and sustainability of a profession.
3. Create a presentation from a scientific paper.
4. Critique primary literature papers presented in the journal club.
5. Conduct literature survey.
6. Practice presentation skills in public.
7. Demonstrate oral communications skills, critical thinking, and responsibility.
8. Assess the information found in primary resources.

V. Course Contents

Theoretical Aspect:

No.	Course Units	Sub-topics	Week due	Contact Hours
1	Orientation	components of a typical presentation, do's and dont's in a presentation, assigning presentations	1	2
2	Journal Club presentations		2-16	30
Total number of weeks and hours			**16**	**32**

VI. Teaching Strategies

Orientation
Mentoring
Journal club interactive discussions

VII. Tasks and Assignments

No.	Task/Assignment	Week due	Mark
.1	Journal Club seminar	throughout the course	**70**

VIII. Learning Assessment:				
No.	**Assessment Tasks**	**Assessment day & date**	**Mark**	**Weight**
1	**Participation throughout the semester**	NA	30	30%
2	**Presentation(s)**	NA	70	70%
	Total		**100**	**100%**

IX. Learning Assessment:		
No.	**Assessment Item**	**Mark**
1	**Clarity of concepts and content**	10
2	**Succession**	10
3	**Language**	10
4	**Time**	10
5	**Use of visual aids**	10
6	**Attitude and enthusiasm**	10
7	**Discussion and answering raised questions**	10
Total		70

X. Learning Resources:
(Author, (Year), Book Title, Edition, Publisher, Country of publishing)
Textbooks-not more than 2
NA
Essential References-not less than 4
NA
Electronic Materials and Web Sites
www.pubmed.com www.sceincedirect..com www.hinari.who.gov (only accessible within university campus)

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**) :**

Course Syllabus Structured Practical Experiential Program (3) **خطة مقرر برنامج التدريب التجريبي المهيكل (3)**

I. General information about the course:						
1	Course Title :	Structured Practical Experiential Program (3)				
2	Course Code and Number :	PHB526				
3	Credit Hours :	Credit Hours				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		-	-	-	2	2
4	Study Level and Semester:	Fifth Year – Second Semester				
5	Pre-requisites (if any):	PHB411/PHB421				
6	Co-requisites (if any):	NA				
7	Program in which the course is offered:	Bachelor of Pharmacy				
8	Teaching Language:	English				
9	Instruction location:					

II. Course Description

Structured Practical Experiential Program III (SPEP III) is an experience and supervised training program for pharmacy students in their fourth year of the program. The course is a 2 credit hour course and consists of a total of 30 hours of pharmaceutical industry training in a pre-approved site. This course gives students opportunities to incorporate skills and competencies learned in the classroom into their professional practice. A prior completion of pharmaceutical technology courses is required to register the course.

III. Course Aims:

1. Introduce the students to the layout and different processes carried out in pharmaceutical industry.
2. Help students to learn, modify, and apply skills involved in the various aspects of pharmaceutical industry.
3. Inform pharmacy students regarding the different departments of a pharmaceutical plant.
4. Allow students to practice in a professional manner during all interactions with

pharmaceutical industry personnel.

IV. Course Intended Learning Outcomes (CILOs) :

1. List the activities that the pharmacist performs in the field of pharmaceutical industry.
2. Describe the different procedures of documentation, quality control, quality assurance, and validation.
3. Distinguish the different processes involved in the production of different pharmaceuticals.
4. Demonstrate awareness of Good Manufacturing Practice (GMP) and Good Laboratory Practice (GLP).
5. Implement the proper techniques in the research and development (R&D), production, and quality control (QC) departments.
6. Demonstrate effective communication skills in response to preceptors and site workers.
7. Demonstrate a high standard of professional behavior (i.e., adhering to established work schedule, minimizing absences, respecting fellow trainees and facility workers).

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
Practical assignments
Interdisciplinary mentoring

VII. Tasks and Assignments

No.	Task/Assignment	Week due	Mark
.1	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 **30 hours** of pharmaceutical industry training at a designated plant. The training should cover all of plant departments.
- Submit **a training notebook at the end of the training reflecting the whole training experience in a daily report format.**
- 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 during the course of their rotation. 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.
- Supervisors feedback (in case of misbehavior).

- 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
  - Departments and production lines visited with a detailed description of the machinery
  - Production steps and analytical methods carried out (or demonstrated) during the visit including quality control assays.

VIII. Learning Assessment:				
No.	**Assessment Tasks**	**Assessment day & date**	**Mark**	**Weight**
1	Completion of required hours		50	50%
2	Reports		50	50%
	Total		**100**	**100%**

IX. Learning Resources:
(Author, (Year), Book Title, Edition, Publisher, Country of publishing)
Textbooks-not more than 2
None unless otherwise specified by the individual preceptor.

X.	Course Policies:
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**) :** • 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.

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