



Module Description

University of AL-Kafeel / College..... Academic Year (2020-2021)

Stage:	First stage
Specialization:	Pharmacy
Name of the Course in Arabic	الرياضيات والاحصاء
Name of the Course in English	Mathematics and Biostatistics
Goals:	<ul style="list-style-type: none"> • Upon completion of the course students will be able to understand the applications of mathematics and statistics in medical field.
Description	The course deals with the concept of basic mathematics and application of biostatistics in the medical field, In addition to its importance when conducting any medical research
Number of Theoretical lectures	3
Number of Practical lectures	-
Credits	3
Name of Instructor in Arabic	عذراء محمد ضياء حسون
Name of Instructor in English	Athraa Mohammed Dheyaa Hasoon
Title	مدرس مساعد
Academic email:	Athraa.mohammed@alkafeel.edu.iq
Phone number (WhatsApp)	07803523821

Curriculum / Theoretical:

Week	Syllabus
1	Mathematics: General concepts; coordinate and graph in plane; inequality; absolute value or magnitude.
2	Function and their graphs; displacement function; slope and equation for lines.
3	Limits and continuity: Limits; theorem of limits; limit involving infinity; continuity; continuity conditions.
4	Derivatives: Line tangent and derivatives; differentiation rules; derivative of trigonometric function; practice exercises.
5	Integration: Indefinite integrals; rules for indefinite integrals; integration formulas for basic trigonometric function.
6	Definite integrals; properties of definite integrals; practice exercises.
7	Biostatistics: General concepts of statistics; statistical methods; statistical theory; applied statistics; statistical operations.
8	Probability concepts: Properties of probability; Set theory and set notation (basic notation); counting techniques- permutations and combinations; calculating the probability of an events.
9	Probability distribution of discrete variable; binomial distribution, Poisson distribution; continues probability distribution and normal distribution, review questions and exercises.
10	The concept of central tendency: Mean of sample and mean of population; median; mode; measure of central tendency; review questions and exercises.
11	Deviations and variation: Deviation; dispersion and variability; standard deviation and variance; coefficient of variations.
12	Standard error; correlation analysis; (regression model and sample regression equation); application of statistic in medical field; review questions and exercises.

References :

Main References :

[1] Finny RI, Thomas GB (Eds.) calculus and Analytical Geometry

[2] Daniel WW (ED.), Foundation for Analysis in the health Science, (latest edition)

Secondary References:

[1] CalCulus

[2] المفاهيم الاساسية في الاحصاء الحيوي



Module Description

University of AL-Kafeel / College..... Academic Year (2020-2021)

Stage:	First stage
Specialization:	Pharmacy
Name of the Course in Arabic	الكيمياء التحليلية
Name of the Course in English	Analytical Chemistry
Goals:	To provide students with a theoretical background on chemical principles that are essential to practice chemical analysis. It enables students to understand the importance of judging the accuracy and precision of experimental data and techniques of quantitative analysis.
Description	Study the concepts and fundamentals of analytical chemistry, which plays a vital role in pharmacology studies. Specifically, this course aims to study some general terms and definitions, preparation of solutions and units for expressing concentration. The course is also to provide an understanding of chemical methods used for elemental and compound analysis, with focusing on quantitative analytical measurements.
Number of Theoretical lectures	Theory 3
Number of Practical lectures	Laboratory 2
Credits	4
Name of Instructor in Arabic	حسنين علي عباس (نظري) ولاء محمد نجم (عملي)
Name of Instructor in English	Hasanain Ali Abbas (نظري) Walaah mohammed najem (عملي)
Title	حسنين علي (مدرس) , ولاء محمد (مدرس مساعد)
Academic email:	h_altameemi@alkafeel.edu.iq

	walaamohammed@alkafeel.edu.iq
Phone number (WhatsApp)	07813377360 , 07700985987

Curriculum / Theoretical:

Week	Syllabus
1	Review of elementary concept important to analytical chemistry: strong and weak electrolytes; important weight and concentration units.
2	Review of elementary concept important to analytical chemistry: strong and weak electrolytes; important weight and concentration units.
3	The evaluation of analytical data: definition of terms. An introduction to gravimetric analysis: statistical analysis of data; rejection of data; precipitation methods; gravimetric factor.
4	Continuing with gravimetric analysis
5	The scope of applications of gravimetric analysis: inorganic precipitating agents; organic precipitating agents.
6	An introduction to volumetric methods of analysis: volumetric calculations; acid-base equilibria and pH calculations.
7	An introduction to volumetric methods of analysis: volumetric calculations; acid-base equilibria and pH calculations.
8	Buffer solutions: theory of neutralization titrations of simple system.
9	Theory of neutralization titrations of complex system; precipitation titrations.
10	Calculation of pH in complex system; volumetric methods based on complex system.
11	Equilibria in oxidation-reduction system; theory of oxidation-reduction titrations.
12	Equilibria in oxidation-reduction system; theory of oxidation-reduction titrations.
13	Spectrophotometric analysis: an introduction to optical methods of analysis; methods based on absorption of radiation.

Curriculum / Practical:

Week	Syllabus
1	Demonstration of some laboratory equipments.
2	Separation and identification of group 1 cations (individual test).
3	Analysis of group 1 cations mixture.
4	Preparation and standardization of an acid.
5	Determination of the percentage of acetic acid.
6	Analysis of sodium carbonate and sodium hydroxide mixture.
7	Determination of chloride by the Mohr method.
8	Determination of chloride by the Volhard method.
9	Preparation and standardization of 0.1N KMnO ₄ .
10	Determination of ferrous form of iron in Mohr's salt.
11	Determination of total hardness in tap water.
12	Gravimetric determination of Nickel.

References :**Main References :**

[1] *Fundamentals of Analytical Chemistry by Stook and West.*

[2] **Handbook for Analytical Chemistry lab Adopted by the Department**

Secondary References:

[1] **Analytical Chemistry** by G. Christian, P. Dasgupta & K. Schug

[2] **Modern Analytical Chemistry** by D. Harvey



الخططة الدراسية

العام الدراسي (2020 - 2021)

كلية الصيدلة

الأولى	<u>المرحلة الدراسية:</u>
صيدلة	<u>التخصص:</u>
اللغة العربية العامة	<u>اسم المادة الدراسية باللغة العربية:</u>
General Arabic	<u>اسم المادة الدراسية باللغة الإنجليزية:</u>
الحفاظ على هوية اللغة العربية تنمية قدرات الطالب النحوية واللغوية تصحيح اللحن الناشئ عن خطأ لغوي في النطق التدريب على النطق والتطبيق السليم لقواعد اللغة العربية تنمية قدرات الطالب اللسانية	<u>اهداف المادة:</u>
يوفر وصف المقرر هذا إيجازاً مقتضياً لأهم خصائص المقرر ومخرجات التعلم المتوقعة من الطالب تحقيقها مبرهنأ عما إذا كان قد حقق الاستفادة القصوى من فرص التعلم المتاحة. ولا بد من الربط بينها وبين وصف البرنامج.	<u>وصف المادة:</u>
4	<u>عدد الساعات النظرية:</u>
لا يوجد	<u>عدد الساعات العملية:</u>
2	<u>عدد الوحدات:</u>
م.د. علي شدهان ياسر	<u>اسم التدريسي باللغة العربية:</u>
Ali Shadhan yaser	<u>اسم التدريسي باللغة الإنجليزية:</u>
مدرس دكتور	<u>اللقب العلمي:</u>
Ali.shadhan@alkafeel.edu.iq	<u>عنوان البريد الالكتروني الجامعي:</u>
07831104507	<u>رقم الهاتف الجوال (WhatsApp):</u>

المنهج المقرر / الجزء النظري:

Week	Syllabus
1	مقدمة عن اهمية هوية اللغة العربية
2	الاسم علاماته ومميزاته
3	المبتدأ والخبر
4	الفعل خواصه وسماته
5	مفهوم حروف المعاني
6	الفرق بين الضاد والطاء
7	قواعد كتابة الهمزة
8	قواعد كتابة الاسم المقصور والممدود
9	امتحان المد
10	(ال التعريف) و (ال الجنسية) (الالف الشمسية والقمرية)
11	بعض الاخطاء اللغوية الشائعة
12	قواعد كتابة التاء المربوطة والمفتوحة
13	قواعد كتابة العدد والنعت العددي
14	علامات الترقيم
15	تحليل نص ادبي

المنهج المقرر / الجزء العملي:

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المصادر:

شرح ابن عقيل على الفية ابن مالك

المراجع الرئيسية:

النحو الوافي , جامع الدروس العربية لمصطفى الغلاييني

المراجع المساعدة:

الإملاء والترقيم في الكتابة العربية , عبد العليم إبراهيم



Module Description

University of ALKafeel / College of Pharmacy. Academic Year (2020-2021)

Stage:	First
Specialization:	Pharmacy
Name of the Course in Arabic	حاسوب 1
Name of the Course in English	Computer I
Goals:	<p>Windows 10 is the latest version of the Windows operating system released by Microsoft on June 29, 2015. It follows Windows 8 and Windows 8.1, which introduced some of the biggest changes to the operating system since the first release in 1985. Windows 10 seems to blend what users loved about Windows 7 with the best features of Windows 8.1 to create a modern operating system that is productive and efficient. The purpose of this course is to teach all students how to navigate the Windows 10 interface, as well as use its features and apps, regardless of whether or not you are currently using the operating system. Introduction to Microsoft Word , In this training, participants will be given an overview of the different features of Microsoft Word . Participants will learn to use Microsoft Word to produce professional-looking documents. Features included are typing, formatting, spell checking, document spacing, margins, page numbering and saving a document.</p>
Description	<p>microsoft Windows (also referred to as Windows or Win) is a graphical operating system developed and published by Microsoft. It provides a way to store files, run software, play games, watch videos, and connect to the Internet. Microsoft Windows was first introduced with version 1.0 on November 10, 1983. Microsoft Word or MS Word (often called Word) is a graphical word processing program that users can type with. It is made by the computer company Microsoft. Its purpose is to allow users to type and save documents. Similar to other word processors, it has helpful tools to make documents</p>
Number of Theoretical lectures	لا يوجد
Number of Practical lectures	2
Credits	1
Name of Instructor in Arabic	عدي عبيد حسون
Name of Instructor in English	Oday obaid hassoon
Title	مدرس مساعد
Academic email:	Oday.husoon@alkafil.edu.iq
Phone number (WhatsApp)	07803730644

Curriculum / Theoretical:

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Curriculum / Practical:

Week	Syllabus
1	Navigate the Windows 10 user interface
2	· Create accounts in Windows
3	· Open apps and programs
4	· Work with tiles
5	· Use the Start button and Start menu
6	· Access and use the Action Center
7	· Work with apps and programs on the taskbar
8	Manage Your Workspace
9	Edit Documents
10	Preview and Print Documents
11	Customize the Word Environment
12	Formatting Text and Paragraphs
13	Apply Character Formatting
14	Control Paragraph Layout
15	Manage Your Workspace

References :

Main References :

[1] Windows 10 Simplified

كتاب من قبل بول ماكفيدريز

[2] Word for Beginners

كتاب من قبل إم إل همفري

Secondary References:

[1] Microsoft Word Step by Step

كتاب من قبل لامبرت، جوان

[2] Easy Windows 10

كتاب من قبل مارك إدوارد سوبر



الخطة الدراسية

العام الدراسي (2020 سلان 2021)

كلية الصيدلة

الأولى	<u>المرحلة الدراسية:</u>
الصيدلة	<u>التخصص:</u>
حقوق الإنسان	<u>اسم المادة الدراسية باللغة العربية:</u>
Human rights	<u>اسم المادة الدراسية باللغة الإنجليزية:</u>
يوفر البرنامج فرصه اكيده وخطوه اولى للطالب للتعريف في حقوقه وكذلك الالتزام الموضوعي بواجباته ويسعى الى اشاعة ثقافة التريبه على حقوق الانسان من اجل بناء مجتمع متماسك.	<u>اهداف المادة:</u>
يوفر وصف المقرر هذا ايجازا لأهم خصائص المقرر ومخرجات التعلم المتوقعه من الطالب تحقيقا مبرهنا عما إذا كان قد حقق الاستفادة القصوى من فرص التعلم المتاحة،ولا بد من الربط بينها وبين وصف البرنامج.	<u>وصف المادة:</u>
2	<u>عدد الساعات النظرية:</u>
لا يوجد	<u>عدد الساعات العملية:</u>
2	<u>عدد الوحدات:</u>
جلاوي سلطان عبطان	<u>اسم التدريسي باللغة العربية:</u>
Gelawi Sultan Abtan	<u>اسم التدريسي باللغة الإنجليزية:</u>
مدرس مساعد	<u>اللقب العلمي:</u>
drgelawialkafel@gmail.com	<u>عنوان البريد الالكتروني الجامعي:</u>
07735078723	<u>رقم الهاتف الجوال (WhatsApp):</u>

Week	Syllabus
1	مقدمه في حقوق الإنسان تعريف عامه
2	حقوق الإنسان في الحضارات القديمه حقوق الإنسان في حضارة وادي الرافدين
3	حقوق الإنسان في حضارة وادي النيل حقوق الإنسان في الحضاره اليونانية حقوق الإنسان في الحضاره الروماني
4	الأساس الشرعي لحقوق الإنسان حقوق الإنسان في الشريعة الاسلاميه
5	تطبيقات اهل البيت عليهم السلام في مجال حقوق الانسان حقوق الإنسان في عهد الإمام علي عليه السلام: "رسالة الحقوق للإمام زين العابدين عليه السلام"
6	تصنيفات وأنواع حقوق الإنسان اولا: الحقوق المدنيه والسياسيه ثانيا: الحقوق الاقتصاديه و الاجتماعيه والثقافيه ثالثا: الحقوق الإضافية التي افرزتها الظروف الراهنه
7	الحريات العامه وانواعها
8	حقوق الإنسان في العصر الحديث اولا: وثائق حقوق الإنسان في بريطانيا ثانيا: وثائق حقوق الإنسان في الولايات المتحده الامريكيه ثالثا: وثائق حقوق الإنسان في فرنسا
9	ضمانات حقوق الإنسان المحليه أو الوطنيه
10	المنظمات الدوليه لحقوق الانسان
11	المنظمات الإقليمية لحقوق الانسان
12	حقوق الإنسان العالميه الأمم المتحده: اولا: ميثاق الأمم المتحده ثانيا: الاعلان العالمي لحقوق الانسان ثالثا: العهد الدولي للحقوق المدنيّة والسياسيه رابعا: العهد الدولي للحقوق الاقتصاديه والاجتماعيه والثقافيه
13	المنظمات الدوليه غير الحكوميه العامله في مجال حقوق الإنسان اولا: منظمه العفو الدوليه ثانيا: اللجنه الدوليّه للصليب الأحمر ثالثا: المنظمه العربيه لحقوق الانسان
14	حقوق الإنسان في العراق

	<p>اولا:المرحلة الاولى:حقوق الإنسان في العراق ١٩٥٨_١٩٦١</p> <p>ثانيا:المرحلة الثانية:حقوق الإنسان في العراق ١٩٦٨_١٩٥٨</p>
15	<p>ثالثا:المرحلة الثالثة:حقوق الإنسان في العراق ١٩٦٨_٢٠٠٣</p> <p>رابعا:المرحلة الرابعة:حقوق الإنسان في العراق ٢٠٠٣_٢٠٠٧</p>

المنهج المقرر / الجزء العملي:

Week	Syllabus
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المصادر:حقوق الإنسان في العراق/جواد كاظم شحاته وآخرون

تعليم حقوق الإنسان في العراق "إشكالات ومقترحات"/جواد كاظم شحاته

حقوق الإنسان في العلم المعاصر/الدكتور سعاد محمد الصباح

حقوق الإنسان في الإسلام/الدكتور محمد الرحيلي

عهد الإمام علي بن أبي طالب"عليه السلام"الى واللّه على مصر الصحابي مالك الاشر/البحث السوادي

حقوق الإنسان/ الدكتور نبيل رشاد سعيد
مناهج حكومة الإمام امير المؤمنين/ باقر شريف القرشي
الإسلام وحقوق الانسان/ باقر شريف القرشي
الحقوق الاجتماعيه وأثارها في دستورنا الدائم/الدكتور ه ازهار عبد الكريم الشخلى

المراجع الرئيسية:

- [1]
- [2]
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المراجع المساعدة:

- [1]
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Module Description

University of ALKafeel / College of Pharmacy. Academic Year (2020-2021)

Stage:	first
Specialization:	Pharmacy
Name of the Course in Arabic	علم احياء الانسان
Name of the Course in English	Human biology
Goals:	At the end of the course the student should be able to describe the human body composition, body systems structure and function, and human genetics such as the Mendelian inheritance, division of chromosomes, and terms such as allele, locus, homo and heterozygous.
Description	Study the human body composition, types of cell structures, types of tissues, bone, skeleton, joints and muscle as well as the nutrition. Human biology also explains in details the different body systems and human genetics.
Number of Theoretical lectures	2
Number of Practical lectures	2
Credits	3
Name of Instructor in Arabic	م.م. محمد كريم جبار م.م. نور حسون كاظم م.م. نور مهدي حسناوي
Name of Instructor in English	Mohammed kareem jabbar Noor hassoon kadhim Noor Mahdi Hasnawi
Title	مدرس مساعد مدرس مساعد مدرس مساعد
Academic email:	Mohammedkareem@alkafeel.edu.iq noor@alkafeel.edu.iq noor.mahdi@alkafeel.edu.iq
Phone number (WhatsApp)	م.م. محمد كريم 07806396004 م.م. نور حسون 07808244693 م.م. نور مهدي 07830605059

Curriculum / Theoretical:

Week	Syllabus
1	Introduction and basic principles of human biology.
2	Cell: Structure, properties and classification.
3	Tissues: Structures; properties; classification and function.
4	Nutrition.
5	Digestive System (Mouth, Esophagus, Stomach)
6	Digest System (intestine).
7	Circulatory System; Blood.
8	Inflammation.
9	Immunity and the blood. Immunity to disease
10	Excretory System.
11	Human Chromosomes. Chromosomes Variations.
12	Human genetics Semi-Lethal genes.
13	Reproduction system, male and female.
14	Skin.
15	Respiration.
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Curriculum / Practical:

Week	Syllabus
1	The light microscope.
2	The cells: Examination of cells using light microscope.
3	The tissues: Epithelial tissues (simple epithelial tissue).
4	The tissues: Epithelial tissue (simple epithelial tissue).
5	Connective tissue.
6	Muscular tissue: Differentiation between different types of muscles.
7	Nervous tissue.
8	Bone and cartilage.
9	Digestive system (Digestion).
10	Digestive system: Small and large intestine.
11	Blood and blood cells.
12	Cell Division (Mitosis).
13	Cell Division (Meiosis).
14	The Chromosomes: Shape and helical structure.
15	Excretory system.

References :

Main References :

- [1] Johnks and Lnglis (eds.),
- [2] Text Book of Human Biology, (Latest edition).
- [3] Molecular genetics

Secondary References:

- [1] human biology
- [2] guyton
- [3]



Module Description

University of AL-Kafeel / College..... Academic Year (2020-2021)

Stage:	first stage
Specialization:	Pharmacy
Name of the Course in Arabic	مبادئ ممارسة الصيدلة
Name of the Course in English	Principles of pharmacy practice
Goals:	<p>This semester aims to :</p> <ul style="list-style-type: none"> ▪ Teaching students the mathematical basics that used in pharmaceutical calculations. ▪ Knowing the different systems of units that used in the pharmaceutical field. ▪ Knowing the components of the prescription and acquiring the sufficient skills to translate the medical abbreviations. ▪ Teaching students the principles of calculating therapeutic doses accurately.
Description	<p>Involves brief information about old pharmacy. It teaches kinds of numbers, abbreviations that are commonly used in prescriptions and their meanings. In this course the students will understand the components of typical prescription, the different unit systems and the relation between these systems. Students will also be familiar with the methods and tools of measuring weights and volumes, and how to calculate doses on different bases and know how to reduce or enlarge formulas; they will be able to describe values in percentage and ratio strength.</p>
Number of Theoretical lectures	2
Number of Practical lectures	-
Credits	2
Name of Instructor in Arabic	أ.د. حيدر كاظم عباس م.م. مجيد نبيل عبد المجيد
Name of Instructor in English	Prof. Dr. Hayder Kadhim Abbass M. Sc. Majeed Nabeel Abdul Majeed
Title	أستاذ , مدرس مساعد (م.م)

Academic email:	Majeed.alshaeer@alkafeel.edu.iq
Phone number (WhatsApp)	07801538804

Curriculum / Theoretical:

Week	Syllabus
1	Some fundamentals of measurements and calculations.
2	Interpretation of prescription or medication orders.
3	The metric system.
4	Calculation of doses.
5	Reducing and enlarging formulas.
6	Density, specific gravity and specific volume.
7	Percentage and ratio strength calculation.

References :

Main References :

[1] Pharmaceutical Calculations by Howard C. Ansel .

[2] Pharmaceutical Calculation by Stoklosa .

Secondary References:

[1] Pharmaceutical Dosage forms and Drug Delivery Systems By Haward A. Ansel; latest edition.



Module Description

University of AL-Kafeel / College..... Academic Year (2020-2021)

Stage:	First
Specialization:	Pharmacy
Name of the Course in Arabic	مصطلحات الطبية
Name of the Course in English	<i>Medical Terminology</i>
Goals:	In this course, students will learn to pronounce, spell, and define medical and pharmaceutical terms used in health care settings. It will use a word-building strategy that helps them discover connections and relationships among word roots, prefixes, and suffixes. They will learn the meaning of each part of a complex medical and pharmaceutical term and be able to put the parts together and define the term.
Description	
Number of Theoretical lectures	1
Number of Practical lectures	
Credits	1
Name of Instructor in Arabic	محمد داخل الركابي
Name of Instructor in English	Mohammed dakhil
Title	Professor
Academic email:	drmdr@alkafeel.edu.iq
Phone number (WhatsApp)	07810680160

Curriculum / Theoretical:

Week	Syllabus
1	Basic word roots and common suffixes
2	More word roots, suffixes and prefixes related to pharmaceutical sciences (pharmacognosy, clinical pharmacy, pharmaceuticals,...etc)
3	Basic anatomical terms and abnormal conditions
4	The genitals and urinary tract
5	The gastrointestinal tract
6	The heart and cardiovascular system
7	Symptoms, diagnoses, treatments, communication qualifiers, and statistics
8	Growth and development, and body orientation
9	Gynecology, pregnancy, and childbirth
10	The eye and the respiratory tract
11	The nervous system and behavioral disorders
12	Blood and immunity
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Curriculum / Practical:

References :

Main References :

[1] *Edward CC, (Ed.); A Short course in Medical Terminology; Latest edition;*

[2] *Lipincott Williams and Wilkins; 2008*

[3]

Secondary References:

[1]

[2]

[3]



Module Description

University of AL-Kafeel / College..... Academic Year (2020-2021)

Stage:	Second
Specialization:	Pharmaceutical sciences
Name of the Course in Arabic	احياء مجهرية طبية 1
Name of the Course in English	Medical microbiology I
Goals:	Provide a basic understanding of the morphology, anatomy, physiology and genetics of bacteria in addition, the methods of handling, visualizing, characterizing identifying of bacterial disease
Description	
Number of Theoretical lectures	3
Number of Practical lectures	1
Credits	4
Name of Instructor in Arabic	عبدالله عيسى الحاتمي
Name of Instructor in English	Abdulla issa
Title	Assistant professor
Academic email:	Abdullaho.mansour@uokufa.edu.iq
Phone number (WhatsApp)	07801159238

Curriculum / Theoretical:

Week	Syllabus
1	Importance of microbiology, History of microbiology
2	Anatomy of bacteria: Surface appendage, Capsule, Cell wall of G +ve & G –ve bacteria, Cytoplasmic membrane.
3	Bacterial physiology: Physical and chemical growth determinate, growth and growth curves, bacterial reproduction.
4	Genetics: Definition, genetic, element, mutation (spontaneous, gene transfer, transformation, conjugation, and gene transduction).
5	Recombinant DNA biotechnology.
6	Sporulation and germination.
7	Sterilization (chemical + physical Methods).
8	Chemotherapy.
9	Morphology of Bacteria, Staining and Classification.
10	Staphylococci species: <i>Streptococcus pyogenes</i> ; <i>Streptococcus pneumoniae</i> .
11	Aerobic Spore-forming bacteria Bacillus species (<i>B. anthracis</i> , <i>B. subtilis</i> , <i>B. ceseus</i>).
12	<i>Clostridium perfringens</i> ; <i>Clostridium tetani</i> ; <i>Clostridium botuliun</i>
13	<i>Corynebacterium diphtheriae</i>
14	<i>Propionibacterium acnes</i> , <i>Listeria</i>
15	<i>Mycobacterium tuberculosis</i> ; <i>M. leprae</i>
16	Chlamydiae; Actinomycetes
17	Identification & classification of G -ve bacteria
18	Enterobacteriaceae: <i>E. coli</i> ; <i>Klebsiella</i> spp.; <i>Cilrobacte</i> , <i>Sertalia</i> , <i>Hafmia</i> , <i>Enterobacter</i>
19	<i>Shigella</i> spp; <i>Salmonella</i> spp; <i>Proteus</i> spp , <i>Pseudomonas</i> spp
20	<i>Vibrio Cholerae</i> ; <i>Brucella</i> spp; <i>Haemophilus</i> spp; <i>Campylobacter</i> spp.
21	<i>Helicobacter</i> spp; <i>Bordetella pertusis</i> ; <i>Trepanoma pallidum</i> (Spirochates); <i>Yersinia pestis</i> ; <i>Pasteruella multocida</i> .
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Curriculum / Practical:

Week	Syllabus
1	Orientation to the laboratory. Rules of conduct and general safety. Microscopic techniques. Bright-field light microscope.
2	Examination of stained microorganisms; Smear preparation and simple staining; Gram staining.
3	The hanging drop slide and bacterial motility; Acid-fast staining procedure.
4	Bacterial spores and endospores staining; Microbiological culture media and sterilization; Methods of inoculation and isolation of pure culture.
5	Action of dyes and antibiotics; Enzymes assays for some specific microbial enzymes.
6	Assays for specific metabolic activities; Acid and gas production from: Carbohydrate fermentation; Triple sugar iron agar test; IMVIC tests.
7	Systemic bacteriology: Staphylococci spp.
8	Streptococci species.
9	Salmonella species.
10	Shigella species.
11	Pseudomonas species.
12	Proteus species.
13	<i>Escherichia coli</i>
14	Klebsiella species.
15	<i>Candida albicans</i> .

References :

Main References :

[1] *Medical Microbiology, seventeenth edition E. Jawetz, J. L. Melnick, E.A. Adel (Latest edition)*

[2] *Principles of Microbiology by Roland M. (Latest edition)*

[3]

Secondary References:

[1]

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[3]



Module Description

University of ALKafeel / College of Pharmacy. Academic Year (2020-2021)

Stage:	Second
Specialization:	Pharmacy
Name of the Course in Arabic	حاسوب 3
Name of the Course in English	Computer III
Goals:	<p>Participants will learn how to create a Microsoft PowerPoint presentation. Functions covered in this session are how to create a slide, add content (text, graphics, objects and pictures) to present a show.</p> <p>An efficient means of managing data is by using databases. Information can be stored, linked, and managed using a database application such as Microsoft Office Access. In this training session, you will examine database concepts, and create and modify databases and their various objects using Microsoft Office Access</p>
Description	<p>PowerPoint is a presentation program developed by Microsoft. PowerPoint is often used to create business presentations, but can also be used for educational or informal purposes. ...</p> <p>The presentations are comprised of slides, which may contain text, images, and other media, such as audio clips and movies</p> <p>Microsoft Access is a database management system (DBMS) from Microsoft that combines the relational Microsoft Jet Database Engine with a graphical user interface and software-development tools. ... It can also import or link directly to data stored in other applications and databases.</p>
Number of Theoretical lectures	لا يوجد
Number of Practical lectures	2
Credits	1
Name of Instructor in Arabic	عدي عبيد حسون
Name of Instructor in English	Oday obaid hassoon
Title	مدرس مساعد
Academic email:	Oday.husoon@alkafil.edu.iq
Phone number (WhatsApp)	07803730644

Curriculum / Theoretical:

Week	Syllabus
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Curriculum / Practical:

Week	Syllabus
1	PowerPoint Basics
2	Create Presentations
3	Insert and Modify Text
4	Work with Graphics and Media
5	Final Preparations
6	Deliver a Presentation
7	PowerPoint Basics
8	Access Basics
9	Design a Database
10	Build a Database
11	Work with Forms
12	Sort, Retrieve, Analyze Data
13	Work With Reports
14	Access with Other Applications
15	Manage an Access Database

References :

Main References :

[1] PowerPoint® 2007 Step by Step

كتاب من قبل جويس كوكس، كورتيس فراي، ولامبرت، جوان

[2] Access 2019 Bible

كتاب من قبل ريتشارد كوسليكا ومايكل أليكساندر

[3]

Secondary References:

[1] 30 Minutes: How to Make Effective PowerPoint...

كتاب من قبل أنجلا روز

Access 2016 in easy steps

كتاب من قبل مايك ماكغراث



الخططة الدراسية

العام الدراسي (2020 سلطان 2021)

كلية الصيدلة

الثانية	<u>المرحلة الدراسية:</u>
الصيدلة	<u>التخصص:</u>
الديمقراطية	<u>اسم المادة الدراسية باللغة العربية:</u>
Democracy	<u>اسم المادة الدراسية باللغة الإنجليزية:</u>
يوفر البرنامج فرصه اكيدہ وخطوه اولی للطالب للتعريف بالحريات العامه وأنواع الانظمه السياسيه ونظم الانتخابات والفصل بين السلطات التنفيذية والتشريعية والقضائية والأنظمة النيابية والأحزاب السياسيه ووظائفها وأنواعها.	<u>اهداف المادة:</u>
يوفر وصف المقرر هذا إيجادا لأهم خصائص المقرر ومخرجات التعلم المتوقعه من الطالب تحقيقا مبرهنا عما إذا كان قد حقق الاستفادة القصوى من فرص التعلم المتاحه، ولا بد من الربط بينها وبين وصف البرنامج.	<u>وصف المادة:</u>
2	<u>عدد الساعات النظرية:</u>
لا يوجد	<u>عدد الساعات العملية:</u>
2	<u>عدد الوحدات:</u>
جلاوي سلطان عبطان	<u>اسم التدريسي باللغة العربية:</u>
Gelawi Sultan Abtan	<u>اسم التدريسي باللغة الإنجليزية:</u>
مدرس مساعد	<u>اللقب العلمي:</u>
drgelawialkafeel@gmail.com	<u>عنوان البريد الالكتروني الجامعي:</u>
07735078723	<u>رقم الهاتف الجوال (WhatsApp):</u>

Week	Syllabus
1	مفهوم الديمقراطية انواع الانظمة السياسييه من حيث ممارسة السلطه
2	مميزات وسلبيات الديمقراطيه المباشره
3	نشأة النظام النيابي خصائص النظام النيابي تنظيم الهيئات النيابيه
4	انواع الاقتراع نظم الانتخاب
5	مفهوم العلاقه بين السلطات العامه اشكال العلاقه بين السلطات
6	النظام البرلماني خصائص النظام البرلماني
7	النظام البرلماني في انكلترا المؤسسات الدستوريه في بريطانيا مجلس العموم البريطاني الوزاره وصلاحياتها في بريطانيا
8	النظام الرئاسي في الولايات المتحده الأمريكيه المؤسسات الدستوريه في الولايات المتحده الأمريكيه
9	الشروط الواجب توفرها في المرشح لرئاسة الجمهوريه
10	اختصاصات الكونغرس
11	النظام المختلط خصائص النظام المختلط
12	النظام المختلط في فرنسا المؤسسات الدستوريه في الجمهوريه الخامسه في فرنسا
13	الصلاحيات التي يمارسها رئيس الجمهوريه بالاشتراك مع الحكومه في فرنسا اختصاصات الحكومه في فرنسا صلاحيات البرلمان الفرنسي
14	الاحزاب السياسيه وظائف الاحزاب السياسيه
15	النظم الحزبيه

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المصادر: الديمقراطيها وما عليها / خليل زامل الجليحاوي

النظم السياسييه / الدكتور عبد الغني بسيوني

أصول النظم السياسييه / الدكتور محمد سويلم

النظم السياسييه والحريات العامه / الدكتور ابو اليزيد المتيت

المراجع الرئيسيته:

[1]

[2]

[3]

المراجع المساعدة:

[1]

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Module Description

University of AL-Kafeel / College..... Academic Year (2020-2021)

Stage:	Second stage
Specialization:	Pharmacy
Name of the Course in Arabic	الصيدلة الفيزيائية I
Name of the Course in English	Physical Pharmacy I
Goals:	Teaching the physical, mathematical and chemical basis of all the physical and chemical phenomena of substances in their solid, liquid and gas states, as it helps to predict the solubility and compatibility of medicinal products and thus assist in the formation of new drugs and dosage forms.
Description	To understand the application of quantitative and theoretical principles of the physical characters of matter in the practice of pharmacy. It aids the pharmacists in their attempt to predict the solubility, compatibility and biological activity of drug products. As a result of this knowledge it will help in the development of new drugs and dosage forms as well as in improvement of various modes of administration.
Number of Theoretical lectures	Theory 3
Number of Practical lectures	Laboratory 2
Credits	4
Name of Instructor in Arabic	قاسم علاوي بدر جابر (نظري) , محمد حمزة حرز (عملي)
Name of Instructor in English	Qasim Allawi Bader Jaber Mohammed hamza
Title	مدرس , مدرس مساعد
Academic email:	Qasim.allawi@alkafeel.edu.iq mohammedhamza@alkafeel.edu.iq

Curriculum / Theoretical:

Week	Syllabus
1	States of matter, binding forces between molecules, gases, liquids, solid and crystalline matters; phase equilibria and phase rule; thermal analysis.
2	Thermodynamics, first law, thermochemistry, second law, third law, free energy function and applications.
3	Solutions of non-electrolytes, properties, ideal and real colligative properties, molecular weight determination.
4	Solution of electrolytes, properties, Arrhenius theory of dissociation, theory of strong electrolytes, ionic strength, Debye-Huchle theory, coefficients for expressing colligative properties.
5	Ionic equilibria, modern theories of acids, bases and salts, acid-base equilibria, calculation of pH, acidity constants, the effect of ionic strength and free energy.
6	Buffered and isotonic solutions: Buffer equation; buffer capacity; methods of adjusting tonicity and pH; buffer and biological system.
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Curriculum / Practical:

Week	Syllabus
1	Expression of concentrations in pharmaceutical preparations
2	Two component systems containing liquid phases.
3	Three component systems.
4	Tie linear for three component systems.
5	Partition coefficient: Measurements and evaluation.
6	Solubility methods.
7	Buffer solutions.
8	Determination of solubility product constant of slightly soluble salts.
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References :

Main References :

- [1] **Physical Pharmacy by Alfred Martin et al; (Latest edition).**
 [2] **Lab Manual for Practical Physical pharmacy Adopted by the Department**

[2]

[3]

Secondary References:

[1]

[2]

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Module Description

University of ALKafeel / College of Pharmacy. Academic Year (2020-2021)

Stage:	Second
Specialization:	Pharmacy
Name of the Course in Arabic	عقاقير 1
Name of the Course in English	Pharmacognosy I
Goals:	<p>How to identify medicinal plant including collection, drying and storage .</p> <p>How to explain the Chromatography, How it works, contrast between different types of chromatographic techniques.</p> <p>How to describe principle of operation for all types of chromatography, Mechanisms for each type of chromatographic techniques .Uses and application</p> <p>Describe plane chromatography, paper, Thin layer, HPLC, column, gas chromatography techniques..</p>
Description	This course is intended to study the scope of pharmacognosy, Medicinal plant nomenclature, classification of natural products, phytochemistry which include extraction and isolation of active constituents from natural sources
Number of Theoretical lectures	2
Number of Practical lectures	2
Credits	3
Name of Instructor in Arabic	ا.م.د. عباس محمد جواد (النظري) م.م. سند مؤيد عبد الحسين (النظري والعملي)
Name of Instructor in English	Abbaas mohammed jawad Sanad Muayad Abdulhussein
Title	استاذ مساعد دكتور مدرس مساعد
Academic email:	abbaaalsarraaf@alkafeel.edu.iq sanad.alfadhel@alkafeel.edu.iq
Phone number (WhatsApp)	07901366107 م.د. عباس محمد جواد 07812750371 م.م. سند مؤيد

Curriculum / Theoretical:

Week	Syllabus
1	General Introduction: The Scope of Pharmacognosy, definitions and basic principles.
2	Drugs from natural sources, crud drugs, official and non-official drugs.
3	Classification of natural products.
4	Plant nomenclature and taxonomy.
5	Production of crude drugs: Cultivation, collection, drying and storage.
6	Deterioration of crude natural products.
7	Pharmacological activities of natural products.
8	Chemistry of natural drug products.
9	Quality control: Evaluation of natural products; macroscopical evaluation; physical evaluation; chemical evaluation; biological evaluation; spectroscopical evaluation.
10	Quality control: Evaluation of natural products; macroscopical evaluation; physical evaluation; chemical evaluation; biological evaluation; spectroscopical evaluation.
11	Phytochemical investigation of herbal products: Extraction of the plant material; Separation and isolation of constituents; characterization of the isolated compounds.
12	Separation technique: Introduction; Mechanisms of separation and classification based on the type of technique; paper chromatography; Thin layer chromatography; Ion-exchange chromatography; Gel filtration chromatography; Column chromatography; Gas chromatography; HPLC; Electrophoresis; Affinity chromatography.
13	Separation technique: Introduction; Mechanisms of separation and classification based on the type of technique; paper chromatography; Thin layer chromatography; Ion-exchange chromatography; Gel filtration chromatography; Column chromatography; Gas chromatography; HPLC; Electrophoresis; Affinity chromatography.
14	Separation technique: Introduction; Mechanisms of separation and classification based on the type of technique; paper chromatography; Thin layer chromatography; Ion-exchange chromatography; Gel filtration chromatography; Column chromatography; Gas chromatography; HPLC; Electrophoresis; Affinity chromatography.
15	Traditional plant medicines as a source of new drugs.
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Curriculum / Practical:

Week	Syllabus
1	Micro measurement and magnification.
2	Microscopical identification of crude drugs and cell contents.
3	Extraction and separation techniques.
4	Chromatography.
5	Paper chromatography (circular and horizontal paper chromatography).
6	Introduction to tin-layer chromatography.
7	TLC on microscope slides.
8	Partition chromatography for the separation of volatile oils.
9	Effect of activity of adsorbents on R _f values.
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References :

Main References :

[1] Trease and Evans Pharmacognosy; (Latest edition).

[2]

[3]

Secondary References:

[1]

[2]

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Module Description

University of ALKafeel / College of Pharmacy. Academic Year (2020-2021)

Stage:	Second
Specialization:	Pharmacy
Name of the Course in Arabic	الفسلجة الطبية
Name of the Course in English	Medical physiology
Goals:	<p>A. Cognitive objectives:</p> <p>Level 1. Development of knowledge. Develop the student's ability to remember what he has learned about physiology.</p> <p>Level 2. Improving the level of comprehension On interpretation, prediction and conclusion.</p> <p>Level 3. Application Development</p> <p>Level 4. Ability of the student to analyze</p> <p>Level 5. Develop the student 's ability to integrate ideas and information Synthesis</p> <p>Level 6. Evaluation the student's ability to give a valuable judgment subject learned.</p> <p>B. The skills objectives of the course</p> <p>1.Improve the student's ability to observe (Observation)</p> <p>2.learn how imitation</p> <p>3. to learn the method of experimentation.</p> <p>C. Emotional objectives and values</p> <p>1.Student learning on reception (acceptance/ Receiving)</p> <p>2. Develop the student's ability to respond (Responding)</p> <p>3. The student should be able to evaluate, give value (Valuing).</p> <p>4. Improving the student's ability to organize.</p> <p>5.Integration of value with the individual behavior (Characterization by value)</p>

Description	To know the concept of physiology and its relationship with other sciences, such as anatomy, pathology, and oral histology. Also understand all types of body systems that starting with the circulatory system and ending with the reproductive system and thus the student is qualified to study the pathology and histopathology
Number of Theoretical lectures	3
Number of Practical lectures	2
Credits	سعد مشكور وليد (النظري) محمد كريم جبار (العملي) اسراء مهدي عبد الهادي (العملي)
Name of Instructor in Arabic	Saad mashkooor waleed Mohammed Kareem Jabar Israa Mahdi Abdulhadi
Name of Instructor in English	مدرس دكتور مدرس مساعد مدرس مساعد
Title	Saad.alzaijy@alkafeel.edu.iq mohammedkareem@alkafeel.edu.iq esraa.mahdi@alkafeel.edu.iq
Academic email:	07709665880 م.د. سعد مشكور 07806396004 م.م. محمد كريم 07802550417 م.م. اسراء مهدي
Phone number (WhatsApp)	سعد مشكور وليد (النظري) محمد كريم جبار (العملي) اسراء مهدي عبد الهادي (العملي)

Curriculum / Theoretical:

Week	Syllabus
1	Cell physiology
2	Cell physiology
3	Cell physiology
4	Nervous system
5	Nervous system
6	Nervous system
7	Nervous system
8	Nervous system
9	Renal physiology
10	Renal physiology
11	Renal physiology
12	Respiratory system
13	Respiratory system
14	Cardiovascular system
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Curriculum / Practical:

Week	Syllabus
1	Introduction to blood physiology.
2	Packed cell volume.
3	Determination of hemoglobin concentration.
4	Red blood cells count
5	Blood indices
6	Tutorial
7	Blood pressure
8	Effect of exercise on blood pressure
9	Tutorial
10	Blood typing
11	blood transfusion
12	Some experiments on vision
13	Tutorial and review
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References :

Main References :

- Essentials of Human Physiology for Pharmacy
 - Lippincott Medical Physiology
 - Guyton and Hall Textbook of Medical Physiology
 - Ganonge

Secondary References:

[1]

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Module Description

University of AL-Kafeel / College..... Academic Year (2020-2021)

Stage:	Second stage
Specialization:	Pharmacy
Name of the Course in Arabic	الكيمياء العضوية II
Name of the Course in English	Organic chemistry II
Goals:	To enable students to understand the chemistry of carbon, and the classification, properties and reactions of organic compounds. It includes understanding the basic structure and properties of organic compounds, in addition to the principles and application of stereochemistry on these compounds
Description	Study the concepts and fundamentals of organic chemistry, which is considered the basis for the study of pharmacology. Specifically, this course aims to study aldehydes, ketones, carboxylic acids and their derivatives, amines, phenols, and stereochemistry in terms of their definition, composition, properties, reactions and methods of preparation as well as their relationship to pharmaceutical compounds.
Number of Theoretical lectures	3
Number of Practical lectures	2
Credits	4
Name of Instructor in Arabic	حسنين علي عباس (نظري) , حسنين علي عباس (عملي)
Name of Instructor in English	Hasanain Ali Abbas
Title	مدرس
Academic email:	h_altameemi@alkafeel.edu.iq
Phone number (WhatsApp)	07700985987

Curriculum / Theoretical:

Week	Syllabus
1	Alkyl halides
2	Alkyl halides
3	Stereochemistry II
4	Stereochemistry II
5	Aldehydes and ketones (include also aldol and Claisen condensation); Classification, reactions and properties
6	Aldehydes and ketones (include also aldol and Claisen condensation); Classification, reactions and properties
7	Aldehydes and ketones (include also aldol and Claisen condensation); Classification, reactions and properties
8	Carboxylic acids: properties and reactions
9	Carboxylic acids: properties and reactions
10	Functional derivatives of carboxylic acids
11	Amines I and II
12	Amines I and II
13	Phenols

Curriculum / Practical:

Week	Syllabus
1	Determination of solubility class
2	Identification of alkyl and aryl halides
3	Identification of alcohols
4	Identification of aldehydes and ketones
5	Identification of carboxylic acids
6	Identification of carboxylic acids salts
7	Identification of amines
8	Identification of phenols

References :**Main References :**

[1] **Organic Chemistry** by Robert T. Morrison and Robert N. Boyd.

[2] **Organic Chemistry** by Mc Murry; Thomason learning; CA, USA

Secondary References:

[1] **Organic Chemistry** by Jonathan Clayden, Nick Greeves, Stuart Warren & Peter Wothers

[2] **Organic Chemistry** by Graham Solomons & Craig Fryhle



Module Description

University of ALKafeel / College of Pharmacy. Academic Year (2020-2021)

Stage:	Second
Specialization:	Pharmacy
Name of the Course in Arabic	اللغة الإنكليزية
Name of the Course in English	English
Goals:	At the end of this course students shall be proficient in the following skills: لـطان Reading an English text properly. لـطان Understanding the text correctly. لـطان Using questions and negatives لـطان Learning new words.
Description	This course shall provide students with the essential skills of reading, writing, listening, and speaking. Students shall be trained in the strategies of understanding the English written text and the concept of comprehension through reading. The course is anticipated to help establish a link between using the English language properly and internalizing the grammatical rules. Concepts such as axillary verbs, tenses, modal verbs, questions, and negatives shall be introduced throughout the course.
Number of Theoretical lectures	2
Number of Practical lectures	لا يوجد
Credits	2
Name of Instructor in Arabic	أ.د أحمد شاكر الكلابي
Name of Instructor in English	Ahmed Shakir AlKilabi
Title	أستاذ
Academic email:	aeduhmed.alkilabi@alkafeel.edu.iq
Phone number (WhatsApp)	07828149373

Curriculum / Theoretical:

Week	Syllabus
1	Unit One: It's A Wonderful World Auxiliary Verbs, Naming the tenses, Questions and Negatives, Short Answers.
2	Unit One: Workbook Exercises
3	Unit Two: Get Happy! Present Tenses/ Present Continuous/ Present Passive
4	Unit Two: Workbook Exercises
5	Unit Three: Telling Tales Past Tenses/ Past Simple and Past Perfect/ Past Passive
6	Unit Three: Workbook Exercises
7	Unit Four: Doing the Right Thing Modal Verbs (1) – Obligation and Permission
8	Unit Four: Workbook Exercises
9	Unit Five: On the Move Future Forms/ Present Continuous
10	Unit Five: Workbook Exercises
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Curriculum / Practical:

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References :

Main References :

[1] Soars, Liz & John Soars. New Headway Plus: Intermediate Student's Book. Special Edition. Oxford: OUP, 2014.

[2] Soars, Liz & John Soars. New Headway Plus: Intermediate Workbook. Special Edition. Oxford: OUP, 2014.

[3] Soars, Liz & John Soars. New Headway Plus: Intermediate Teacher's Book. Special Edition. Oxford: OUP, 2014.

Secondary References:

[1] www.thefreedictionary.com

[2] www.almaany.com

[3]



Module Description

University of AL-Kafeel / College..... Academic Year (2020-2021)

Stage:	Third stage
Specialization:	Pharmacy
Name of the Course in Arabic	الصيدلة التكنولوجية 1
Name of the Course in English	Pharmaceutical Technology 1
Goals:	To teach theoretical bases for the technology of preparing different dosage forms with respect to their raw materials, compositions, methods of preparation, stability, storage and uses .
Description	This subjected is directly connected to the dispersed systems: their classification; comparisons between different systems. Solutions and types of solutions. Solubility: Factors affecting solubility; expression of dissolution; dissolution rate versus solubility; preparation of solutions containing non-volatile materials. Official solutions; classification of official solutions; preparation and uses. Aqueous solutions containing aromatic principles; aromatic waters; methods of preparations; stability. Also, Syrups: sugar-based syrups; artificial and sorbitol-based syrups; stability of syrups. Also, Definition and methods of clarification; filter aids in clarification. Preparation of solutions using mixed solvent systems; spirits, and elixirs. Extraction; maceration and percolation. Tinctures; fluid extracts; extracts of resins and oleoresins. Colloidal dispersions; .lyophilic; lyophobic. Coarse dispersion; suspensions .

Number of Theoretical lectures	Theory 3
Number of Practical lectures	Laboratory 2
Credits	4
Name of Instructor in Arabic	سرمد صباح ناصر (نظري), قاسم علاوي بدر جابر (عملي)
Name of Instructor in English	,Sarmad Sabah Nasser Qasim Allawi Bader Jaber
Title	أستاذ مساعد دكتور , مدرس
Academic email:	s.aledresi@uokufa.edu.iq Qasim.allawi@alkafeel.edu.iq
Phone number (WhatsApp)	07828795682 07730466610

Curriculum / Theoretical:

Week	Syllabus
1	Dispersed systems: their classification; comparisons between different systems.
2	Solutions and types of solutions.
3	Solubility: Factors affecting solubility; expression of dissolution; dissolution rate versus solubility; preparation of solutions containing non-volatile materials.
4	Official solutions; classification of official solutions; preparation and uses.
5	Aqueous solutions containing aromatic principles; aromatic waters; methods of preparations; stability.
6	Syrups: sugar based syrups; artificial and sorbitol based syrups; stability of syrups.
7	Definition and methods of clarification; filter aids in clarification.
8	Preparation of solutions using mixed solvent systems; spirits, and elixirs.
9	Extraction; maceration and percolation.
10	Tinctures; fluid extracts; extracts of resins and oleoresins.
11	Colloidal dispersions; lyophilic; lyophobic.
12	Coarse dispersion; suspensions.

Week	Syllabus
1	Solutions (Into body cavity, oral and external use).
2	Syrups: Preparation techniques and quality evaluation.
3	Review and tutorial
4	Elixirs: Preparation techniques and quality evaluation.
5	Spirits: Preparation techniques and quality evaluation.
6	Review and tutorial
7	Suspensions: Preparation techniques and quality evaluation.
8	Dispersion of oils in inhalations.

Curriculum / Practical:

References :

Main References :

- [1] Pharmaceutical Dosage forms and Drug Delivery Systems By Haward A. Ansel; latest edition.
- [2] Sprowel's American Pharmacy; Latest edition .
- [3] Lab Manual for Practical Pharmaceutical technology Adopted by the Department.

Secondary References:

- [1] Aulton's Pharmaceutics The Design and Manufacture of Medicines By Michael E. Aulton and Kevin M. G. Taylor
- [2] Physical Pharmacy by Alfred Martin et al; (Latest edition).



Module Description

University of AL-Kafeel / College..... Academic Year (2020-2021)

Stage:	Third
Specialization:	Pharmacy
Name of the Course in Arabic	الكيمياء الحياتية 1
Name of the Course in English	Biochemistry I
Goals:	To integrate key concepts describing the traditional core topics of Biochemistry: structure and metabolism. At the end of the semester the students should be able to understand the chemical structure, and function of all biomolecules present in the living organisms.
Description	
Number of Theoretical lectures	3
Number of Practical lectures	1
Credits	4
Name of Instructor in Arabic	علي فتاح ناصر
Name of Instructor in English	Ali fattah
Title	Assistant lecturer
Academic email:	Ali.almusawi@alkafeel.edu.iq
Phone number (WhatsApp)	07811611065

Curriculum / Theoretical:

Week	Syllabus
1	Introduction to the macromolecules biochemistry: Definitions and terms; proteins, enzymes, DNA; Clinical value.
2	Amino acids: Structures of A.A (table of standard A.A abbreviation and side chain); Classification, properties, isomerism.
3	Amino acids: Chemical reactions, Zwitter ions, titration curve calculating isoelectric point values. Examples and questions. Non standards A.A: Structures, existence and clinical value.
4	Peptides: Peptide bond, resonance forms, isomers, physical properties and chemical reactions. Essential poly peptides in human body, structures, roles and clinical values.
5	Proteins: Structure and conformations of proteins, Primary structure, Secondary structure (α helix, β sheet), tertiary structure, quaternary structure. Classification, synthesis, cellular functions (Enzymes, cell signaling, and ligand transport, structural proteins), protein in nutrition.
6	Denaturation of proteins and protein sequencing: Determining A.A composition, N-terminal A.A analysis, C- terminal A.A analysis, Edman degradation, prediction protein sequence from DNA/ RNA sequences. Methods of protein study: Protein purification, cellular localization, proteomics and bioinformatics, structure prediction and simulation.
7	Carbohydrates: Chemistry and classification, biomedical importance, classification of CHO, Stereochemistry of monosaccharides, metabolism of CHO; Physiologically important monosaccharides, glycosides, disaccharides, polysaccharides.
8	Lipids: Introduction, classification of lipids, fatty acids (F.A), nomenclature of F.A, saturated F.A, unsaturated F.A, physical and physiological properties of F.A, metabolism of lipids. Phospholipids, lipid peroxidation and antioxidants, separation and identification of lipids, amphipathic lipids.
9	Enzymes: Structures and mechanism, nomenclature, classification, mechanisms of catalysis, thermodynamics, specificity, lock and key model, induced fit model, transition state stabilization, dynamics and function, allosteric modulation. Biological function, cofactors, coenzymes, involvement in disease.
10	Kinetics: General principles, factors effecting enzyme rates (substrate conc., pH, temperature, etc), single-substrate reaction (Michaelis-Menten kinetics), kinetic constants. Examples of kinetic questions and solutions.

11	Enzyme inhibition: Reversible inhibitors, competitive and non competitive inhibition, mixed-type inhibition, Irreversible inhibition. Inhibition kinetics and binding affinities (k_i), questions and solutions.
12	Control of activity and uses of inactivators; multi-substrate reactions, ternary-complex mechanisms, ping-pong mechanisms, non-Michaelis-Menten kinetics, pre-steady-state kinetics, chemical mechanisms.
13	Nucleic Acid: Chemical structure, nucleic acid components, nucleic acid bases, nucleotides and deoxynucleotides (Properties, base pairing, sense and antisense, super-coiling, alternative structures, quadruple structures.
14	Biological functions of DNA: Genes and genomes, transcription and translation, replication.
15	Biochemistry of extracellular and intracellular communication: Plasma membrane structure and function; Biomedical importance, membrane proteins associated with lipid bilayer, membranes protein composition, dynamic structures of membranes, a symmetric structures of membranes.
16	Artificial membranes model, the fluid mosaic model, membrane selectivity, physiological functions of plasma membranes.
17	Biochemistry of the endocrine system: Classification of hormones, biomedical importance, the target cell concept and hormone receptors, biochemistry of hormone signal transduction.
18	Special topics: Nutrition, digestion, and absorption. Biomedical importance, digestion and absorption of carbohydrates, lipids, proteins, vitamins and minerals; energy balance. Biochemistry of hemostasis and clot formation.
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Curriculum / Practical:

Week	Syllabus
1	Effects of acids on carbohydrates: Molish test; Bials test; Anthron test; Seliwanoffs test; Mucic acid test.
2	Classification of carbohydrates according to reducing properties: Benedicts test; Fehlings test; Barfoed test.
3	Classification of carbohydrates according to reducing properties: Iodine test; Ozasone test.
4	Determination of unknown carbohydrates sample.
5	Color reactions of proteins: Biuret test; Ninhydrin test.
6	Color reactions of proteins: Millons test; Hopkins-Cole test; unoxidized sulfur test.
7	Solubility of proteins (effects of acid, neutral salts, heavy metals, and alkaloidal reagents).
8	Determination of unknown sample of proteins.
9	Experiments on solubility of lipids.
10	Acrolin test for lipids; Soap; Studying properties of soap.
11	Determination of saponification number.
12	Properties of lipids: Iodine test for lipids.
13	Properties of enzymes: Effects of heat on enzymes.
14	Properties of enzymes: Effect of concentration of enzyme (salivary amylase) on reaction velocity.
15	Properties of enzymes: Effect of pH on enzymatic activity.

References :

Main References :

Harper's Illustrated Biochemistry, Latest edition [2]

[3]

Secondary References:

[1]

[2]

[3]



Module Description

University of AL-Kafeel / College..... Academic Year (2020-2021)

Stage:	Third stage
Specialization:	Pharmacy
Name of the Course in Arabic	الكيمياء الصيدلانية اللاعضوية
Name of the Course in English	Inorganic Pharmaceutical Chemistry
Goals:	The Inorganic Pharmaceutical Chemistry course aims to provide a review of the principles of inorganic chemistry applied to medicinal and pharmaceutical chemistry. This includes understanding atomic and molecular structures, explaining atomic structures and the relationship with bonding forces and complex formation and their applications to understand the work of some complex drugs such as anticancer drugs and .antitoxins with heavy metals
Description	Inorganic pharmaceutical chemistry describes inorganic products used as pharmaceuticals, for example preparations applied to the skin, dental preparations, radiopharmaceuticals, and radiological diagnostic preparations.
Number of Theoretical lectures	Theory 2
Number of Practical lectures	Laboratory 2
Credits	3
Name of Instructor in Arabic	أ.م.د. زيد مهدي جابر العبيدي (نظري), جواد كاظم جواد (عملي)
Name of Instructor in English	Assist. Prof. Dr. Zaid Mahdi Jaber Al-Obaidi Jawad kadhum jawad alshamis
Title	أستاذ مساعد , مدرس
Academic email:	Zaid.alobaidi@alkafeel.edu.iq jawad.alshamis@alkafeel.edu.iq
Phone number (WhatsApp)	07702751265

Curriculum / Theoretical:

Week	Syllabus
1	Atomic and molecular structure/ complexation
2	Atomic and molecular structure/ complexation continue...
3	Essential and Trace Ions
4	Lec4: Non-Essential Ions
5	Gastrointestinal agents: Antacids
6	Protectives, Adsorbents, and Topical Agents
7	Topical Agents... continue
8	Dental agents.
9	Radiation and Radiopharmaceuticals
10	Radiopharmaceutical preparations, Radiopaque and Contrast Media

Week	Syllabus
1	Preparation and standardization of 1N HCl (known sample).
2	Preparation and standardization of 1N HCl (quiz and unknown).
3	Preparation and standardization of 1N 1NaOH (known sample).
4	Preparation and standardization of 1N NaOH (quiz and unknown).
5	Assay of NaOH solution (known sample).
6	Assay of NaOH solution (unknown sample).
7	Assay of sodium benzoate (known sample).
8	Assay of sodium benzoate (quiz and unknown).
9	Assay of Borax (explanation of basic concepts).
10	Assay of Borax (quiz and unknown).
11	Assay of citric acid (known sample).
12	Assay of citric acid (unknown sample).
13	Assay of magnesium hydroxide (known sample).
14	Assay of magnesium hydroxide (quiz and unknown).
15	Assay of ammoniated mercury (unknown sample).

Curriculum / Practical:

References :

Main References :

[1] Inorganic Medicinal and Pharmaceutical Chemistry by Block, Roche Soine and Wilson, latest edition

[2] Wilson and Gisvold; Textbook of Organic medicinal and Pharmaceutical chemistry; Delgado JN, Remers WA, (eds); latest edition .

Secondary References:

1. <http://www.dentalcare.com/en-US/dental-education/continuing-education/ce410/ce410.aspx?ModuleName=coursecontent&PartID=2&SectionID=1>
2. <http://nsdl.niscair.res.in/jspui/bitstream/123456789/782/1/revised%20dental%20products.pdf>
3. <http://pocketdentistry.com/4-treatment/>



Module Description

University of ALKafeel / College of Pharmacy. Academic Year (2020-2021)

Stage:	Third
Specialization:	Pharmacy
Name of the Course in Arabic	فسلجة امراض
Name of the Course in English	Pathophysiology
Goals:	Describe the basic concepts of pathophysiology at the cellular level related to injury, the self-defense mechanism, mutation, and cellular proliferation.
Description	Outline basic pathological factors that influence the disease process. Describe the impact and abnormal functions upon the organ (s) associated with the disease process of targeted body systems. Describe clinical manifestations associated with the diseased organ(s).
Number of Theoretical lectures	3
Number of Practical lectures	2
Credits	4
Name of Instructor in Arabic	أ.د. مصطفى غازي سلوم العباسي (النظري) م.م. ايمن محمد باقر عبد الحسين (العملي)
Name of Instructor in English	Professor Dr. Mustafa Ghazi Salloom Alabbassi Aimen mohammed Baqer
Title	أستاذ مدرس مساعد
Academic email:	Prof.dr.mustafaghazi@alkafeel.edu.iq aimen.mohammed@alkafeel.edu.iq
Phone number (WhatsApp)	+9647901461993 ا.د. مصطفى غازي م.م. ايمن محمد باقر 07810301016

Curriculum / Theoretical:

Week	Syllabus
1	Introduction.
2	Cell injury and tissue response; Degeneration; Necrosis; Atrophy; Hypertrophy; Metaplasia and Calcification; Inflammation and Repair.
3	Cell injury and tissue response; Degeneration; Necrosis; Atrophy; Hypertrophy; Metaplasia and Calcification; Inflammation and Repair.
4	Disorders of electrolytes and water and acid–base balances: Hyper and Hyponatremia; Hyper and Hypokalemia; Syndrome of inappropriate secretion of ADH; Diabetes insipidus; Metabolic acidosis and alkalosis; Respiratory acidosis and alkalosis.
5	Disorders of cardiovascular system: Hyperemia; Congestion and edema; Thrombosis; embolism and infarction; Shock; Coronary heart disease and MI; Rheumatic heart disease; Heart failure; Acute pulmonary edema; Essential hypertension; Secondary hypertension; Malignant hypertension; Hypotension; Aneurysm versus varicose veins;
6	Disorders of respiratory system: Pneumonias; Tuberculosis; Respiratory distress syndrome; Bronchial asthma; Emphysema and bronchiectasis; Cystic fibrosis; Pulmonary embolism; Pulmonary hypertension.
7	Disorders of the renal system: Nephrotic syndrome; Glomerulonephritis; Diabetic glomerulosclerosis; Hypertensive glomerular disease; Pyelonephritis; Drug related nephropathies; Acute renal failure; Chronic renal failure.
8	Disorders of GI and hepatobiliary systems: Peptic ulcer and Zollinger – Ellison syndrome; Irritable bowel syndrome; Crohn's disease; Diarrhea; Celiac disease; Viral hepatitis; Primary biliary cirrhosis; Liver failure; Cholelithiasis.
9	Disorders of thyroid function: Hypothyroidism. Hyperthyroidism. Graves's disease. Thyrotoxicosis.
10	Disorders of adrenal function: Cushing syndrome. Adrenal cortical insufficiency (primary and secondary). Congenital adrenal hyperplasia. Pheochromocytoma.
11	Diabetes mellitus and metabolic syndrome; Dyslipoproteinemia.
12	Neoplasia.
13	Metabolic and rheumatic disorders of skeletal system: Osteoporosis; Osteomalacia and rickets; Rheumatoid arthritis; Systemic lupus erythematosus; Ankylosing spondylitis; Gout; Osteoarthritis syndrome.
14	Alteration in immune response: Hypersensitivity disorders; Autoimmune disease; Transplantation immunopathology; Immunodeficiency disorders;
15	Review

Curriculum / Practical:

Week	Syllabus
1	General introduction and slide preparation.
2	Cell injury and degenerations.
3	Growth disturbances.
4	Inflammation.
5	Thrombosis.
6	Neoplasia.
7	Disorders of respiratory system.
8	Disorders of the cardiovascular system
9	Disorders of renal system.
10	Liver disorders.
11	Disorders of the gastrointestinal tract.
12	Disorders of the central nervous system.
13	Disorders of the reproductive system.
14	Disorders of skeletomuscular system.
15	Disorders of endocrine system.

References :

Main References :

[1] Essentials in Pathophysiology by: Carol Mattson Porth; Latest edition.

Secondary References:

[1] Pathophysiology - Binder Ready, 7th Edition Author : Jacquelyn L. Banasik

[2]

[3]

[3]



Module Description

University of AL-Kafeel / College..... Academic Year (2020-2021)

Stage:	Third
Specialization:	Pharmacy
Name of the Course in Arabic	فسلجة علم الامراض
Name of the Course in English	Pathophysiology
Goals:	Describe the basic concepts of pathophysiology at the cellular level related to injury, the self-defense mechanism, mutation, and cellular proliferation. Outline basic pathological factors that influence the disease process. Describe the impact and abnormal functions upon the organ (s) associated with the disease process of targeted body systems. Describe clinical manifestations associated with the diseased organ(s).
Description	
Number of Theoretical lectures	3
Number of Practical lectures	2
Credits	3
Name of Instructor in Arabic	أ.د.مصطفى غازي سلوم العباسي
Name of Instructor in English	Mustafa Ghazi Salloom Alabbassi
Title	Professor
Academic email:	Prof.dr.mustafaghazi@alkafeel.edu.iq
Phone number (WhatsApp)	+9647901461993

Curriculum / Theoretical:

Week	Syllabus
1	Introduction.
2	Cell injury and tissue response; Degeneration; Necrosis; Atrophy; Hypertrophy; Metaplasia and Calcification; Inflammation and Repair.
3	Cell injury and tissue response; Degeneration; Necrosis; Atrophy; Hypertrophy; Metaplasia and Calcification; Inflammation and Repair.
4	Disorders of electrolytes and water and acid–base balances: Hyper and Hyponatremia; Hyper and Hypokalemia; Syndrome of inappropriate secretion of ADH; Diabetes insipidus; Metabolic acidosis and alkalosis; Respiratory acidosis and alkalosis.
5	Disorders of cardiovascular system: Hyperemia; Congestion and edema; Thrombosis; embolism and infarction; Shock; Coronary heart disease and MI; Rheumatic heart disease; Heart failure; Acute pulmonary edema; Essential hypertension; Secondary hypertension; Malignant hypertension; Hypotension; Aneurysm versus varicose veins;
6	Disorders of respiratory system: Pneumonias; Tuberculosis; Respiratory distress syndrome; Bronchial asthma; Emphysema and bronchiectasis; Cystic fibrosis; Pulmonary embolism; Pulmonary hypertension.
7	Disorders of the renal system: Nephrotic syndrome; Glomerulonephritis; Diabetic glomerulosclerosis; Hypertensive glomerular disease; Pyelonephritis; Drug related nephropathies; Acute renal failure; Chronic renal failure.
8	Disorders of GI and hepatobiliary systems: Peptic ulcer and Zollinger – Ellison syndrome; Irritable bowel syndrome; Crohn's disease; Diarrhea; Celiac disease; Viral hepatitis; Primary biliary cirrhosis; Liver failure; Cholelithiasis.
9	Disorders of thyroid function: Hypothyroidism. Hyperthyroidism. Graves's disease. Thyrotoxicosis.
10	Disorders of adrenal function: Cushing syndrome. Adrenal cortical insufficiency (primary and secondary). Congenital adrenal hyperplasia. Pheochromocytoma.
11	Diabetes mellitus and metabolic syndrome; Dyslipoproteinemia.
12	Neoplasia.
13	Metabolic and rheumatic disorders of skeletal system: Osteoporosis; Osteomalacia and rickets; Rheumatoid arthritis; Systemic lupus erythematosus; Ankylosing spodylitis; Gout; Osteoarthritis syndrome.
14	Alteration in immune response: Hypersensitivity disorders; Autoimmune disease; Transplantation immunopathology; Immunodeficiency disorders;
15	Review

Curriculum / Practical:

Week	Syllabus
1	General introduction and slide preparation.
2	Cell injury and degenerations.
3	Growth disturbances.
4	Inflammation.
5	Thrombosis.
6	Neoplasia.
7	Disorders of respiratory system.
8	Disorders of the cardiovascular system
9	Disorders of renal system.
10	Liver disorders.
11	Disorders of the gastrointestinal tract.
12	Disorders of the central nervous system.
13	Disorders of the reproductive system.
14	Disorders of skeletomuscular system.
15	Disorders of endocrine system.

References :

Main References :

[1] *Essentials in Pathophysiology by: Carol Mattson Porth; Latest edition.*

[2]

[3]

Secondary References:

[1] **Pathophysiology - Binder Ready, 7th Edition** Author : Jacquelyn L. Banasik

[2]

[3]



Module Description

University of ALKafeel / College of Pharmacy. Academic Year (2020-2021)

Stage:	fourth
Specialization:	Pharmacy
Name of the Course in Arabic	الادوية II
Name of the Course in English	Pharmacology II
Goals:	Introducing pharmacy students to the general pharmacology of the central nervous system and the different groups of drugs used in the treatment of diseases of the central nervous system or drugs that change its function. The student gets acquainted with the different drugs used in the treatment of cardiovascular diseases. In addition, this course will cover medications that affect the digestive and respiratory systems
Description	is considered one of the basic subjects that Pharmacology the College of Pharmacy student relies on mainly after graduation, as it combines all the sciences that the student studied, including medical pharmacology, science of pharmaceutical chemistry, pathology, and physiology
Number of Theoretical lectures	3
Number of Practical lectures	2
Credits	4
Name of Instructor in Arabic	م.د. ياسمين علي حسين (النظري) أ.د. مصطفى غازي (النظري) م.م. يحيى ابراهيم يحيى (العملي)
Name of Instructor in English	Yasmeen Ali Hussien Mustafa Ghazi Salloom Yahia Ibrahim Yahia
Title	مدرس دكتور أستاذ دكتور مدرس مساعد
Academic email:	Yasmeen.alamri@alkafeel.edu.iq/ prof.dr.mustafaghazi@alkafeel.edu.iq yahia.alkhazaily@alkafeel.edu.iq
Phone number (WhatsApp)	07813909018 م.د. ياسمين علي 07901461993 أ.د. مصطفى غازي

Curriculum / Theoretical:

Week	Syllabus
1	Introduction to CNS pharmacology
2	CNS stimulants. Anxiolytic and Hypnotic drugs.
3	General and Local Anesthetics.
4	Antidepressant drugs
5	Antipsychotic (neuroleptic) drugs.
6	Opioid analgesics and antagonists.
7	Treatment of neurodegenerative diseases.
8	Antiepileptic Drugs.
9	The treatment of heart failure (HF). Diuretics.
10	Antiarrhythmic drugs.
11	Antihypertensive drugs.
12	Antihyperlipidemic drugs.
13	Gastrointestinal and antiemetic drugs.
14	Drugs acting on the respiratory system.
15	Drugs affecting the blood
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Curriculum / Practical:

Week	Syllabus
1	Routs of drug administration
2	Onset and duration of drugs (Barbiturates)
3	Absorption and excretion of drugs
4	Effect of parasympathomimetics on gland secretions
5	Drugs and human eye
6	The effects of drugs on IOP rabbits
7	Evaluation of opioid analgesics
8	Evaluation of NSAIDs
9	Evaluation of anti-parkinsonian drugs
10	The effects of drugs and their antagonists on isolated rats ileum
11	The effects of drugs and their antagonists on isolated rabbits ileum
12	
13	
14	
15	

References :

Main References :

[1] Lipincott Pharmacology; Latest edition

[2]

[3]

Secondary References:

[1] Lab Manual for Practical Pharmacology Adopted by the Department

[2]

[3]



Module Description

University of AL-Kafeel / College..... Academic Year (2020-2021)

Stage:	Fourth stage
Specialization:	Pharmacy
Name of the Course in Arabic	صيدلة حيائية
Name of the Course in English	Biopharmaceutics
Goals:	<p>After completing this course, the student should be able to:</p> <ul style="list-style-type: none"> ▪ Describe of how the physicochemical properties of drugs, routes of administration, and dosage forms affect the rate and extent of drug absorption, including the influences of particle size, surface area, ionization, salt form, partition coefficient, excipients, solubility and possible rate-limiting steps in drug absorption. ▪ Describe mechanisms of drug absorption into the systemic circulation, as well as the influences of a drug's physicochemical properties and physiological factors. ▪ Define and describe bioavailability and bioequivalence. ▪ Describe and define linear and nonlinear pharmacokinetics of drug, including drug absorption, distribution and volume of distribution, half-life, renal excretion and hepatic clearance
Description	<p>The coarse deals with the physical and chemical properties of drug substance, dosage form and the biological effectiveness of the drug or drug product upon administration, including drug availability in the human or animal body from a given dosage form. The pharmacokinetic part of the coarse deals with the time-coarse of the drug in the biological system, and quantification of drug concentration pattern in normal subjects and in certain disease states</p>

Number of Theoretical lectures	Theory 3
Number of Practical lectures	2
Credits	3
Name of Instructor in Arabic	أ.د. حيدر كاظم عباس (نظري), أ.د. حيدر كاظم عباس (عملي)
Name of Instructor in English	Prof. Dr. Hayder Kadhim Abbas
Title	أستاذ
Academic email:	hayder.ismael@alkafeel.edu.iq
Phone number (WhatsApp)	07801548803

Curriculum / Theoretical:

Week	Syllabus
1	Introduction to biopharmaceutics.
2	Biopharmaceutic aspects of products; drug absorption; mechanisms of absorption; physicochemical factors; dissolution rate; effects of excipients; type of dosage forms.
3	One compartment open model.
4	Multicompartment models.
5	Pharmacokinetics of drug absorption.
6	Bioavailability and bioequivalence.
7	Clearance of drugs from the biological systems.
8	Hepatic elimination of drugs.
9	Protein binding of drugs.
10	Intravenous infusion
11	Multiple dosage regimens.
12	Non-linear pharmacokinetics.
13	Dosage adjustment in renal diseases.

Week	Syllabus
1	Preparation of calibration curve of salicylic acid.
2	<i>In vitro</i> evaluation of bulk laxative.
3	<i>In vitro</i> evaluation of antacids.
4	Dissolution of tablets.
5	Review and tutorial
6	Determination of pharmacokinetic parameters from CP-time by residual method.
7	Determination of pharmacokinetic parameters from CP-time by trapezoidal method.
8	Determination of pharmacokinetic parameters from urine excretion samples.
9	Hydrolysis of aspirin in buffer pH 6.8.
10	Review and tutorial

Curriculum / Practical:

References :

Main References :

- [1] *Shargel L, Yu AB, (Eds.), Applied Biopharmaceutics and Pharmacokinetics; Latest edition.*
- [2] **Aulton's Pharmaceutics The Design and Manufacture of Medicines** By Michael E. Aulton and Kevin M. G. Taylor
- [3] *Lab Manual for Practical Biopharmaceutics Adopted by the Department*

Secondary References:

- [1] **Pharmaceutical Dosage forms and Drug Delivery Systems** By Haward A. Ansel; latest edition
- [2] **Physical Pharmacy** by Alfred Martin et al; (Latest edition).



Module Description

University of AL-Kafeel / College..... Academic Year (2020-2021)

Stage:	Fourth
Specialization:	pharmacy
Name of the Course in Arabic	الصيدلة السريرية
Name of the Course in English	Clinical pharmacy I
Goals:	To develop an understanding and acceptance of clinical pharmacy and pharmaceutical care as concepts and applications, which enable the student to ensure safe and effective use of medications in disease state as a part of medical team.
Description	
Number of Theoretical lectures	2
Number of Practical lectures	1
Credits	3
Name of Instructor in Arabic	اسامة كاظم
Name of Instructor in English	Osama kadhum
Title	Lecturer
Academic email:	Usama72@gmail.com
Phone number (WhatsApp)	07829515621

Curriculum / Theoretical:

Week	Syllabus
1	Introduction to clinical and community pharmacy: Drug distribution systems, principles of patient education.
2	Clinical pharmacy practice in neonates, pediatrics and geriatrics.
3	Clinical pharmacy in respiratory system care: Cough, common cold and allergic rhinitis.
4	Clinical Pharmacy in G.I.T system care: Diarrhea, constipation, GERD, and hemorrhoids.
5	Pediatric care practice: Oral thrush and head lice.
6	Pharmacy care in skin conditions: Acne, scabies, psoriasis, hair loss and athlete's foot.
7	Women health care: Cystitis and vaginal thrush, primary dysmenorrhea and emergency contraceptive techniques.
8	Pharmacy care in CNS related problems: Headache, insomnia and motions sickness.
9	Pharmacy care in eye disorders.
10	Pharmacy care in ENT conditions.
11	Pharmacy care in oral hygiene; mouth ulcer and mouth thrush.
12	Pharmacy care in obesity and body weight control.
13	Pharmacy care in management of pain and musculoskeletal disorders.
14	Nicotine replacement therapy (NRT).
15	Clinical pharmacy practice in poisoning.
16	Clinical pharmacy practice in eczema and dermatitis; dandruff.
17	Clinical pharmacy in fungal skin infections; cold sore; corns and callus.
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Curriculum / Practical:

Week	Syllabus
1	Communication with patients.
2	Respiratory system in practice (part I) : Cough.
3	Respiratory system in practice (part II) : Common cold.
4	G.I.T system in practice (part I): Constipation.
5	G.I.T system in practice (part II): Diarrhea and IBS.
6	GIT system in practice (part III): GERD
7	Skin conditions in practice (part I): Hair loss; cold sore and athlete's foot.
8	Skin conditions in practice (part II): Dandruff and Eczema.
9	Skin conditions in practice (part III): warts and scabies.
10	Collective Practice number 1.
11	Pediatrics in practice: Oral thrush; colic; pinworm and napkin rash.
12	Minor eye disorders in practice.
13	Women health in practice.
14	Insomnia and motion sickness in practice.
15	Collective practice number 2.

References :

Main References :

1] 1- Paul Rutter; *Community Pharmacy; Symptoms, Diagnosis and Treatment*

[2] . 2- Roger Walker, Clive Edwards (Eds), *Clinical Pharmacy and Therapeutics, Churchill Livingstone, London, Latest edition.*

[3]

Secondary References:

[1]

[2]

[3]



Module Description

University of AL-Kafeel / College..... Academic Year (2020-2021)

Stage:	Fourth stage
Specialization:	Pharmacy
Name of the Course in Arabic	الكيمياء الصيدلانية العضوية II
Name of the Course in English	Organic Pharmaceutical Chemistry II
Goals:	<ul style="list-style-type: none"> ▪ Studying methods of drugs' discovery. ▪ Studying methods of drugs' development to produce a more powerful and less harmful therapeutic agents. ▪ Studying structure-activity relationship of drugs.
Description	The course is devoted to the discovery and development of new agents for treating diseases, and enables translating the drug structural formula into therapeutic effect. Additionally, it focuses on the methods of preparation for some pharmaceutical agents.
Number of Theoretical lectures	3
Number of Practical lectures	2
Credits	4
Name of Instructor in Arabic	أ.م.د. ضرغام قاسم شهيد (نظري) , جواد كاظم جواد الشمس (عملي)
Name of Instructor in English	Jawad kadhum jawad alshamis
Title	استاذ مساعد دكتور (ضرغام قاسم) , مدرس (جواد كاظم)
Academic email:	dhurgham.alkhefaji@alkafeel.edu.iq jawad.alshamis@alkafeel.edu.iq
Phone number (WhatsApp)	07808602249 07901974305

Curriculum / Theoretical:

Week	Syllabus
1	Cholinergic agents, cholinergic receptors and their subtypes.
2	Cholinergic agonists; stereochemistry and structure-activity relationships (SAR); products; cholinesterase inhibitors.
3	Cholinergic blocking agent; structure-activity relationships (SAR); Solanaceous alkaloid and analogues; synthetic cholinergic blocking agents and products; ganglionic blocking agents (neuromuscular blocking agents).
4	Analgesic agents (SAR of morphine, SAR of meperidine type molecules; SAR of methadone type compounds; N-methylbezomorphans, antagonist type analgesics in benzomorphans).
5	Analgesic receptors, endogenous opioids; Products; Antitusive agents; Anti-inflammatory analgesics.
6	Adrenergic agents (Adrenergic neurotransmitters); Adrenergic receptors; Drugs affecting Adrenergic neurotransmission; Sympathomimetic agents; Adrenergic receptor antagonists.
7	CNS depressant; Benzodiazepines and related compounds; Barbiturates; CNS depressant with skeletal muscle relaxant properties; Antipsycotics; Anticonvulsants.

Curriculum / Practical:

References :

Main References :

[1] *Wilson and Gisvold Textbook of Organic Medicinal and Pharmaceutical Chemistry; Delgado JN, Remers WA, (Eds.); Latest edition.*

[2] *Lab Handbook for Practical Pharmaceutical Chemistry Adopted by the Department*

Week	Syllabus
1	Preparation of salicylic acid.
2	Re-crystallization of salicylic acid.
3	Synthesis of aspirin.
4	Re-crystallization of aspirin.
5	Assay of aspirin (known sample).
6	Assay of aspirin (unknown sample).
7	Preparation of nitrobenzene.
8	Preparation of aniline.
9	Preparation of acetanilide.
10	Re-crystallization of acetanilide.
11	Chlorosulfonation of acetanilide.
12	Amination of <i>p</i> -chlorobenzene sulfonyl chloride.
13	Hydrolysis of <i>p</i> -chlorobenzene sulfonyl chloride to sulfanilamide.
14	Assay of sulfa drugs (known sample).
15	Assay of sulfa drugs (unknown sample).



Module Description

University of ALKafeel / College of Pharmacy. Academic Year (2020-2021)

Stage:	Fourth
Specialization:	Pharmacy
Name of the Course in Arabic	اللغة الإنكليزية
Name of the Course in English	English Language
Goals:	<p>At the end of this course students shall be able to:</p> <p>سـاطن use a wide range of structures to express different concepts.</p> <p>سـاطن Understand a wide variety of totally authentic texts.</p> <p>سـاطن practice in more extended speaking, e.g., role-plays and debates.</p> <p>سـاطن train in systematic expansion of their vocabulary in a wide range of lexical areas.</p>
Description	<p>This course shall provide the students with the following essential and advanced elements of reading:</p> <p>سـاطن exposure to a wide variety of totally authentic texts.</p> <p>سـاطن challenging tasks which help them read better.</p> <p>سـاطن to develop an awareness of register.</p> <p>سـاطن practice in guessing the meaning of unknown lexis.</p> <p>The course shall also provide students with the essential skills of writing, listening, and speaking. More complex grammatical structures such as past modals need revising and several new advanced structures, such as inversion and ellipsis, will be introduced.</p> <p>Students shall be trained in the strategies of understanding the English written text and the concept of comprehension through reading. Concepts such as course markers, narrative tenses, used to, and abstract nouns shall be introduced throughout the course.</p>
Number of Theoretical lectures	2
Number of Practical lectures	لا يوجد
Credits	2
Name of Instructor in Arabic	أ.د أحمد شاكر الكلابي
Name of Instructor in English	Ahmed Shakir AlKilabi
Title	أستاذ
Academic email:	aeduhmed.alkilabi@alkafeel.edu.iq

Curriculum / Theoretical:

Week	Syllabus
1	Unit One: A. What Motivates You? Discourse Markers (1): Connectors
2	Unit One: B. Who am I? Personality; Family Colloquial English 1 Family Secrets, On the Street
3	Unit Two: A. Whose Language Is IT? Pronouns/ Language Terminology
4	Unit Two: B. Once Upon A Time Narrative Tenses, Used to/ Word Building: Abstract nouns
5	Public Holiday 6 January 2021 Iraqi Army Day
6	Unit Three: A. Don't Get Mad, Get Even
7	Unit Three: B. History Goes to the Movies Discourse Markers (2) Adverbs and Adverbial Expressions
8	Unit Four: A. Breaking the Silence
9	Unit Four: B. Lost in Translation
10	Review and Check
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Curriculum / Practical:

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References :

Main References :

] Latham-Koenig, Christina and Clive Oxenden. American English File: Student's Book. Oxford: Oxford University Press, 2009

[2] Latham-Koenig, Christina, Clive Oxenden, and Jane Hudson. American English File: Workbook. Oxford: Oxford University Press, 2009

Secondary References:

[1] Latham-Koenig, Oxenden, Seligson - American English File Teacher's Book Level 5. Oxford: Oxford University Press, 2009.

[2] www.thefreedictionary.com

[3] www.almaany.com



Module Description

University of AL-Kafeel / College..... Academic Year (2020-2021)

Stage:	Fourth
Specialization:	pharmacy
Name of the Course in Arabic	صحة عامة
Name of the Course in English	Public health
Goals:	This course enables the students to understand the principles of public health and the art of preventing disease, promoting health and prolonging life, through organized effort of society.
Description	
Number of Theoretical lectures	2
Number of Practical lectures	
Credits	2
Name of Instructor in Arabic	سالم فايز كاظم
Name of Instructor in English	Salim Fayez Kadhim
Title	Lecturer
Academic email:	Sfk9@alkafeel.edu.iq
Phone number (WhatsApp)	07825538875

Curriculum / Theoretical:

Week	Syllabus
1	Concepts and principles of public health and preventive medicine.
2	Public health and statistics: Information for health care providers.
3	Epidemiology.
4	Communicable diseases: Infections through the gastro-intestinal tract.
5	Infections through skin and mucous membranes.
6	Infections through the respiratory tract.
7	Arthropod-borne infections.
8	Non-communicable disease: Health in transition.
9	Nutritional disorders.
10	Family health.
11	Environmental health.
12	Innate and acquired Immunity; Immunization.
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References :**Main References :**

[1] Lucas AO, Gilles HM, (Eds), Short Textbook of Public Health Medicine for the Tropic, Latest edition.

[2]

[3]

Secondary References:

[1]

[2]

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Module Description

University of AL-Kafeel / College..... Academic Year (2020-2021)

Stage:	Fifth stage
Specialization:	Pharmacy
Name of the Course in Arabic	الصيدلة الصناعية II
Name of the Course in English	Industrial Pharmacy II
Goals:	<ul style="list-style-type: none"> ▪ Teaching pharmacy student the principles of dosage forms manufacturing (tablets, capsules, aerosols etc.) ▪ Teaching the basic validation of dosage forms in quality control departments according to the international pharmacopeia ▪ The student should be able to distinguish between the different manufacturing methods of medicinal formulas according to the physical technical properties of the drug compound.
Description	The course enable technical setup for coordination of standards for formulation of typical dosage forms and the principles needed to learn mass production of different pharmaceutical dosage forms. The syllabus includes different dosage forms like tablets, capsules, aerosols, emulsion, etc, besides the advanced techniques like enteric coating and micro-encapsulation
Number of Theoretical lectures	Theory 3
Number of Practical lectures	Laboratory 2
Credits	4
Name of Instructor in Arabic	أ.م.د احمد هاشم حسين (نظري), أ.م.د احمد هاشم حسين (عملي)
Name of Instructor in English	Ahmed Hashim Hussein
Title	أستاذ مساعد
Academic email:	ahmed.h.hussein@alkafeel.edu.iq
Phone number (WhatsApp)	07809421523

Curriculum / Theoretical:

Week	Syllabus
1	Pharmaceutical dosage forms: Tablets; role in therapy; advantages and disadvantages; formulation; properties; evaluation; machines used in tableting; quality control; problems; granulation, and methods of production; excipients, and types of tablets.
2	Tablet coating; principles; properties; equipments; processing; types of coating (sugar and film); quality control, and problems.
3	Capsules: Hard gelatin capsules; materials; production; filling equipments; formulation; special techniques.
4	Soft gelatin capsules: Manufacturing methods; nature of capsule shell and content; processing and control; stability.
5	Micro-encapsulation; core and coating materials; stability; equipments and methodology.
6	Modified (sustained release) dosage forms; theory and concepts; evaluation and testing; formulation.
7	Liquids: Formulation; stability and equipments.
8	Suspensions: Theory; formulation and evaluation.
9	Emulsions: Theory and application; types; formulation; equipments and quality control.
10	Semisolids: Percutaneous absorption; formulation; types of bases (vehicles) preservation; processing and evaluation.
11	Suppositories: Rectal absorption; uses of suppositories; types of bases; manufacturing processes; problems and evaluation.
12	Pharmaceutical aerosols: Propellants; containers; formulation; types and selection of components; stability; manufacturing; quality control and testing.

Week	Syllabus
1	Direct compression method for preparation of tablets.
2	Wet granulation method for preparation of tablets.
3	Dry granulation method for preparation of tablets.
4	Review and tutorial
5	Evaluation of tablets.
6	Capsules dosage form: Preparation and evaluation.
7	Parenteral dosage forms
8	Review and tutorial

Curriculum / Practical:

References :

Main References :

[1] *The Theory and Practice of Industrial Pharmacy by Leon Lachman et al; Latest edition.*

[2] *Lab Manual for Practical Industrial pharmacy Adopted by the Department*

Secondary References:

[1]Pharmaceutical Manufacturing Hand book by Shyne Cox.

[2] Pharmaceutical Dosage forms and Drug Delivery Systems By Haward A. Ansel



Module Description

University of AL-Kafeel / College..... Academic Year (2020-2021)

Stage:	Fifth stage
Specialization:	Pharmacy
Name of the Course in Arabic	الكيمياء الصيدلانية العضوية VI
Name of the Course in English	Organic Pharmaceutical Chemistry VI
Goals:	<ul style="list-style-type: none"> ▪ To give students knowledge and experience in the field of drugs and hormones as part of their medical and pharmaceutical field. ▪ It includes classification, synthesis, biotransformation and / or formulation of some drugs to improve their effect and also to avoid certain side effects. ▪ Synthesis of a few handcrafted structures of some prodrug to facilitate students' understanding of the unit.
Description	Organic Pharmaceutical Chemistry VI describes the basic concept of drug precursors; Covalent (divisible) bonds; Functional groups of drug initiators; Types of medication initiators. Chemical delivery systems; Polymeric drug initiators in addition to the types and structure of polymers. Pharmacological targeting. Combination chemistry of peptides and other linear structures, examination and design of the virtual library of pharmaceutical compounds, in addition to a simplified description of computational chemistry and .the use of computers in drug design
Number of Theoretical lectures	2
Number of Practical lectures	-
Credits	2
Name of Instructor in Arabic	أ.م.د. زيد مهدي جابر العبيدي
Name of Instructor in English	Assist. Prof. Dr. Zaid Mahdi Jaber Al-Obaidi
Title	أستاذ مساعد
Academic email:	Zaid.alobaidi@alkafeel.edu.iq
Phone number (WhatsApp)	07702751265

Curriculum / Theoretical:

Week	Syllabus
1	Basic concept of prodrugs
2	Types of prodrugs
3	Rational for the Use of Prodrugs
4	Chemical Drug Delivery Systems: Strategies and Applications
5	Classification of polymers used for bioconjugation
6	Drug Targeting
7	Combinatorial Chemistry: Introduction
8	Combinatorial Chemistry: Drug design approach and HTS
9	Combinatorial Chemistry: Virtual (In Silico) Screening
10	1. Detection, purification, and analysis 2. Encoding combinatorial libraries

References :

Main References :

1. Wilson and Gisvold Textbook of Organic Medicinal and Pharmaceutical Chemistry; Delgado JN, Remers WA, (Eds.); 12th ed., 2012.
2. An Introduction to Medicinal Chemistry by Graham L. Patrick. 5th edition.

Secondary References:

1. *Prodrug Design: Perspectives, Approaches and Applications in Medicinal Chemistry* ISBN 978-0-12-803519-1
2. Burger's Medicinal Chemistry and Drug Discovery Book by Donald J. Abraham
3. Combinatorial Chemistry: Principles and Techniques by Árpád Furka



Module Description

University of AL-Kafeel / College..... Academic Year (2020-2021)

Stage:	Fifth
Specialization:	Pharmacy
Name of the Course in Arabic	تدريب المستشفيات
Name of the Course in English	Hospital training
Goals:	To teach students the application of pharmacy practice in different hospital wards; it includes training on case evaluation and follow up, evaluation of therapeutic regimens and registration of errors related to drug therapy and presenting ideas to solve problems.
Description	
Number of Theoretical lectures	
Number of Practical lectures	2
Credits	2
Name of Instructor in Arabic	امجد كريم , حيدر هاشم , اشده فاروق , محمد هادي , احمد كاظم , يحيى ابراهيم , مجيد نبيل , اسامة كاظم
Name of Instructor in English	Amjed kareem , haider hashim,ashdhaa faruoq,mohammed hadi , ahmad kadhum, yehia Ibrahim , majeed nabeel , osama kadhum
Title	

Academic email:	
Phone number (WhatsApp)	

Curriculum / Theoretical:

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Curriculum / Practical:

Week	Syllabus
1	Clinical Pharmacy Practice in Internal Medicine: Clinical observation of cases; evaluation of the case sheets; case presentation; discussion and evaluation.
2	Clinical Pharmacy Practice in Surgery wards: Clinical observation of cases; evaluation of the case sheets; case presentation; discussion and evaluation.
3	Clinical Pharmacy Practice in Gynecology and Obstetrics Ward: Clinical observation of cases; evaluation of the case sheets; case presentation; discussion and evaluation.
4	Clinical Pharmacy Practice in pediatrics: Clinical observation of cases; evaluation of the case sheets; case presentation; discussion and evaluation.
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References :**Main References :**

[1] *Manuals for Clinical Training Adopted by the Department*

[2]

[3]

Secondary References:

[1]

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Module Description

University of AL-Kafeel / College..... Academic Year (2020-2021)

Stage:	Fifth
Specialization:	Pharmacy
Name of the Course in Arabic	تدريب مختبرات سريرية
Name of the Course in English	Clinical Laboratory Training
Goals:	: It provides general information about the biochemical basis of disease and about the principles of laboratory diagnosis; it supplies specific guidance on the clinical value of chemical investigations, indicating their range of application and limitations as well as relating results of laboratory tests to the process of clinical diagnosis and management as these might applied to individual patients.
Description	
Number of Theoretical lectures	
Number of Practical lectures	2
Credits	2
Name of Instructor in Arabic	علي فتاح , نور حسون , نور عدنان
Name of Instructor in English	Ali Fattah , noor hasoon , noor adnan
Title	Assistant lecturer
Academic email:	
Phone number (WhatsApp)	07811611065

Curriculum / Theoretical:

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Curriculum / Practical:

Week	Syllabus
1	Diagnostic test basics, collecting & transporting specimens, venipuncture, urine specimen, stool specimen.
2	Biochemical tests: Fasting blood glucose, Post-prandial glucose, Oral glucose tolerance test.
3	Blood urea, Blood creatinine, Creatinine clearance, Uric acid.
4	Cholesterol, Lipoproteins, triglycerides.
5	Blood proteins, Bilirubin.
6	Calcium, Inorganic phosphate, Serum chloride
7	Alkaline phosphatase, Acid phosphatase, Alanine aminotransferase, Aspartate aminotransferase, Lactate dehydrogenase, Creatine phosphokinase.
8	Serological tests: VDRL, ASO- Titer, Hepatitis tests.
9	C-reactive protein test, Rheumatic factor test, Rosebengal test, Typhoid fever test(Widal test), Pregnancy Test.
10	General urine examination, urine specimen collection.
11	Hematological tests: RBC count, Hb, PCV, RBC indices, WBC count, Platelets count.
12	Blood typing, Coombs test, Bleeding time, ESR.
13	Microbiological tests: culture and sensitivity tests, Staining methods
14	Culture media, Enriched culture media for general use
15	Tests for identification of bacteria, Disk diffusion tests of sensitivity to antibiotics, Choice of drugs for disk test, bacterial disease and their laboratory diagnosis.

References :

Main References :

[1] *Manual for Laboratory Training Adopted by the Department*

[2]

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Secondary References:

[1]

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Module Description

University of AL-Kafeel / College..... Academic Year (2020-2021)

Stage:	Fifth
Specialization:	Pharmacy
Name of the Course in Arabic	علاجات تطبيقية أ
Name of the Course in English	Applied therapeutics
Goals:	To improve the knowledge and practice of students in the clinical application of drugs in the treatment of diseases and disorders in different organ systems, and enable students to integrate clinical pharmacy practice with other health care providers in the clinical setting.
Description	
Number of Theoretical lectures	3
Number of Practical lectures	
Credits	3
Name of Instructor in Arabic	محمد داخل الركابي
Name of Instructor in English	Mohammed dakhil alrekabi
Title	Professor
Academic email:	drmdr@alkafeel.edu.iq
Phone number (WhatsApp)	07810680160

Curriculum / Theoretical:

Week	Syllabus
1	Pharmacotherapy of Cardiovascular Disorders: Hypertension.
2	Drug therapy in heart failure.
3	Drug therapy in ischemic heart diseases and acute coronary syndrome.
4	Drug therapy in arrhythmias and stroke.
5	Pharmacotherapy in dyslipidemia and venous thromboembolism.
6	Drug therapy in hypovolemic shock, intensive care (DKA).
7	Pharmacotherapy of Respiratory disorders: Asthma and COPD.
8	Drug therapy in cystic fibrosis and upper and lower respiratory tract infections.
9	Pharmacotherapy in gastrointestinal disorders: GERD and peptic ulcer diseases.
10	Drug therapy in inflammatory bowel disease and irritable bowel syndrome.
11	Drug therapy in portal hypertension and liver cirrhosis, viral hepatitis.
12	Drug therapy in nausea and vomiting and pancreatitis.
13	Pharmacotherapy in renal disorders: Acute renal failure.
14	Drug therapy in chronic end-stage renal diseases.
15	Drug therapy in fluid and electrolyte disorders and acid base disturbances; urinary tract infections.
16	Drug therapy in urinary incontinence and pediatric enuresis.
17	Drug therapy benign prostatic hyperplasia and erectile dysfunction.
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Curriculum / Practical:

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References :

Main References :

[1] Roger Walker, Clive Edwards (eds), *Clinical Pharmacy and Therapeutics*, Churchill Livingstone, London, Latest edition.

[2] Mary Anne Koda-Kimble (ed.), *Applied Therapeutics: The Clinical Use of Drugs*, Walter Klumer, Latest edition.

[3]

Secondary References:

[1]

[2]

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Module Description

University of ALKafeel / College of Pharmacy. Academic Year (2020-2021)

Stage:	Five
Specialization:	Pharmacy
Name of the Course in Arabic	علم السموم السريري
Name of the Course in English	Clinical toxicology
Goals:	<ol style="list-style-type: none"> 1- To improve the student knowledge how to recognize and differentiate toxicity of a wide range of substances including medications, household preparations etc... 2- To improve the student knowledge regarding the possible interventions in order to prevent, minimize and reverses the effect of toxic substances. 3- To improve the student knowledge regarding the protection of environment and how to minimize the toxic effect on eco system.
Description	Clinical toxicology enables students to use various information such as signs, information written on a package, or information from relatives to recognize the possible cause of toxicity. Particularly in children and person with suicide tendency.
Number of Theoretical lectures	2
Number of Practical lectures	2
Credits	2
Name of Instructor in Arabic	م.د. سالم فايز كاظم (النظري) م.م. لفته فايز سالم (العملي)
Name of Instructor in English	Salim Fayez Kadhim Lafta Fayez Kadhim
Title	مدرس دكتور مدرس مساعد
Academic email:	Sfk9@alkafeel.edu.iq lafta.fayez@alkafeel.edu.iq
Phone number (WhatsApp)	07825538875 م.د. سالم فايز 07803542994 م.م. لفته فايز

Curriculum / Theoretical:

Week	Syllabus
1	Introduction and definitions
2	Management of poisoned patients/stabilization
3	Clinical evaluation
4	GI decontamination (part I)
5	GI decontamination (part II)
6	Enhancing toxicant elimination (part I)
7	Enhancing toxicant elimination (part II)
8	Enhancing toxicant elimination (part III)
9	Antidotes
10	Supportive care and follow up
11	Special age groups (geriatrics/pediatrics/pregnant women)
12	Poisoning in pregnancy
13	Toxicity of OTC medications
14	Toxicity of theophylline
15	Toxicity of digoxin
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Curriculum / Practical:

Week	Syllabus
1	Laboratory Principles or Toxicological Screening.
2	Laboratory Principles or Toxicological Screening.
3	Cardiac glycosides toxicity: Digitalis.
4	Cases on toxicity with foods and dietary supplements.
5	Evaluation of cases of toxicity with anti-parkinsonian drugs
6	Urine analysis of toxins and chemicals.
7	Urine analysis of toxins and chemicals.
8	Drugs of abuse
9	Over the counter drugs: Case on Acetaminophen poisoning ; Salicylates; evaluation of urine salicylates.
10	Over the counter drugs: Case on Acetaminophen poisoning; Salicylates poisoning ; evaluation of urine salicylates.
11	Heavy metals poisoning (poisoning of mercury)
12	Heavy metals poisoning(arsenic poisoning)
13	Heavy metals poisoning(lead poisoning)
14	Evaluation of drug toxicity on humane(initial management)
15	Evaluation of drug toxicity on humane(Goals Of Treatment)

References :

Main References :

- [1] Gossel TA, Bricker TD, (Eds.); Principles of Clinical Toxicology; latest edition.
[2] Viccellio P, (Ed.); Handbook of Medicinal Toxicology; latest edition. [3]

Secondary References:

- [1]
[2]
[3]



Module Description

University of AL-Kafeel / College..... Academic Year (2020-2021)

Stage:	Fifth
Specialization:	Pharmacy
Name of the Course in Arabic	كيمياء سريرية
Name of the Course in English	Clinical chemistry
Goals:	To exhibit knowledge of human body chemistry levels under healthy and abnormal conditions. At the end of the semester the students should be familiar with the basic and advanced information in clinical laboratory chemistry and how it relates to patient health and care.
Description	
1Number of Theoretical lectures	3
Number of Practical lectures	1
Credits	4
Name of Instructor in Arabic	احمد جلال
Name of Instructor in English	Ahmed jalal
Title	Assistant professor
Academic email:	Ahmedj.mohammed@uokufa.edu.iq
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Curriculum / Theoretical:

Week	Syllabus
1	Disorders of Carbohydrates metabolism, Hyperglycemia & Diabetes mellitus, Hypoglycemia.
2	Disorders of lipid metabolism.
3	Liver Function Tests.
4	Kidney Function Tests.
5	Diagnostic enzymology.
6	Hypothalamus & pituitary endocrinology, disorders of anterior pituitary hormones, disorders of adrenal gland, hypopituitarism.
7	Reproductive system, disorders of gonadal function in males & females, biochemical assessment during pregnancy.
8	Tumor markers.
9	Drug interaction with laboratory Tests.
10	Disorders of calcium metabolism
11	Acid- Base Disorders.
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Curriculum / Practical:

Week	Syllabus
1	Specimen collection and preservation.
2	Estimation of blood glucose (enzymatic method).
3	Oral Glucose Tolerance Test (OGTT).
4	Determination of blood urea nitrogen.
5	Determination of Creatine and Creatinine.
6	Estimation of serum uric acid.
7	Estimation of serum Bilirubin.
8	Estimation of serum Phosphate.
9	Total lipid profile: Estimation of serum cholesterol.
10	Total lipid profile: Estimation of LDL.
11	Total lipid profile: Estimation of HDL.
12	Total lipid profile: Estimation of Triglycerides.
13	Estimation of AST activity.
14	Estimation of ALT activity.
15	Estimation of CK activity.

References :

Main References :

[1] *Clinical Chemistry & Metabolic Medicine, Crook, Latest edition.*

[2] - *Clinical Chemistry, Kaplan, Latest edition.*

[3]

Secondary References:

[1]

[2]

[3]