

نموذج وصف المقرر وبنيته

1. اسم المقرر :					
كيمياء طبية					
2. كود المقرر:					
3. الفصل / السنة سنوي					
سنوي					
4. تاريخ اعداد هذا الوصف 2026-2025					
2025-2026					
5. اشكال الحضور المتاحة حضور اسبوعي					
المحاضرات نظري (ومختبرات العملي الاسبوعي)					
6. عدد الساعات الدراسية (الكلي):					
عدد الساعات الدراسية : 60 نظري و 60 ساعة عملي					
7. اسم مسؤول المقرر الدراسي :					
8. اهداف المقرر					
1. تمكين الطلبة من تحصيل المعرفة لكيفية استخدام واستعمال المواد الكيميائية والتعامل معها اضافة الى تعريف الطلبة على المركبات الحيوية والتي لها اهمية في جسم الانسان 2. تمكين الطلبة بكيفية الكشف عن بعض المركبات الحيوية الموجودة في جسم الانسان . 3. تدريب الطلبة بكيفية تحضير المحاليل الكيميائية وتحديد تركيزها واجراء الكشوفات الكيميائية المختلفة..					اهداف المادة الدراسية:
1. استراتيجيات التعليم والتعلم					
1. الطريقة الالقائية 2. استخدام محاضرات البوربوينت 3. طريقة المناقشة والنقاش 4. استعمال الشاشات والسبورات الذكية في عرض المادة العلمية 5. التعليم في المختبرات لاكتساب المهارات العلمية 6. التقارير والمشاريع 7. المجاميع الطلابية 8. ورش العمل 9. الرحلات العلمية					الاستراتيجية
2. بنية المقرر					
Week	hours	Unit or subject name	Required Learning Outcomes	Learning method	Evaluation method
1.	2hrs.Theory 2hrs.Practical	Acids,bases&salts. - Overview of	How to calculate ionization constant of acids and base and its important in	Power point	Quiz

		biological safety & security equipment	balance in blood - What is the concept of Biosafety and Biosecurity		
2.	2hrs.Theory 2hrs.Practical	-Salts Introduction to Biosecurity Risk characterization in biosecurity Vulnerability assessment Components of laboratory biosecurity	How to prepare salts. - How to do risk assessment in medical lab.	Power point	Quiz
3.	2hrs.Theory 2hrs.Practical	Fluids and Electrolytes Biosafety practices part Biosafety rules simulations 3D	How the body keeps the balance of Fluids and Electrolytes. - How to practice Biosafety in Lab.	Power point	Quiz
4.	2hrs.Theory 2hrs.Practical	PH Disinfection & Sterilization Hazardous chemical decontamination and biological waste Disposal	What is the pH scale and how Measuring pH -How to protect yourself in Lab.	Power point	Quiz
5.	2hrs.Theory 2hrs.Practical	PH Biosafety training	How PH keeps Acid Base balance in blood. Practical training in Biosafety	Power point	Quiz
6.	2hrs.Theory 2hrs.Practical	Colloids and Colloidal solutions	Definition of Colloids and its important in dialysis in the living systems	Power point	Quiz
7.	2hrs.Theory 2hrs.Practical	Chirality in Biological Systems	How Physical properties of the Chiral carbon in different types of saccharides	Power point	Quiz
8.	2hrs.Theory 2hrs.Practical	Chemical concentrations	How to prepare solutions and the reactions equilibrium	Power point	Quiz
9.	2hrs.Theory 2hrs.Practical	Pollution	What are types of pollutions and how to reduce it and waste management	Power point	Quiz
10.	2hrs.Theory 2hrs.Practical	Radioactive	History and the applications of types of radiations and their effect on human body	Power point	Quiz

11.	2hrs.Theory 2hrs.Practical	Alkanes and Cycloalkanes	Aliphatic & aromatic compounds names and structures	Power point	Quiz
12.	2hrs.Theory 2hrs.Practical	Alkenes and alkynes	Alkenes and alkynes	Power point	Quiz
13.	2hrs.Theory 2hrs.Practical	Aromatic compound	How to prepare Aromatic compound	Power point	Quiz
14.	2hrs.Theory 2hrs.Practical	Aromatic compound	What are types of Aromatic compound in nature	Power point	Quiz
15.	2hrs.Theory 2hrs.Practical	Isomerism	What are Stereoisomers of Carbon in space	Power point	Quiz
16.	2hrs.Theory 2hrs.Practical	Isomerism	What is the Diastereomers in nature	Power point	Quiz
17.	2hrs.Theory 2hrs.Practical	Alcohol	Physical properties Oxidation of alcohols in living system	Power point	Quiz
18.	2hrs.Theory 2hrs.Practical	Carboxylic acids	What are the physical properties of Carboxylic acids, acidity of carboxylic acids and the derivatives of carboxylic acids	Power point	Quiz
19.	2hrs.Theory 2hrs.Practical	Carboxylic acids	What are the physical properties of Carboxylic acids, acidity of carboxylic acids and the derivatives of carboxylic acids	Power point	Quiz
20.	2hrs.Theory 2hrs.Practical	Aldehydes and Ketones	Definition and Types of aldehydes and Ketones	Power point	Quiz
21.	2hrs.Theory 2hrs.Practical	Carbohydrates	Definition and classification of Carbohydrates including the three dimensional structures of monosaccharides	Power point	Quiz
22.	2hrs.Theory 2hrs.Practical	Monosaccharide's Definition & classification of hormones	Definition and classification of Monosaccharide's	Power point	Quiz
23.	2hrs.Theory 2hrs.Practical	Disaccharides Carbohydrates and oral health	What are the structures and types of disaccharides. How dietary carbohydrates	Power point	Quiz

			affect oral health and dental caries		
24.	2hrs.Theory 2hrs.Practical	Lipids	What are the Classification of lipids and their biological roles in body	Power point	Quiz
25.	2hrs.Theory 2hrs.Practical	Derived Lipids	What are the Classification of Phospholipids as lipid derivative includes prostaglandins, thromboxanes, leukotrienes, steroids, sex hormones and oral contraceptives	Power point	Quiz
26.	2hrs.Theory 2hrs.Practical	Proteins	What are the Classification and types of proteins.	Power point	Quiz
27.	2hrs.Theory 2hrs.Practical	Amino acids effects on oral health	What are the Classification and reactions of amino acids	Power point	Quiz
28.	2hrs.Theory 2hrs.Practical	Nucleic acids	What are the Types and Classification of Nucleic acids	Power point	Quiz
29.	2hrs.Theory 2hrs.Practical	Nucleosides, Nucleotides	What are Nucleosides and Nucleotides of Nucleic acids	Power point	Quiz
30.	2hrs.Theory 2hrs.Practical	Dioxy and ribo Nucliec acids	What are the chemical structure of DNA and RNA	Power point	Quiz
31.	1Hrs Theory	Introduction to biosafety and biosecurity Occupational safety and health Key components of bio-risk management Definition & concepts of biosecurity & biosafety	What is the concept of Biosafety and Biosecurity. Understand the principles of occupational safety and health in labs. Identify the key components of bio-risk management.	Power Point	Quiz
32.	1Hrs Theory	Universal safety precaution Components of biosafety in all labs Biosafety barriers in labs Personal Protective Equipment (PPE) Facility design	How to apply universal safety precautions in laboratories. Identify biosafety barriers and appropriate facility design. Learn how to select and use Personal Protective Equipment (PPE).	Power Point	Quiz

33.	1Hrs Theory	Bio-risk Management System Assess the capability of the laboratory Staff control Relation of risk groups of biosafety level, practices and equipment	How to do risk assessment in medical and biological labs Understand the relation between risk groups and biosafety levels. Evaluate laboratory capability and staff control measures	Power Point	Quiz
34.	1Hrs Theory	Transportation of biological material International transport regulation The basic triple packaging system	Learn the international regulations for transporting biological materials. How to safely pack biological samples using the triple packaging system.	Power Point	Quiz
35.	1Hrs Theory	Safety for support staff Laboratory Hygiene Engineering and building maintenance services	Understand safety protocols tailored for laboratory support staff. Implement proper laboratory hygiene and engineering controls. Manage building maintenance services safely around hazard zones.	Power Point	Quiz

3. تقييم المقرر

15 درجة امتحان نصف السنة
25 -درجة سعي سنوي مقسمة على 12.5 : درجة للفصل الأول مقسمة الى 7.5 درجة للجزء النظري و تشمل امتحانين فصليين و تقارير و واجب بيئي و امتحانات يومية +5 درجة للجزء العملي وتشمل الامتحانات اليومية و التقارير و الواجبات البيئية
12.5 درجة للفصل الثاني مقسمة الى 7.5 درجة للجزء النظري و تشمل امتحانين فصليين و تقارير و واجب بيئي و امتحانات يومية
5 درجة للجزء العملي و تشمل الامتحانات اليومية و التقارير و الواجبات البيئية
20 درجة للامتحان العملي النهائي
40 درجة للامتحان النظري النهائي

4. مصادر التعلم والتدريس

George H. S. "The Chemical Basis Of Life:, Little, Brown and Company, 2012.
Morrison and Boyd R.N. " Ellyn and Bacon. Inc.,2013. 2