Ministry of Higher Education and Scientific Research
Scientific Supervision and Scientific Evaluation Apparatus
Directorate of Quality Assurance and Academic Accreditation
Accreditation Department

University of Warith Al-Anbiyaa
College of Medicine

Biochemistry

مصادقة السيد العميد
الطبيب الاخصائي
أ.د. علي عبد سعدون الفتلاوي

2024

Course Description Form

1. Course Name:
Biomedical chemistry
2. Course Code:
Medu206
3. Semester / Year:
2024
4. Description Preparation Date:
2024/4/30
5. Available Attendance Forms:
Attendance
6. Number of Credit Hours (Total) / Number of Units (Total)
Units 9 Theoretical 90 hours Practical 60 hours
7. Course administrator's name (mention all, if more than one name)
Name: Riyad Abdel Rasoul Hamid Haniwa Email: riadh.ab@uowa.edu.iq
8. Course Objectives

Course Objectives	**Introducing the student to studying the chemical composition of the human body and the changes that occur in this composition in normal and pathological cases, and conducting some laboratory experiments on some of the body's natural compounds.**
9. Teaching and Learning Strategies	
Strategy	These are the plans that faculty members used to develop the teaching and learning process for students, and they are the plans that are followed to reach learning goals. They describe all curricular and extracurricular activities to achieve the learning outcomes of the programme.
10. Course Structure	

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
6	36	State amino ac properties, Select ami acids which produ specific biologi compounds, Explain t biomedical importar of amino ac decarboxylation, Defi transamination. St the clinical value transamination, List t reactions due carboxyl gro reactions due to ami group and reactions SH group, Match t clinical applications the type of amino aci Account for some of t typical properties amino acids (e.g., hi melting poir solubility in water) terms of zwitteri formation. Illustrate disulfide bo formation, Expl disulfide bo importance, Defi peptide bond, dipepti tripeptide a polypeptide, expressi how they are forme Draw and name, the possible isome tripeptides that can formed by combini three different ami acid residues (ami		Learning method a lecture laboratory Discussion groups small(sgd)	Conducting daily and monthly exams and evaluating daily interaction during lecture, laboratory, and small groups

		acid units) of giv structure, Illustrate t formation of a disulfi linkage between t cysteine residues, a how such bonds can li together two separa peptide chains or c provide a brid between two cystei residues present in single peptide molecu State the differe structural organizati of proteins, Describe t basic structure protein, including bo simple and conjugat proteins, Give exam on the protei structure-function relationship, Descri the main physi properties of proteins State the differe structural organizati of proteins, Describe t basic structure protein, including bo simple and conjugat proteins, Give exam on the protei structure-function relationship, Descri the main physi properties of proteins Classify proteins, sel suitable examples such group, Describe t basic structure of simp and conjugated protei Differentiate fibro proteins and globu			

		proteins; Give example of the prima structure of a protein. Discuss the function a clinical significance proteins, Revi general causes abnormal serum plasma prote concentration, a Explain the nc pathological factors th influence serum plasma prote concentration. Digestion of prote absorption of ami acids, Gastric a intestinal peptidas pancreatic peptidases Amino acids transp across intestinal ce Nitrogen balan positive and negat nitrogen balan causes, Degradation a transport intracellular and tiss protein, Amino ac Metabolism, Essent and non-essential ami acids, Amino ac biosynthesis, Transamination reactions, role pyridoxal-5- phospha Amino acid catabolis Ketogenic a glucogenic amino aci Transport of ammor to the liver and kidn neurotoxicity associat with ammonia. Ur			

		cycle, transport of ur and excreti regulation, Metabo fate of some amino aci amino acids and TCA cycle. Tyrosine - deriv neurotransmitters. Tryptophan-derived neurotransmitters. Creatine, Glutathio polyamines, biosynthesis functions, Nitric oxi biosynthesis a functions. Biosynthesis of puri nucleotides, de novo a salvage pathways.Regulation purine biosynthes degradation purines.Biosynthesis pyrimidine nucleotid regulation, oro aciduria. Degradation pyrimidine nucleotid Deoxyribonucleotide biosynthesis.			
11. Course Evaluation					

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc	
12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Textbook of biochemistry f medical students
Main references (sources)	DM Vasudevan
Recommended books and references (scientific journals, reports…)	Quick review of biochemistry Martin A Crook Lecture notes of biochemistry
Electronic References, Websites	