**بسم الله الرحمن الرحيم**

**University: Al-Nahrain**

**College: Medicine**

**Department: Chemistry and Biochemistry**

**Stage: Master / First semester**

**Lecturer name: Dr. Omar F. Abdul-Rasheed**

**Qualification: Assistant Professor**

**Place of work: Chemistry and Biochemistry Department**

**Republic of Iraq**

**The Ministry Of Higher Education**

**& Scientific Research**



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| --- | --- | --- | --- | --- | --- |
| Course Instructor | Dr. Omar F. Abdul-Rasheed | | | | |
| E-mail | Omar\_rasheed39@yahoo.com | | | | |
| Title | Advanced Biochemistry | | | | |
| Course Coordinator | Dr. Raid J. Mohammad | | | | |
| Course Objective | The program involves:  Study the structure and dynamics of biological membranes as well as different transport mechanisms. The course was also aimed to Understand the structure, function and metabolism of different biomolecules and to study the different metabolic pathways of carbohydrates, lipids, amino acids and nucleic acids. | | | | |
| Course Description | Type here course description | | | | |
| Textbook | Lecture notes of Clinical Chemistry | | | | |
| Course Assessments | Term Tests | Laboratory | Quizzes | Project | Final Exam |
| (30%) | - | - | - | (70%) |
| General Notes | Type here general notes regarding the course | | | | |

**University: Al-Nahrain**

**College: Medicine**

**Department: Chemistry and Biochemistry**

**Stage: Second/ Second semester**

**Lecturer name: Dr. Omar F. Abdul-Rasheed**

**Qualification: Assistant Professor**

**Place of work**

**Republic of Iraq**

**The Ministry Of Higher Education**

**& Scientific Research**



**Course Weekly Outline**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Week** | **Date** | **Topics Covered** | **Lab. Experiment Assignments** | **Notes** |
| 1 |  | Biological Membranes and transport (I) |  | Dr. Omar F. Abdul-Rasheed |
| 2 |  | Biological Membranes and transport (II) |  | Dr. Omar F. Abdul-Rasheed |
| 3 |  | Bioenergetics |  | Dr. Omar F. Abdul-Rasheed |
| 4 |  | Carbohydrate: Structure, function and metabolism(I) |  | Prof. Firyal H. Abdul-Jaleel |
| 5 |  | Carbohydrate: Structure, function and metabolism(II) |  | Prof. Firyal H. Abdul-Jaleel |
| 6 |  | Carbohydrate: Structure, function and metabolism(III) |  | Prof. Firyal H. Abdul-Jaleel |
| 7 |  | Lipid: structure, function and metabolism (I) |  | Dr. Omar F. Abdul-Rasheed |
| 8 |  | Lipid: structure, function and metabolism (II) |  | Dr. Omar F. Abdul-Rasheed |
| 9 |  | Lipid: structure, function and metabolism (III) |  | Dr. Omar F. Abdul-Rasheed |
| **Mid- Term Exam.** | | | | |
| 10 |  | Amino acid and protein: structure, function and metabolism (I) |  | Dr. Omar F. Abdul-Rasheed |
| 11 |  | Amino acid and protein: structure, function and metabolism (II) |  | Dr. Omar F. Abdul-Rasheed |
| 12 |  | Amino acid and protein: structure, function and metabolism (III) |  | Dr. Omar F. Abdul-Rasheed |
| 13 |  | Creatine and Biogenic amines metabolism |  | Dr. Ria Baban |
| 14 |  | Purines and pyrmidines metabolism |  | Dr. Ria Baban |
| 15 |  | Tumor markers |  | Dr. Ria Baban |

**INSTRUCTOR Signature: Dean Signature:**