**بسم الله الرحمن الرحيم**

**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: 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 | Clinical Chemistry  |
| Course Coordinator | Dr. Raid J. Mohammad |
| Course Objective | The program involves: changes during different disease states and general consequences. There is a stress on the :* Abnormal metabolism of macromolecules and pathological changes in the function of liver, kidney, different hormones with the clinical interpretation of laboratory findings.
* Use of enzymes in clinical diagnosis and prognosis, isoenzymes, their clinical significance.
* Porphyrin metabolism, and disorders, haemoglobinopathies, disorders of iron metabolism and significance of related laboratory tests.
* Cancer chemistry and tumor markers and their importance in clinical diagnosis and prognosis.

To have some experience in biochemical techniques in order to appreciate the practical problem of clinical biochemistry as a diagnostic tool and to improve the problem- solving skills through collaborative and individual reflection and analysis.  |
| Course Description | Type here course description |
| Textbook | Lecture notes of Clinical Chemistry  |
| Course Assessments | Term Tests | Laboratory | Quizzes | Project | Final Exam |
|  (40%) |  (15%) |  - | - |  (45%) |
| General Notes | Type here general notes regarding the course |

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**Course Weekly Outline**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Week** | **Date** | **Topics Covered** | **Lab. Experiment Assignments** | **Notes** |
| 1 |  | Integration of Metabolism(I)  |  | Dr. Omar F. Abdul-Rasheed |
| 2 |  | Integration of Metabolism(II) |  | Dr. Omar F. Abdul-Rasheed |
| 3 |  | Carbohydrate metabolism disorders (I) |  | Dr. Ria Baban  |
| 4 |  | Carbohydrate metabolism disorders (II) |  | Dr. Ria Baban |
| 5 |  | Lipid metabolism disorders(I) |  | Dr. Omar F. Abdul-Rasheed |
| 6 |  | Lipid metabolism disorders (II) |  | Dr. Omar F. Abdul-Rasheed |
| **Mid – Term Exam.** |
| 7 |  | Amino acid and protein disorders  |  | Dr. Mohammad Umran |
| 8 |  | Renal Function tests  |  | Dr. Ria Baban |
| 9 |  | Water and electrolyte metabolism  |  | Dr. Ria Baban |
| 10 |  | Acid base balance disorders(I) |  | Dr. Ria Baban |
| 11 |  | Acid base balance disorders(II) |  | Dr. Ria Baban |
| 12 |  | Calcium and phosphorus metabolism |  | Dr. Omar F. Abdul-Rasheed |
| 13 |  | Iron metabolism and porphyria(I)  |  | Dr. Mohammad Umran  |
| 14 |  | Iron metabolism and porphyria(II)  |  | Dr. Mohammad Umran  |
| 15 |  | Tumor markers  |  | Dr. Mohammad Umran  |

**INSTRUCTOR Signature: Dean Signature:**