**University: Alqadisiya University**

**College: College of Biotechnology**

**Department: Medecal Biotechnology**

**Stage: Second stage**

**Lecturer name:** **Dr.Mohammed Al-Askeri**.

**Academic Status: Lecturer**

**Qualification:PHD**

**Place of work: Alqadisiya University**



**Republic of Iraq**

 **The Ministry of Higher Education**

 **& Scientific Research**

 **Course Weekly Outline**

|  |  |
| --- | --- |
| **Course Instructor** | Dr.Mohammed Al-Askeri |
| **E\_mail** | Mohammed.ati@edu.qu.iq |
| **Title** | Molecualr biology |
| **Course Coordinator** | Type here the came of course coordinator |
| **Course Objective** | This module is a major (Mandatory) Departmental course for the second Year. The course covers the central dogma of molecular biology including gene replication, transcription, translation, gene expression regulation in both prokaryotes and eukaryotes and the future practical application for each process. |
| **Course Description** | This course aims at introducing the student to the basic concepts in molecular Biology. It begins by considering the molecular nature of genes and organization of the prokaryotic and eukaryotic genomes. This is followed by DNA replication, repair, gene expression and regulation of gene expression. Techniques used to study these processes will be covered in brief |
| **Textbook** | Title: Molecular Cell Biology Author(s): Lodish, A.Berk etal Year: 2012Publisher: W. H. Freeman and CompanyISBN:978-07167-7601-7 |
| **References** | Gene IX |
| **Course Assessment** | Term Tests | Laboratory | Quizzes | Project | Final Exam |
| As (35%) | As (15%) | As (10%) | ---- | As (40%) |
| **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** |  | **The nature of genetic material** |  |  |
| **2** |  | **Chromatin structure** |  |  |
| **3** |  | **Molecular structure of genes** |  |  |
| **4** |  | **The complexity of the eukaryotic genome** |  |  |
| **5** |  | **Enzymology of DNA replication** |  |  |
| **6** |  | **DNA damage and repair** |  |  |
| **7** |  | **Transcription** |  |  |
| **8** |  | **Nuclear mechanisms of post-transcriptional control** |  |  |
| **9** |  | **Export of mRNPs from the Nucleus** |  |  |
| **10** |  | **Cytoplasmic mechanisms of post-transcriptional****control** |  |  |
| **11** |  | **Translation** |  |  |
| **12** |  | **mutations** |  |  |
| **13** |  | **prions** |  |  |
| **14** |  | **Snps** |  |  |
| **15** |  | **NCBI** |  |  |
| **16** |  | **Exam**  |  |  |

 **Instructor Signature: Dean Signature:**