**Ministry of Higher Education and Scientific Research**

**Mustansiriyah University /College of Science**

**Department of ..........................**

**(الخطة الدراسية للمساق)**

**Course Plan**

**Course No.:**  **Time Division:** 2 hr Theoretical and 1 hr Practical

**Course Name: Bacterial Taxonomy Semester & Year: First, 2022 / 2023**

**Course Website:**

**Course Description:**

**This subject presents the fundamentals of bacterial taxonomy beginning by historical view of classification of all living organisms in general and bacteria in particular ,taxonomical systems ,ranks of taxonomy, identification methods and scientific nomenclature as well as the major taxonomic characters of different bacterial groups .**

**Course Intended Outcomes: Students at the end of the course should be learned the basics of taxonomy and must be able to differentiate among the bacterial kingdom, phyla , classes ,orders ,families ,genera and species for different groups.**

**------------------**

**Course Outline:**

|  |  |
| --- | --- |
| Week | Description depends on the Timing table (Theoretical & Practical) |
| 1 | Lec .1History and fundamentals of taxonomy |
| 2 | Lec.2 Classification systems and methods of classification |
| 3 | Lec.3 The Major Divisions of Life ;Domain ;Archaea and Archaea phyla |
| 4 | Lec 4.Domain ;Bacteria and Bacterial phyla :Phylum, Aquificae,  :Thermotogae ,Deinococcus-Thermus, Tenericutes, Photosynthetic Bacteria |
| 5 | Lec. 5 Phylum Cyanobacteria , Phylum Chlamidae, |
| 6 | Lec.6 Phylum Spirochaetes, Phylum Bacteroidetes |
| 7 | Exam |
| 8 | The Phylum *Proteobacteria* in 5 classes: general properties |
| 9 | Phylum *Proteobacteria*  1*-Alphaproteobacteria*  2*-Betaproteobacteria* |
| 10 | Phylum *Proteobacteria*  *3-Gammaproteobacteria*  4*-Deltaproteobacteria*  5*-Epsilonproteobacteria* |
| 11 | Phylum Firmicutes  Class Clostridia |
|  |  |
| 12 | Phylum Firmicutes  Class Bacilli |
| 13 | Phylum *Actinobacteria* :general criteria and divisions |
| 14 | Phylum *Actinobacteria* ;major suborders |
| 15 | Exam |

|  |  |
| --- | --- |
| Week | **Description depends on the Timing table (Practical)** |
| 1 | Lab .1 Taxonomy of bacteria ( Staining ) |
| 2 | Lab. 2 Differential stains ( Gram Staining ) |
| 3 | Lab. 3 Differential stains (Acid fast stain or acid bacilli test) (AFB) |
| 4 | Lab. 4 Special stains (structural stains) |
| 5 | Lab. 5 Special stains ( Endospore Staining ) |
| 6 | Exam |
| 7 | Lab .6 The differential media |
| 8 | Lab. 7 Biochemical tests ( Oxidase test ) |
| 9 | Lab. 8 Biochemical tests (Coagulase test) |
| 10 | Lab. 9 Biochemical tests (Triple Sugar Iron Agar (TSI) and  H2S production test) |
| 11 | Lab .10 Biochemical tests (Urease test ) |
| 12 | Exam |
| 13 | Lab .11 Biochemical tests (IMViC Tests ) |

**Textbooks:**

**[1]: The first edition of *Bergey's Manual of systematics Archaea and bacteria***

**Suggested references:**

**[1]:**

**Marking:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **First Semester** | | | | **Final Exam** |
| **1st exam** | **2nd exam** | **Practical** | **Activity** |  |
|  |  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Assignment/ Project** | **Description** | **Due Date** | **Marking** |
| **test** | **written exam** | **1/12/2018** | **3** |
| **---** | **---** |  |  |

**Instructor(s) information [معلومات الأستاذ]**

**Section: (microorganisms) ; Lecture Room:[ 303, 401 ] , ; Office No.: ( )**

**Instructor's Name:** **Dr. Fatima Ramadan Abdul**

**E-Mail**: *qetasyshah@gmail.com*

**Office Hours : Sunday:[ 1.30 : 4 .30]**

**Tuesday.:[ 1.30 : 4.00 ]**

**NOTES:**

**-Office Hour:Other office hours are available by appointment.**

**-The content of this syllabus not be changed during the current semester.**

## Lecturer Signature Chairman Signature