

## Faculty of Oral & Dental Medicine

### General Microbiology

#### Information :

**Course Code :** SGS 391

**Level :** Undergraduate

**Course Hours :** 2.00- Hours

**Department :** Faculty of Oral & Dental Medicine

#### Instructor Information :

Title	Name	Office hours
Associate Professor	SALWA IBRAHIM IBRAHIM YOUSSEF	7
Associate Professor	SALWA IBRAHIM IBRAHIM YOUSSEF	7
Lecturer	Esraa Hafez Saad Hafez	
Lecturer	Dina Magdy Abdel Salam Abdel Aziz	
Assistant Lecturer	Dina Abd El Hameid Hamdi Abd El Hameid	
Teaching Assistant	Amany Elsayed Kandel Elsayed	

#### Area Of Study :

To provide the basic knowledge about microorganisms including bacteria, viruses and fungi especially those causing diseases relevant to dentistry.

-To enable the students to understand the infection control measures that should be applied in clinic & different methods of sterilization & disinfection in order to protect themselves and their patients from cross infection or contaminations .

- To provide the basic knowledge about the immunity as well as the possible consequences of failure of immune system .

- To enable students to understand the different mechanisms of action of antimicrobial agents as well as their complications.

- To enable the students to have practical skills about the conventional & advanced methods used for diagnosis of bacterial diseases

- To provide the students with information about Oral bacterial flora & the oral defense mechanisms .

#### Description :

introduction, bacterial cell structure and stains, growth and metabolism, nutritional requirements, sterilization and disinfection, genetics, antimicrobial and Immunology.

#### Course outcomes :

##### **a.Knowledge and Understanding: :**

1 -	Basic structure ,classification ,growth requirements and genetics of bacteria as well as antimicrobial agents.
2 -	The overall interaction of different cells of the immune system ,the soluble mediators of immunity as well as the consequences of failure or exaggeration of immune response

##### **b.Intellectual Skills: :**

1 -	The proper choice of proper antimicrobial agents in order to avoid their possible side effect & prevent emergence of drug resistance
-----	--

2 -	The proper choice of suitable disinfectant for disinfection of clinical contact surfaces & housekeeping surfaces
3 -	The proper choice of method of sterilization for different instruments or articles
<b>c. Professional and Practical Skills: :</b>	
1 -	Technique of Hand washing & barrier precautions (e.g., heavy-duty utility gloves, masks, protective eyewear) when cleaning and disinfecting environmental surfaces.
2 -	knowledge about different parts of microscope & how to adjust it for better identification of organism
3 -	Differentiation between different types of bacteria under the microscope according to their morphology ,staining character & arrangement
4 -	selective media used for isolation of organisms causing diseases relevant to dentistry
<b>d. General and Transferable Skills: :</b>	
1 -	Self confidence, communication skills
2 -	Pleasure of learning
3 -	Thinking & comprehension of subject are the best methods for learning

#### **Course Topic And Contents :**

Topic	No. of hours	Lecture	Tutorial / Practical
Prokaryotes VS eukaryotes - Bacterial classification - Bacterial cell structure	3		Infection control measures in dentistry
Bacterial genetics -Host- parasites relationship -Bacterial growth curve	3		Physical methods of Sterilization
Antimicrobial agents	3		Microscopy & bacterial staining
Disinfection	3		Conventional bacterial identification methods
Components of the immune system	3		Immunological diagnosis of Infectious diseases
Tissues & cells involved in the immune response	3		Molecular diagnosis of Infectious diseases
Antigen and immunogenicity	3		Antibiotic susceptibility testing
Immunoprophylaxis	3		8h Tutorials
Cell- mediated immunity Cytokines	3		8h Tutorials
Humoral immunity	3		8h Tutorials
Immunoglobulins	3		8h Tutorials
Hypersensitivity reactions	3		8h Tutorials
Tumor immunology	3		8h Tutorials

### **Course Topic And Contents :**

Topic	No. of hours	Lecture	Tutorial / Practical
Oral Defense mechanisms	3		8h Tutorials

### **Teaching And Learning Methodologies :**

Lectures

Lab

Tutorials ( class discussion )

### **Course Assessment :**

Methods of assessment	Relative weight %	Week No	Assess What
1st mid term	15.00	6	assess Knowledge and understanding
2nd midterm	15.00	11	assess Knowledge and understanding
oral final exam	10.00	16	assess Knowledge and understanding as well as the self confidence of students
practical final exam	15.00	16	assess Practical ,intellectual ,general skills.
semester work	20.00		
written final exam	25.00	16	

### **Course Notes :**

-Hand out

-Computer-aided learning materials " CD"

### **Recommended books :**

Free reading

### **Periodicals :**

Trends in Immunology

Online Microbiology & Immunology data base