

Planning and Quality Assurance Affairs

Form (A)

Course Specifications

General Information

Course name	Microbiology
Course number	DENT2215
Faculty	
Department	
Course type	Major Needs
Course level	2
Credit hours (theoretical)	2
Credit hours (practical)	0
Course Prerequisites	

Course Objectives

- 1 - 1. Understand the basic features of bacteriology, virology, mycology and parasitology
- 2 - 2. Know the common infections and diseases of medical importance: etiology, mode of transmission, virulence factors, laboratory diagnosis, treatment, prevention and control of such diseases

Intended Learning Outcomes

Knowledge and Understanding	<ul style="list-style-type: none"> * Describe the bacterial, viral and fungal morphology * Identify the host parasite relationship and microbial pathogens * Mention the most important infectious clinical conditions and outline the diagnosis, treatment, prevention and control of the most likely organisms causing such diseases * Describe the pathogenesis, clinical presentations, treatment and prevention of some parasitic diseases
Intellectual Skills	<ul style="list-style-type: none"> * 1. Correlate the causal relationship of microbes and diseases * Categorize a microorganism as a bacterium, virus or fungus according to standard taxonomy * Analyze the results of microbiological tests
Professional Skills	<ul style="list-style-type: none"> * Carry out examination of medically important bacteria based on microscopic examination of stained preparations * Perform a Gram stain and a Ziehl-Neelsen stain and identify micro-organisms according to morphology and characteristics, stained preparations. * Examine culture media and biochemical tests commonly used for bacterial identification and distinguish positive and negative results * Identify the different viral, mycotic and parasitic diseases and the modes of their transmission and management * To enable students to understand the pathogenesis, clinical presentations and complications of some parasitic diseases * To enable students to know the general outline of treatment, prevention and control of some parasitic infections
General Skill	<ul style="list-style-type: none"> * Do diagnostic laboratory tests * Understand and interpret the laboratory diagnosis results * Know the main signs and symptoms of most infectious diseases * Use computers efficiently in reaching biomedical information to remain current with advances in knowledge and practice (research assignments)

Course Contents

1 - Gram positive cocci: (Staphylococci and Streptococci)
2 - Gram negative cocci) Neisseria)
3 - Gram positive bacilli)Corynebacterium, Listeria., Bacillus, Clostridium)
4 - Acid-Fast Bacilli)Mycobacteria)
5 - Gram negative bacteria: Enterobacteriaceae: Eschericia coli, Shigella, Salmonella, Yersinia
6 - Gram negative bacteria: Pseudomonas, Vibrio, Campylobacter, Helicobacter, Haemophilus, Bordetella and Brucella
7 - Spirochaetes: Treponema and Borrelia
8 - Rickettsia, Chlamydia and Mycoplasma
9 - Mycology: Properties of fungi, cutaneous mycosis, subcutaneous mycosis, systemic mycosis and opportunistic mycosis
10 - Virology: Properties of viruses, Hepatitis viruses, Influenza viruses, Rhinoviruses, Measles virus, Mumps virus, Rubella virus and Coronavirus
11 - Parasitology: Protozoa: Entamoeba histolytica, Giardia lamblia, Trichomonas vaginalis and Toxoplasma gondii
12 - Parasitology: Helminths: Nematelminthes: Enterobius vermicularis, Tricuris trichiura, Ascaris lumbricoides and Trichinella spiralis. Platyhelminthes: Taenia solium and Taenia saginata.

Teaching and Learning Methods

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| 1 - Lectures
2 - Reports
3 - Discussion
4 - Quizzes |
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Teaching and Learning Methods for the Disabled Students

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| 1 - Not applicable |
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Students Assessment

<u>Assessment Method</u>	<u>TIME</u>	<u>MARKS</u>
Quiz 1	the third week	10
Quiz 2	fifth week	10
Midterm exam	Eighth week	30
Quiz 3	the eleventh week	10
Final exam	Fifteenth week	40

Books and References

Course note	Handouts
Essential books	Jawetz, Melnick & Adelberg's Medical Microbiology 26th edition (2013)
Recommended books	Patrick R. Murray. Basic Medical Microbiology (2018)
	Levinson, W. Review of Medical Microbiology and Immunology 12th edition (2012)
	Bhatia R & Ichhpujani R. L. Essentials of Medical Microbiology 4th edition (2008)