

Course title	Microbiology - Immunology				
Course Code	MEDI109				
Course Type	Theoretical				
Level	Diploma				
Year / Semester	1st Year / 2nd Semester				
Teacher's Name	Dr. Sarris Dimitrios				
ECTS	6	Lectures / week	3	Laboratories / week	0
Course Purpose and Objectives	The aim of the course Microbiology - Immunology is to introduce students to the general principles of Microbiology with a particular orientation on the side of Microbiology related to humans, as well as the basic functions of the immune system.				
Learning Outcomes	<p>Upon completion of the course, students are expected to:</p> <p>Knowledge</p> <ol style="list-style-type: none"> 1. Recognise the structure and classification of microorganisms 2. Know the basic theory of the microscope and the stainings used in microbiology 3. Formulate the basic principles of the physiology of pathogenic microorganisms 4. Describe important concepts, scientific names and characteristics of the main microorganisms 5. Explain about pathogenic microorganisms and the transmission of infectious diseases 6. Identify the main differences between the categories of microorganisms <p>Skills</p> <ol style="list-style-type: none"> 7. Analyse the key aspects of microbial ecology, as well as the microbiology of food, industry and medicine. <p>Competences</p> <ol style="list-style-type: none"> 8. Be able to evaluate the content of the acquired knowledge and its relations with the profession of Medical Representative. 9. Be able to combine the so-called knowledge and skills with those presented in the following courses. 				
Prerequisites	-	Required:	-	-	
Course Content	<p>Introduction: Subject and history of Microbiology</p> <p>Microbiology:</p> <ul style="list-style-type: none"> • Prokaryotic and eukaryotic cells • Classification, morphology and structure of microorganisms • Physiology, nutrition of microorganisms (basics) • Staining methods – Gram Staining • Gram-positive and Gram-negative bacteria • Anaerobic Bacteria • Bacterial reproduction • Fungi – Parasites - Protozoa and Helminths • Viruses – Phages • Viral infections • Pathogens • Symbiotic microorganisms 				

	<ul style="list-style-type: none"> • Pathogens • Normal flora of the gastrointestinal tract • Normal flora of the genital system <p>Elements of the immune system:</p> <ul style="list-style-type: none"> • Host-Parasite Relationship • Host defense – Immune system • Inflammation • Phagocytosis • Antigens • Cellular immunity • Humoral Immunity • Antigen-antibody • Active and passive immunity • Interferons (IFN) <p>Immunology</p> <ul style="list-style-type: none"> • Antimicrobial therapies and chemotherapeutic agents • Antibiotic resistance • Vaccines • Immunotherapy
Teaching Methodology	<p>The course content will be taught through: Power Point presentations, guided discussions with the active participation of students, individual and team work by students and the use of a variety of audiovisual media and other teaching tools as required for the delivery of each module.</p>
Bibliography	<p>Greek Bibliography</p> <ul style="list-style-type: none"> • Συλλογικό έργο (2018). <i>Εγχειρίδιο κλινικής μικροβιολογίας</i>, University Studio Press, ISBN 978-960-12-2391-9. • Αγγελής, Γ. (2017). <i>Μικροβιολογία και μικροβιακή τεχνολογία</i>. 2^η Έκδοση. Unibooks. ISBN: 9786185304126 • Βυζαντιάδης, Τ. Α. (2018). • Καγκούνη-Κύρτσου, Α. Δ. (2012). <i>Γενική μικροβιολογία</i>, Σταμούλη Α.Ε., ISBN:978-960-351-904-1. • Δρ Καλκάνη-Μπουσιάκου Ε. (2006). <i>Γενική Μικροβιολογία</i>. Εκδόσεις Έλλην, ISBN: 960-286-899-6. • Μαυρίδου, Α. Θ. (2012). <i>Γενική μικροβιολογία</i>. Εκδόσεις Πασχαλίδη, ISBN: 9789604891634. <p>English Bibliography</p> <ul style="list-style-type: none"> • Alberts B. (2014). <i>Essential Cell Biology</i>, 4th^{Edition}, Publisher Garland Science, ISBN: 9780815344551. • Norman, R. I. (2007). <i>Flesh and Bones of Medical Cell Biology</i>, Publisher Mosby, ISBN: 9780723433675. • Manzoor, A. M. (2020). <i>Basics and Fundamentals of Immunology</i>. New York: Nova Medicine and Health. ISBN: 9781536166392. <p>EBSCOHost.</p>
Assessment	<ul style="list-style-type: none"> • Attendance and participation: 10% • Assignments / Essays: 20% • Midterm Written Examination: 20% • Final Written Examination: 50% <p><i>Written examination has two parts that are examined as part of one exam paper. The first part includes closed-ended questions, such as multiple choice questions, true or false, matching exercises, complete the gaps exercises, etc. The first part is usually</i></p>

	<p>worth 40% - 50% of the total marks of the exam paper. The second part includes open-ended questions that are meant to assess the students' abilities to analyse, reflect, explain, recall etc. The second part is usually worth 50% - 60%. The total marks of the exam paper are 100.</p>
Language	Greek or English