

Course Title	Microbiology			
Course Code	NURS 201			
Course type	Spring			
Level	BSc (1 st Cycle)			
Year / Semester	2 nd /Fall			
Instructor	Dr Maria Pantelidou			
ECTS	4	Lectures / week	2	Laboratories / week
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Course Objectives	<p>Inevitably, infections are an important part of the nursing profession. For this reason, the teaching of microbiology is an integral part of nursing studies because it provides essential and basic knowledge in the application of the nursing profession. Infectious diseases relate to a very significant proportion of patients who are hospitalized and demanding appropriate health care. The scope of teaching microbiology 1st) to understand the impact of the various microorganisms on health and 2nd) to know the methods and procedures of limiting the spread of pathogenic microorganisms and the prevention of infectious diseases and 3rd) to know the importance of the proper use of antibiotics.</p> <p>Therefore, the successful application of microbiology to the nursing profession is an indicator of a profound understanding of the interaction of the microbial world with humans.</p>			
Learning outcomes	<p>Upon completion of the course students will be able to:</p> <ul style="list-style-type: none"> - Define the basic concepts of microbiology in relation to nursing practice. - Apply the proper ways of correctly collecting microbiological samples. - Apply the correct methodology for the limitation of infectious diseases and know the ways to avoid the spread of nosocomial infections. - Relate the role that nurses can play in controlling hospital acquired infections. - Recognize the importance of disinfection and sterilization measures and practices. - Appraise the importance of the position and role of the Infection Control Nurse in a hospital. - Discover the importance of the proper use of antibiotics in the treatment of infections. 			
Prerequisites	None		Co-Requisites	None
Course Content	<p>Theory</p> <ul style="list-style-type: none"> - The role and purpose of Microbiology in nursing. 			

	<ul style="list-style-type: none"> - Introduction and Historical background in Microbiology and Nursing - Role and importance of the normal flora of the human body - Bacteriology - Prokaryotic and eukaryotic microorganisms - 5. Sources, modes of transmission and pathogenesis of bacteria - Microbiological samples and diagnostic methods - Infections related to health care - Infections from the scope of nursing - The role of Nurses in the Control of Infections - Virology - Common microbial strains and the diseases they cause - Common fungal strains and the diseases they cause - Known Viral Infections - Common parasitic strains and the diseases they cause - Diagnosis of infections <p><u>Laboratory exercises:</u></p> <p>Presentation and study of clinical cases. Students work together in small groups. Study of clinical cases of bacteriology, parasitology, fungi, vibration. Bacterial growth, types of test loops, bacteria swabs, Gram staining method, antibiotic resistance</p>
Teaching Methodology	<p>The teaching of nursing microbiology includes lectures on the contribution of the theoretical background and laboratory exercises to better understand and consolidate the concepts of microbiology in relation to nursing. Detailed notes with PowerPoint are used in the teaching. Imaging material is used to better understand some microbiological concepts and processes. The laboratory part of the lesson takes place in the laboratory under the supervision of the workshop supervisor. For each microbiology laboratory exercise, there is proper preparation in advance and demonstration to the students by the Laboratory Officer. In addition, students present Case Studies of infectious diseases through which an understanding of the importance of infections in nursing practice is evaluated</p>
Bibliography	<p><u>(a) Textbooks:</u></p> <p>Ward, D. (2016). <i>Microbiology and Infection Prevention and Control for Nursing Students</i>. SAGE</p> <p>Greenwood, D., Slack, R., Peutherer, J. & Barer, M. (2016). <i>Ιατρική Μικροβιολογία, Τόμος Ι και ΙΙ, Ιατρικές Εκδόσεις Πασχαλίδης. (In Greek)</i></p> <p><u>(b) References:</u></p> <p>Cornelissen, C. N., & Hobbs, M. M. (2019). <i>Microbiology</i>. Lippincott Williams & Wilkins.</p> <p>Microbiology Education in Nursing Practice, 2017. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5577971/</p> <p>Hawley, L., Clarke, B. P., & Ziegler, R. J. (2013). <i>BRS Microbiology and</i></p>

	<p><i>Immunology. LWW.</i></p> <p><i>Through the services of the university library, access is provided to electronic repositories of scientific journals and articles, indicatively ProQuest, Cambridge University Press and Science Direct with thousands of scientific journals in the fields of health sciences.</i></p>
Assessment	<p>The evaluation of this course includes continuous evaluation (midterm examination, laboratory evaluation, class participation) and final examination.</p> <p>Mid-term examination: 30%. The written midterm exam consists of multiple choice questions with short answers.</p> <p>Laboratory work: 10%. The evaluation of students includes a presentation of work with case studies of infections and evaluation of the understanding of the meaning of nosocomial infections.</p> <p>Class participation: 10%. Classroom participation includes formative assessments with problem-solving questions.</p> <p>Written examination: 50%. The written final exam will include multiple choice questions and descriptive questions with short answers.</p>
Language	Greek / English