



UNIVERSITÀ DEGLI STUDI DI PALERMO

DEPARTMENT	Promozione della Salute, Materno-Infantile, di Medicina Interna e Specialistica di Eccellenza "G. D'Alessandro"		
ACADEMIC YEAR	2023/2024		
BACHELOR'S DEGREE (BSC)	NURSING		
INTEGRATED COURSE	MICROBIOLOGY AND GENERAL PATHOLOGY - INTEGRATED COURSE		
CODE	05209		
MODULES	Yes		
NUMBER OF MODULES	2		
SCIENTIFIC SECTOR(S)	MED/07, MED/04		
HEAD PROFESSOR(S)	CALA' CINZIA	Ricercatore	Univ. di PALERMO
	CAPRA GIUSEPPINA	Professore Associato	Univ. di PALERMO
OTHER PROFESSOR(S)	CAPRA GIUSEPPINA	Professore Associato	Univ. di PALERMO
	CALA' CINZIA	Ricercatore	Univ. di PALERMO
	AIELLO ANNA	Ricercatore a tempo determinato	Univ. di PALERMO
	SIRECI GUIDO	Professore Associato	Univ. di PALERMO
CREDITS	6		
PROPAEDEUTICAL SUBJECTS			
MUTUALIZATION			
YEAR	1		
TERM (SEMESTER)	2° semester		
ATTENDANCE	Mandatory		
EVALUATION	Out of 30		
TEACHER OFFICE HOURS	<p>AIELLO ANNA Tuesday 14:00 16:00 Sezione di patologia generale, Corso Tukory 211, 90134, Palermo Thursday 14:00 16:00 Sezione di patologia generale, Corso Tukory 211, 90134, Palermo</p> <p>CALA' CINZIA Tuesday 15:00 18:00 Dipartimento Promozione della Salute, Materno-Infantile, di Medicina Interna e Specialistica di Eccellenza "G. D'Alessandro" via del vespro n 133 secondo piano</p> <p>CAPRA GIUSEPPINA Tuesday 12:00 13:00 PROSAMI Via del vespro 133</p> <p>SIRECI GUIDO Monday 10:00 12:00 CLADIBIOR Friday 10:00 12:00 CLADIBIOR</p>		

DOCENTE: Prof.ssa CINZIA CALA'- Sede GORDON

PREREQUISITES	Basic Knowledge of general pathology, biology, genetics
LEARNING OUTCOMES	<p>Knowledge and understanding Acquisition of tools for the understanding of the pathogenesis and pathophysiology of the disease. Knowledge of features of microorganisms and of the main microbial pathogens. Ability of using technical language acquired through the courses.</p> <p>The students will achieve the following objectives: Ability to apply knowledge and understanding; Ability to recognize and apply the cognitive tools and the methodological approach of General Pathology and Microbiology for the scientific and rational practice of nursing. To demonstrate the ability to apply their knowledge and understanding to the main issues of General Pathology and Microbiology.</p> <p>Making judgments To be able to evaluate independently the results of studies investigating the pathogenesis and pathophysiology of diseases. Acquire sufficient knowledge of the world of microorganisms to interpret microbiological data relating to nursing practice</p> <p>Communication skills Ability to explain easily and exhaustively the acquired knowledge. Ability to communicate with colleagues, healthcare professionals, patients and their relatives.</p> <p>Ability of learning Ability to update the acquired knowledge by consulting the scientific publications concerning the disciplines in question. Ability to participate, using the knowledge acquired during the course, in continuous updating initiatives in the professional field</p>
ASSESSMENT METHODS	<p>Oral exam. The candidate will have to answer at least four questions posed orally, at least two for each of the two modules, covering the different parts of the program, with reference to the recommended texts. Final assessment aims to evaluate whether the student has knowledge and understanding of the topics, has acquired the skills to interpret the notions and judge independently. The evaluation is expressed using a 30-point scale.</p> <p>ECTS grades: A – A+ Excellent (30-30 cum laude) - Grade descriptors: Excellent knowledge of teaching contents; students should show high analytical and synthetic capabilities and should be able to apply their knowledge to solve highly complex problems.</p> <p>ECTS grade : B Very good (27-29) - Grade descriptors: Good knowledge of the teaching contents and excellent language control; students should show analytical and synthetic skills and be able to apply their knowledge to solve problems of medium and, in some cases, even higher complexity.</p> <p>ECTS grade: C Good (24-26)- Grade descriptors: Good knowledge of teaching contents and good language control; the students should be able to apply their knowledge to solve problems of medium complexity.</p> <p>ECTS grade: D Satisfactory (21-23)- Grade descriptors: Average knowledge of the teaching contents, in some cases limited to the main topic; acceptable ability to use the specific discipline language and independently apply the acquired knowledge.</p> <p>ECTS grade: E Sufficient (18-20) - Grade descriptors: Minimum teaching content knowledge, often limited to the main topic; modest ability to use the subject specific language and independently apply the acquired knowledge.</p> <p>ECTS grade: F Fail (1-17) - Grade descriptors: Lack of an acceptable knowledge of the main teaching content knowledge; very little or no ability to use the specific subject language and apply independently the acquired knowledge.</p> <p>Exam failed</p>
TEACHING METHODS	Lectures

DOCENTE: Prof.ssa GIUSEPPINA CAPRA- Sede NIGHTINGALE

PREREQUISITES	Basic Knowledge of general pathology, biology, genetics.
LEARNING OUTCOMES	<p>Knowledge and understanding</p> <p>Acquisition of tools for the understanding of the pathogenesis and pathophysiology of the disease.</p> <p>Ability of using technical language of these disciplines. Knowledge of features of microorganisms and main pathogens.</p> <p>The students will achieve the following objectives:</p> <p>Ability to apply knowledge and understanding</p> <p>Ability to recognize and apply the cognitive tools and the methodological approach of General Pathology for the scientific and rational practice of the profession.</p> <p>To demonstrate the ability to apply their knowledge and understanding to the main themes of microbiology.</p> <p>Making judgments</p> <p>To be able to evaluate independently the results of studies developed with the aim to clarify pathogenesis and pathophysiology of diseases.</p> <p>To acquire enough microbiology knowledge to critically analyze data</p> <p>Communication skills</p> <p>Ability to explain easily and exhaustively the knowledge. Ability to communicate with colleagues, healthcare professionals, patients and their relatives.</p> <p>Ability of learning</p> <p>Ability to update scientific publications about these disciplines Attendance to meeting, congress and seminars</p>
ASSESSMENT METHODS	<p>At the end of the course, the student will take an oral exam and will have to answer at least 4 questions, at least 2 for each module, concerning different parts of the program, with reference to the recommended texts.</p> <p>The final test aims to assess whether the student has understood the topics, has acquired interpretation skills and autonomy of judgment.</p> <p>Evaluation and its criteria</p> <p>The evaluation is out of thirty, as shown in the following scheme:</p> <p>- Grade 30 - 30 with honors - Evaluation: Excellent (ECTS grade A-A + excellent)</p> <p>Outcome: Excellent knowledge of the teaching contents. The student demonstrates a high analytical-synthetic capacity and is able to apply the knowledge to solve highly complex problems.</p> <p>- Grade : 27 - 29 - Grade: Excellent (ECTS grade B very good)</p> <p>Outcome: Excellent knowledge of the teaching contents and excellent ownership of language. The student demonstrates synthetic-analytical skills and is able to apply knowledge to solve problems of medium complexity and, in some cases, even high.</p> <p>- Grade: 24 - 26 - Grade: Good (ECTS grade C Good)</p> <p>Outcome: Good knowledge of the teaching contents and good ownership of language. The student is able to apply knowledge to solve problems of medium complexity.</p> <p>Grade: 21 - 23 - Assessment: Fair (ECTS grade D satisfactory)</p> <p>Outcome: Fair knowledge of the teaching contents, in some cases limited to main topics. Acceptable ability to use language specific to the discipline and to independently apply the acquired knowledge.</p> <p>- Grade: 18 - 20 - Assessment: Sufficient (ECTS grade E sufficient)</p> <p>Outcome: Minimum knowledge of teaching contents, often limited to main topics. Modest ability to use the specific language of discipline and to independently apply the acquired knowledge.</p> <p>- Grade: 1 - 17 - Grade: Insufficient (ECTS grade F Fail)</p> <p>Outcome: Does not have an acceptable knowledge of the main contents of teaching. Very little or no ability to use language specific to the discipline and to independently apply the acquired knowledge. Failed exam.</p>
TEACHING METHODS	Lectures

MODULE
GENERAL PATHOLOGY AND PATHOPHYSIOLOGY

Prof. GUIDO SIRECI - Sede GORDON, - Sede GORDON

SUGGESTED BIBLIOGRAPHY

Elementi di Patologia generale e Fisiopatologia Generale, G.M. Pontieri, IV edizione, Piccin. Le basi dell'Immunologia, Fisiopatologia del sistema immunitario, A. K. Abbas, A. Lichtman, V edizione, Edra Masson.

AMBIT	10304-Scienze biomediche
INDIVIDUAL STUDY (Hrs)	45
COURSE ACTIVITY (Hrs)	30

EDUCATIONAL OBJECTIVES OF THE MODULE

Knowing the immune system and the defence strategies, the overall characteristics of innate and adaptive immunity. Acquiring knowledge on the strategies maintaining the natural homeostasis and understanding the molecular mechanisms generating disease. Knowing the physiopathology of local and systemic inflammatory response, through the action of involved cells and mediators. Knowing systemic pathology and disease of organ systems and the main diagnostic methodologies in the laboratory field. Learning the immune and inflammatory response to vaccines. Knowing the development of neoplastic disease through the analysis of the hallmarks of cancer, the major carcinogens and through the study of the main involved genes.

SYLLABUS

Hrs	Frontal teaching
2	Introduction to the subject. To have a clear conception of homeostasis, disease, etiology and pathogenesis.
3	The blood and the regulation of the hematopoietic process. Morphological and functional characteristics and alterations of leukocytes and erythrocytes.
7	Natural and specific immune response: cells and tissues of the immune system. Antigens, antibodies, complement system and MCH (I and II classes). Immunopathology and hypersensitivity reactions.
7	Acute inflammation: vascular modifications. Cellular and fluid phase mediators: preformed and newly formed mediators. Inflammation cells, adhesion molecules and cell migration. Exudate and exudate. Repair processes, repair tissue and wound healing. Nonspecific and granulomatous histophlogosis.
5	Systemic inflammation and its manifestations: leukocyte formula alteration, acute phase proteins, febrile and non-febrile hyperthermia, disease behavior, hypoxia. Complete blood count test and study of a clinical case.
6	The cellular response to the injury: adaptations and cell death. Definition of tumor and classification. Characteristics of benign and malignant tumors. Multistep tumor progression and hallmark of cancer. Oncogenes and tumor suppressors. Carcinogenesis and prevention.

MODULE
GENERAL PATHOLOGY AND PATHOPHYSIOLOGY

Prof.ssa ANNA AIELLO - Sede NIGHTINGALE, - Sede NIGHTINGALE

SUGGESTED BIBLIOGRAPHY

Elementi di Patologia generale e Fisiopatologia Generale, G.M. Pontieri, IV edizione, Piccin.
Le basi dell'Immunologia, Fisiopatologia del sistema immunitario, A. K. Abbas, A. Lichtman, V edizione, Edra Masson.

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MODULE MICROBIOLOGY

Prof.ssa CINZIA CALA' - Sede GORDON, - Sede GORDON

SUGGESTED BIBLIOGRAPHY

Sherris Microbiologia Medica EMSI
La Placa Principi di Microbiologia Medica EdiSes
De Grazia S, Giammanco G, Ferraro D – Microbiologia e microbiologia clinica per infermieri. Casa Editrice Pearson

AMBIT	10304-Scienze biomediche
INDIVIDUAL STUDY (Hrs)	45
COURSE ACTIVITY (Hrs)	30

EDUCATIONAL OBJECTIVES OF THE MODULE

- To know structural-functional, replicative and pathogenic characteristics of microorganism.
- To know the interactions between microorganism and host.
- To know the mechanisms of control of microbial infections.
- To know the basic laboratory methodology for the diagnosis of infections
- Be able to correlate the microbiological knowledge with nursing.

SYLLABUS

Hrs	Frontal teaching
2	Structure and replication of bacteria
1	Metabolism and methods of cultivation of bacteria
2	Pathogenicity factors of bacterias and way of transmission of microorganisms
2	Structure and replication of fungi; pathogenicity factors of fungi.
2	Structure and replication of viruses
3	Virus-cell and virus-host interactions
2	Antimicrobial agents
2	Mechanisms of disinfection, sterilization and vaccines.
2	Choice of the biological sample
2	Principle of microbiological diagnosis
10	Principals pathogens causing respiratory, gastroenteric and urogenital diseases (Streptococcus spp; Staphylococcus spp; Neisseria spp; Micobacterium spp; Clostridium spp; Enterobacterium spp; Herpesvirus; Papillomavirus; hepatitis viruses; Retroviruses; Toxoplasma gondii; Candida)

MODULE MICROBIOLOGY

Prof.ssa GIUSEPPINA CAPRA - Sede NIGHTINGALE, - Sede NIGHTINGALE

SUGGESTED BIBLIOGRAPHY

Sherris Microbiologia Medica EMSI
 La Placa Principi di Microbiologia Medica EdiSes
 De Grazia S, Giammanco G, Ferraro D – Microbiologia e microbiologia clinica per infermieri. Casa Editrice Pearson

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3	Virus-cell and virus-host interactions
2	Antimicrobial agents
2	Mechanisms of disinfection, sterilization and vaccines.
2	Vaccines
2	Principle of microbiological diagnosis
10	Principals pathogens causing respiratory, gastroenteric and urogenital diseases (Streptococcus spp; Staphylococcus spp; Neisseria spp; Micobacterium spp; Clostridium spp; Enterobacterium spp; Herpesvirus; Papillomavirus; hepatitis viruses; Retroviruses; Toxoplasma gondii; Candida)