



## BSc in Nursing

**INTEGRATED COURSE TITLE:** INFORMATION TECHNOLOGY/ SEMINAR ACTIVITY

**NUMBER OF ECTS CREDITS:** 1

**CODE:** MED/45

**MODULE CONVENOR:** NOEMI GIANNETTA; AUGUSTO CARPICO

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### **PREREQUISITES**

There are no specific prerequisites required.

### **LEARNING OBJECTIVES**

The aim of the seminar activity is to provide students with a detailed understanding of the anatomy and physiology of the cardiac system, as well as the practical skills necessary to perform and accurately interpret an electrocardiogram (ECG) in a nursing context. The course aims to provide an in-depth understanding of the principles of electrocardiography and techniques for accurately recording an ECG. Students will also learn to read and interpret the ECG from a nursing perspective, including identifying normal variations and any abnormalities.

### **LEARNING OUTCOMES**

#### **Knowledge and Understanding**

At the end of the seminar activity, the student will be able to:

- Have a thorough understanding of the anatomical structure and physiological functions of the cardiac system, including different types of cardiac tissues, heart chambers, heart valves, and the electrical conduction system.
- Have a clear understanding of the fundamental principles of electrocardiography, including the process of generating and recording cardiac electrical activity through electrodes.
- Know the correct techniques for performing an electrocardiogram recording, including electrode placement on the patient's body and technical parameters for accurate recording.
- Be able to interpret an electrocardiogram from a nursing perspective, recognizing normal tracings and identifying any abnormalities, including signs of ischemia, infarction, arrhythmias, and other cardiac conditions.
- Have detailed knowledge of different types of cardiac arrhythmias, including causes, symptoms, clinical implications, as well as monitoring and nursing management strategies.

- Understand the role of the nurse in monitoring and surveillance of patients with cardiac arrhythmias, including those undergoing cardiac surgery, and be able to apply best practices to ensure proper nursing care.

### **Applying knowledge and understanding**

At the end of the seminar activity, the student will be able to:

- Apply the acquired knowledge of ECG recording techniques to correctly position electrodes on the patient's body, ensuring accurate and reliable recording of cardiac electrical activity.
- Use understanding of electrocardiography principles to accurately interpret ECG tracings, recognizing signs of normality, abnormalities, and cardiac arrhythmias, and applying appropriate nursing management strategies.
- Apply knowledge of cardiac arrhythmias and nursing monitoring procedures to perform regular checks on patients, promptly detecting any changes in heart rhythm and taking necessary corrective actions.
- Use knowledge of emergency management procedures and first aid to intervene quickly in potentially dangerous cardiac arrhythmia situations, ensuring an effective and appropriate response in crisis situations.
- Collaborate with other healthcare team members, including physicians, specialized nurses, and laboratory technicians, to ensure comprehensive and coordinated care for patients with cardiac conditions, integrating their own skills within the overall care plan.
- Use their knowledge and skills to educate and inform patients and their families about cardiac arrhythmias, associated risk factors, and recommended preventive and therapeutic measures, thus promoting active involvement in managing their cardiac health.

### **Communication skills**

The student must orally present the core topics in an organized and coherent manner, using a specific, appropriate scientific language that aligns with the discussion topic.

### **Making judgements**

At the end of the seminar activity, the student should be able to:

- Independently assess the patient's condition, including signs and symptoms of cardiac arrhythmias, and determine the need for additional monitoring or immediate nursing interventions based on the collected information.
- Utilize judgment autonomy to establish priorities in nursing care, determining which patients require closer monitoring or more urgent interventions based on the severity of arrhythmias and the patient's health risk.
- Be capable of making rapid and effective decisions in emergency situations, such as ventricular arrhythmias or ventricular fibrillation, using their experience and expertise to establish an immediate action plan and save lives.

- Use judgment autonomy to adapt nursing therapies based on the patient's response to treatment, closely monitoring ECG results and making adjustments to pharmacological therapies or monitoring procedures as needed.
- Collaborate with other members of the healthcare team, such as physicians and specialists, to discuss treatment options and establish an integrated care plan for patients with cardiac arrhythmias, making informed and coordinated decisions to optimize care.
- Utilize judgment autonomy to educate patients about their cardiac conditions, associated risk factors, and recommended preventive and therapeutic measures, helping them understand and manage their cardiac health effectively.

### **Learning skills**

The student will have acquired appropriate learning skills and methods to deepen and improve their skills in the field of electrocardiography, including through consulting scientific literature. Additionally, the student will adopt a professional behavior: active attitude, continuous commitment, reflective approach oriented towards self-learning, acceptance of feedback for improvement in achieving the set objectives.

### **COURSE SYLLABUS**

- Anatomy and physiology of the cardiovascular system
- Electrocardiography
- Electrocardiogram: techniques for accurate recording
- Nursing reading and interpretation of an ECG
- Arrhythmias
- Certain arrhythmic conditions associated with cardiac surgery - nursing monitoring and surveillance.

### **COURSE STRUCTURE**

The Bachelor's Degree in Nursing provides a total of 2 university educational credits (CFUs) to be dedicated to internship activities in the first year of the course. Each CFU corresponds to 30 hours, therefore the total internship hours in the first year of the course amount to 60 hours.

Attendance at seminar activities is mandatory for all students enrolled in the Bachelor's Degree program.

### **ASSESSMENT CRITERIA**

The Seminar Activity exam consists of an oral examination, the assessment of which constitutes an integral part of the course evaluation. All content outlined in the teaching programs will be evaluated. The assessment will focus on the student's knowledge and understanding, their ability to apply knowledge and understanding, their judgment autonomy, and their communication skills, which will respectively weigh 30%, 30%, 30%, and 10% towards the final score. The final grade will be assigned collectively by the Committee.

The evaluation criteria will include: acquired knowledge, judgment autonomy, communication skills, and learning abilities. The final oral exam will be assessed based on the following criteria:

- fail** The candidate possesses an inadequate knowledge of the topic, makes significant errors in applying theoretical concepts, and shows weak presentation skills.
- pass** The candidate possesses an adequate knowledge of the topic, good presentation skills and ability to apply theoretical concepts.

#### **OPTIONAL ACTIVITIES**

Students will have the opportunity to engage in theoretical/practical exercises and participate in seminars or laboratory activities.

#### **RECOMMENDED READING**

- Material provided by the professor.