



## BSc in Nursing

**INTEGRATED COURSE TITLE:** PROFESSIONAL LABORATORY 3

**NUMBER OF ECTS CREDITS:** 1

**CODE:** MED/45

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### **PREREQUISITES**

No specific prerequisites are required.

### **LEARNING OBJECTIVES**

The goal of Professional Laboratory 3 is to provide students with comprehensive and in-depth training on the skills and knowledge necessary to deliver advanced nursing care in a variety of clinical settings, including resuscitation and home care. This course aims to prepare students to manage a wide range of critical situations safely and effectively, ensuring high-quality, patient-centered nursing practice.

### **LEARNING OUTCOMES**

#### **Knowledge and Understanding**

At the end of the Professional Laboratory, the student will be able to:

- Understand the operation and interpretation of electromedical devices used in clinical practice, such as the multi-parametric monitor and the ventilator.
- Have knowledge of the main laboratory tests used in the assessment of critically ill patients, such as blood gas analysis and microbiology tests, and understand their importance in the diagnosis and monitoring of patient conditions.
- Understand the fundamental concepts related to infusion therapy, including drug dilution and the management of sedation and inotropes.
- Have an in-depth understanding of the nursing workflow in a resuscitation unit, including the procedures and practices necessary to provide high-quality nursing care to critically ill patients.
- Understand the principles and practices for infection prevention, including the importance of personal and environmental hygiene and the appropriate use of standard precautions.
- Know and understand the procedures and practices for performing specific hygiene care, such as airway management and patient mobilization.

- Have a comprehensive knowledge of strategies and practices for preventing pressure injuries in acute and critical patients.
- Understand the procedures and practices for managing emergencies in resuscitation, including cardiac arrest, bleeding, sepsis, and the ability to respond promptly to such situations.

### **Applying knowledge and understanding**

At the end of the Professional Laboratory, the student will be able to:

- Utilize acquired knowledge of the functioning of electromedical devices to effectively monitor critically ill patients, interpreting and accurately assessing data provided by multi-parametric monitors and other devices.
- Apply acquired knowledge of infusion therapy to safely prepare and administer medications, dilutions, and fluids, ensuring proper management of venous lines and the prevention of potential complications.
- Utilize understanding of protocols and procedures to effectively manage emergency situations in resuscitation, such as cardiac arrest, bleeding, and sepsis, by taking immediate and appropriate measures.
- Implement learned infection prevention practices to minimize the risk of contamination and spread of pathogens, adopting strict personal hygiene and following standard precautions.
- Apply procedures and practices for performing specific hygiene care, such as airway management and patient mobilization, ensuring comprehensive and high-quality nursing care.
- Utilize acquired knowledge of pressure injury prevention to assess and reduce the risk of skin injuries in critically ill patients, adopting preventive measures such as repositioning and the use of support devices.
- Apply acquired skills in home care to provide comprehensive and personalized support to patients with invasive and non-invasive ventilation, ensuring continuity of care and a safe and comfortable environment.

### **Communication skills**

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

### **Making judgements**

At the end of the Professional Laboratory, the student will be able to:

- Develop the ability to critically evaluate data from electromedical devices and laboratory tests to identify any anomalies or changes in the patient's condition and make timely and appropriate decisions
- Utilize knowledge of the patient's clinical conditions and nursing care procedures to develop individualized care plans that consider the patient's specific needs and conditions.
- Be able to assess and prioritize nursing activities based on the severity of the patient's situation and immediate needs, ensuring efficient allocation of available resources.
- Develop the ability to quickly assess emergency situations such as cardiac arrest, bleeding, and sepsis, and make immediate and decisive decisions to stabilize the patient and ensure their well-being.
- Be able to adapt nursing care strategies in response to changes in the patient's condition and environmental conditions, modifying care plans appropriately and in real-time.

- Use their judgment to identify potential risks to patient safety, such as nosocomial infections or pressure injuries, and take preventive measures to mitigate these risks and ensure a safe and protected environment for the patient.

### **Learning skills**

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

### **COURSE SYLLABUS**

- Basic knowledge of the functioning and interpretation of electromedical devices and laboratory tests: multiparametric monitor, ventilator, hemodynamic monitoring, blood gas analysis, microbiology tests.
- Notions of infusion therapy and management: dilution, sedation, inotropes. • Nursing workflow in resuscitation.
- Infection prevention.
- Execution of specific hygiene care.
- Patient mobilization.
- Prevention of Pressure Injuries.
- Notions of Emergency Management in resuscitation: cardiac arrest, bleeding, sepsis.
- Home care assistance.
- Assistance to individuals with invasive and non-invasive ventilation at home.

### **COURSE STRUCTURE**

The Bachelor's degree program in Nursing allocates a total of 1 university educational credit (CFU). With each CFU equivalent to 30 hours, the total number of internship hours in the first year of the course amounts to 30 hours.

Attendance at the professional laboratory is mandatory for all students enrolled in the program.

### **ASSESSMENT CRITERIA**

The final exam for Professional Laboratory 3 consists of an oral examination, and its grading is an integral part of the course evaluation. All contents outlined in the course curriculum will be assessed. The evaluation will consider the student's knowledge and comprehension, their ability to apply knowledge and comprehension, their autonomy of judgment, and their communication skills. These aspects will contribute to the final score, with weights of 30%, 30%, 30%, and 10%, respectively. The final grade will be assigned collectively by the Commission.

The assessment criteria will include evaluating the acquired knowledge, autonomy of judgment, communication skills, and learning capabilities. The final oral exam will be evaluated 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 and practical exercises.

#### **RECOMMENDED READING**

- Tutto il materiale verrà fornito dal docente per mezzo di dispense all'inizio del corso.