



BSC IN MIDWIFERY

INTEGRATED TEACHING: ANESTHESIA AND INTENSIVE CARE PRINCIPLES OF PHARMACOLOGY APPLIED TO OBSTETRICS

SSD: MEDS-06/A, BIOS-11/A, MEDS-23/A, MEDS-10/B, MEDS-21/A

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Credits: 5

Module: **Anaesthesiology**

SSD: MEDS-23/A

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Number of Credits: 1

Module: **General Surgery**

SSD: MEDS-06/A

Professor: [Domenico Tripodi](#)

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Number of Credits: 1

Module: **Pharmacology**

SSD: BIOS-11/A

Professor: [Giovanna Petrucci](#)

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Number of Credits: 1

Module: **Infectious Diseases**

SSD: MEDS-10/B

Professor: [Giuseppina Liuzzi](#)

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Number of Credits: 1

Module: **Gynaecology and Obstetrics**

SSD: MED/40

Professor: [Luca Cipriano](#)

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Number of Credits: 1

PREREQUISITES

The prerequisites for the students are knowledge of: basic concepts of biochemistry, anatomy and physiology, anatomy and physiology of the female reproductive system, and physiological changes during pregnancy. Knowledge of microorganisms and of the immune response is needed, as well as the main mechanisms of inflammation and infection.

LEARNING OBJECTIVES

The goal of the Integrated Course is to provide the students with indepth knowledge on: main surgical diseases and their treatment, management about pre and postoperative care of surgical patients, pharmacological, general and peripheral anesthesia concepts necessary in case of surgical and obstetric emergencies.

Moreover, the Integrated Course aims to provide students with knowledge of main infectious diseases with specific regard to the basic principles of epidemiology, pathogenesis, clinical diagnosis and therapy, as well as primary and secondary prevention tools.

LEARNING OUTCOMES

The expected learning outcomes are consistent with the Bologna Process's instructions (or regulations) and the Directive 2005/36/EC. They are in the European Qualifications Framework (Dublin Descriptors) as follow:

At the end of the course, the student will be able to:

Knowledge and understanding

- Recognize the main surgical conditions of clinical relevance
- Understand their pathophysiological mechanisms
- Describe the nursing aspects of the diagnostic and therapeutic pathways for surgical conditions
- Apply specific knowledge to the nursing management of surgical patients
- Discuss commonly used medications with regard to their mechanisms of action, clinical use, adverse effects, and implications for midwifery practice
- Identify medications commonly used in emergency care
- Compare and contrast the influence of sex, race, and ethnicity on drug response and pharmacological effects
- Outline strategies to optimize the safe and effective administration of pharmacological treatments
- Describe the main phases of general and regional anesthesia
- Describe the principal monitoring techniques and treatment approaches used in intensive care
- Describe the major obstetric emergencies, from diagnosis to management
- Describe the classification criteria for the main bacterial, viral, and protozoal infections
- Describe the epidemiological principles of infectious diseases, with particular reference to different geographical settings
- Explain the mechanisms of transmission of infectious diseases
- Describe the diagnostic techniques used to identify pathogens and assess the immune response
- Describe the main therapeutic classes used for the prevention and treatment of infectious diseases
- Describe infection prevention, isolation, and infection control measures

Ability to apply knowledge and understanding

- Apply regulatory knowledge to identify the scope of practice of midwives and other healthcare professionals
- Apply knowledge of midwifery care to clinical practice

Communication skills

- Present topics orally in a clear, organized, and coherent manner
- Use appropriate terminology consistent with the subject under discussion

Making judgments

- Recognize the importance of acquiring in-depth knowledge as a foundation for competent midwifery education and practice
- Recognize the importance of theoretical knowledge for the midwifery profession

Learning skills

- Engage in independent learning by consulting scientific literature and relevant resources on emergency and urgent care

COURSE SYLLABUS

SURGERY

- Acute abdomen, peritonitis, and intestinal obstruction
- Gastrointestinal and vascular bleeding
- Abdominal and head trauma
- Major oncological conditions of surgical interest: colorectal, liver and pancreatic, thyroid, and breast

cancers

PHARMACOLOGY

- General principles of reproductive and developmental toxicology: male and female reproductive toxicology, critical periods of susceptibility, dose-response relationship, and threshold concept
- Medications for hypertension
- Anticoagulant drugs
- Antiplatelet and thrombolytic drugs
- Local anesthetics
- General anesthetics
- Sedative-hypnotic drugs
- Oxytocic and abortion-inducing drugs (Oxytocin, Prostaglandins)
- Tocolytic drugs (Ritodrine, Calcium channel blockers)
- Uterotonic drugs (Ergometrine, Methysergide)
- Principles of antibiotic therapy
- Antidiabetic drugs
- Over-the-counter drugs, medicinal plants, and herbal products in pregnancy
- Prescribing drugs in childbearing and pregnancy: principles and clinical practice

ANESTHESIOLOGY

- Preparation of environment and patient to surgical procedures
- Use of anesthetics. Management of preanesthesia phase
- Intra and postsurgical phase
- Management of central and peripheral venous lines and surgical drainages
- Management of surgical wounds and postsurgical pain
- Monitoring in Intensive Care Unit
- Organ failure. Physiopathology and treatment
- Mechanical Ventilation
- Extracorporeal removal techniques
- The patient in shock
- Stupor and coma

INFECTIOUS DISEASES

- General aspects on Infectious Diseases
- Infection and infectious disease
- The chain of transmission
- The body's defenses against infectious diseases
- Diagnostic procedure and guiding concepts of therapy, types of isolation
- Globalization and infectious diseases
- The Infectious syndromes (epidemiology, etiology, clinical, diagnostic and therapeutic aspects)
 - Sepsis and endocarditis
 - SIRS, sepsis, septic shock
 - Acute respiratory syndrome
 - Acute neurological syndrome
 - Meningitis and infectious encephalitis
 - Diarrheal syndrome
 - Acute jaundice syndrome
 - Febrile exanthematous syndromes

- Feverish syndromes returning from the tropics
- HIV infection / AIDS
- Viral hepatitis

GYNECOLOGY

Obstetric emergencies: obstetric gynaecological interventions; changes in the course of labour, arrest of labour and uterus rupture; malpositions and malpresentations; cord prolapse; shoulder dystocia; disseminated intravascular coagulation.

COURSE STRUCTURE

The course consists of 70 hours of classroom teaching, composed of frontal lessons, working groups and interactive learning activities through simulations, use of mannequins and discussion of clinical cases.

COURSE GRADE DETERMINATION

The final exam will be oral and it will be communicated at the beginning of the lessons together the didactic materials necessary to the preparation for the final evaluation.

The oral exam will focus on the program and will assess the student's knowledge and mastery of specific scientific language.

The evaluation criteria considered will be: acquired knowledge, independent judgment, communication skills and learning skills. The exams will be assessed according to the following criteria:

< 18 Fail	The candidate possesses an inadequate knowledge of the topic, makes significant errors in applying theoretical concepts, and shows weak presentation skills.
18-20	The candidate possesses a barely adequate and only superficial knowledge of topic, limited presentation skills, and only an inconsistent ability to apply theoretical concepts.
21-23	The candidate possesses an adequate, but not in depth, knowledge of the topic, a partial ability to apply theoretical concepts, and acceptable presentation skills.
24-26	The candidate possesses a fair knowledge of the topic, a reasonable ability to apply theoretical concepts correctly and present ideas clearly.
27-29	The candidate possesses an in-depth knowledge of the topic, a sound ability to apply theoretical concepts, good analytical skills, clear argumentative clarity and an ability to synthesize.
30-30L	The candidate possesses an in-depth knowledge of the topic, an outstanding ability to apply theoretical concepts, a high level of argumentative clarity, as well as excellent analytical skills, and a well-developed ability to synthesize and establish interdisciplinary connections.

OPTIONAL ACTIVITIES

Students can request optional workshops to deepen some specific topics.

READING MATERIALS

GYNECOLOGY:

- Pescetto, De Cecco, Pecorari, Ragni. Ginecologia e ostetricia. 2017
- Trattando di Scienza ed Arte della Professionalità Ostetrica. Costantini W. Piccin. Ed. 2021.

ANAESTHESIOLOGY:

- Guida al monitoraggio in area critica. GD Giusti, Maggioli Editore

PHARMACOLOGY:

- Le basi della farmacologia - Whalen - Lerchenfeldt - Giordano. Zanichelli, edizione IV 2025

OTHER MODULES:

- Didactic material delivered by the Professors.