



BSC IN MIDWIFERY

INTEGRATED TEACHING: OBSTETRICAL-GYNECOLOGICAL PATHOLOGY, ENDOCRINOLOGY AND SEXOLOGY

SSD: MEDS-21/A, MEDS-08/A, MEDS-08/C

Responsible Professor: [Francesca Moro](mailto:francesca.moro@unicamillus.org)

E-mail: francesca.moro@unicamillus.org

Credits: 5

Modules: **Gynaecology and Obstetrics**

SSD: MEDS-21/A

Professor: [Francesca Moro](mailto:francesca.moro@unicamillus.org)

CFU: 2

E-mail: francesca.moro@unicamillus.org

Professor: [Fabrizio Signore](mailto:fabrizio.signore@unicamillus.org)

CFU: 1

E-mail: fabrizio.signore@unicamillus.org

Credits: 3

Module: **Endocrinology**

SSD: MEDS-08/A

Professor: [Marco Infante](mailto:marco.infante@unicamillus.org)

E-mail: marco.infante@unicamillus.org

Credits: 1

Module: **Applied Diet. Sciences**

SSD: MEDS-08/C

Professor: [Laura Scappaticci](mailto:laura.scappaticci@unicamillus.org)

E-mail: laura.scappaticci@unicamillus.org

Credits: 1

PREREQUISITES

The pre-requisites 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.

LEARNING OBJECTIVES

At the end of this course, students will be able to describe the major complications of pregnancy, labour, and delivery, explaining their prevention, diagnosis, and treatment.

They will be able to identify the most prevalent endocrine and metabolic disorders based on their clinical features, knowing the main laboratory and imaging tests required for the diagnostic procedure.

Moreover, they will acquire the basics of Human Nutrition, obtaining a functional understanding of Nutritional guidelines during pregnancy and lactation and awareness of the nutritional aspects of maternal and child health on a Global Health level.

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

- describe the clinical features of the cervical incompetence
- classify of the hypertensive disorders in pregnancy
- describe the types of pregnancy-induced hypertension, their causes, and the specific diagnostic criteria

- describe the pathogenetic mechanisms, the clinical course of both preeclampsia and eclampsia as well as their potential impact on maternal and foetal wellbeing
- explain the pathogenetic mechanisms, the diagnostic features, the clinical course, and impact on maternal and foetal wellbeing of gestational diabetes mellitus and of diabetes mellitus in pregnancy
- identify the causes and preterm labour; the pathogenetic mechanisms underlying preterm labour, the diagnostic issue of preterm labour and the maternal and foetal/neonatal impact of preterm birth
- describe the aetiology, the pathogenetic mechanisms and the clinics of the abruptio placentae and the placenta previa
- describe aetiology, the pathogenetic mechanisms and the clinics of intrahepatic cholestasis of pregnancy
- describe aetiology, the pathogenetic mechanisms and the clinics of the following viral infections in pregnancy: HIV, COVID-19, HAV, HBV, HCV, ZIKV
- explain the major puerperal disorders
- describe the thyroid problems in pregnant women
- describe disorders in amniotic fluid volume
- describe the main complications occurring during labour and birth, their prevention and treatment
- describe the main cases of labour and pathological deliveries
- explain the pathophysiology of the main feedback mechanisms that regulate hormone synthesis and secretion
- describe the clinical presentations of the endocrine and metabolic disorders covered in the course
- explain the pathophysiology, the natural history and the main complications of the endocrine and metabolic disorders covered in the course
- describe the main diagnostic tests and approaches used to detect the endocrine and metabolic disorders covered in the course
- explain the basic concepts of the different therapeutic approaches to the management of the endocrine and metabolic disorders covered in the course
- describe the most common endocrine and metabolic disorders during pregnancy, puerperium, and lactation
- explain the nutritional value of most food products and have a solid understanding of the guidelines for healthy eating
- describe the particular nutritional needs of a mother and child during pregnancy and lactation
- explain implications of poor food security and inadequate nutrition on the health of the mother and child around the world

Applying Knowledge and Understanding

- apply the principles of midwifery to selected cases, problems, and a variable range of situations
- use the tools, methodologies language and conventions of midwifery to test and communicate ideas and explanations

Communication Skills

- present the topics orally in an organized and consistent manner
- use a proper scientific language coherent with the topic of discussion

Making Judgements

- recognize the importance of an in-depth knowledge of the topics consistent with a proper education
- identify the importance of a proper theoretical knowledge of the topic in the clinical practice

Learning skills

- activate autonomous in-depth courses by consulting scientific literature and texts relating to obstetric pathology, emergencies/urgencies and in general to obstetrics and gynecology

COURSE SYLLABUS

GYNECOLOGY

- Physiopathology of implantation and early pregnancy
- Hypertensive disorders of pregnancy (pregnancy-induced hypertension, preeclampsia, eclampsia): aetiology, pathogenetic mechanisms, diagnosis, principles of treatment

- Diabetes in pregnancy: aetiology, pathogenetic mechanisms, diagnosis, principles of treatment
- Abruptio placenta and placenta previa: aetiology, pathogenetic mechanisms, diagnosis, principles of treatment
- Preterm labour: Aetiology, pathogenetic mechanisms, diagnosis, principles of treatment
- Intrahepatic cholestasis of pregnancy
- HIV, COVID-19, HAV, HBV, HCV, ZIKV infections in pregnancy
- Major puerperal disorders
- Disorders in amniotic fluid volume
- Operative vaginal birth: application of the obstetric suction cup and forceps
- CTG in labour and discussion of clinical cases
- Perineal trauma: treatment of perineal lacerations (with practical suturing approach)
- Placenta accreta spectrum disorders
- Surgical times of CT and obstetric-gynaecologist interventions
- Practice in the operating room: compression sutures, the surgical times of C-section, Cesarean hysterectomy and the main surgical interventions

ENDOCRINOLOGY

- Principles of endocrinology: definition of endocrinology, hormone synthesis and secretion, feedback mechanisms regulating hormone synthesis and secretion, hormone transport, hormone receptors, hormone actions.
- Pathophysiology of the hypothalamus-pituitary axis, disorders of the hypothalamus and pituitary gland: pituitary tumours, prolactinomas, acromegaly and gigantism, diabetes insipidus, hypopituitarism.
- Pathophysiology of the hypothalamic-pituitary-thyroid axis and thyroid disorders: thyroiditis, hypothyroidism, hyperthyroidism, thyroid cancer.
- Pathophysiology of calcium-phosphorus metabolism and disorders of the parathyroid glands: hypocalcemia, hypercalcemia, hypoparathyroidism, hyperparathyroidism. Osteoporosis and metabolic bone diseases.
- Pathophysiology of the endocrine pancreas, type 1 diabetes mellitus, type 2 diabetes mellitus, gestational diabetes mellitus, acute and chronic complications of diabetes mellitus, hypoglycemia.
- Pathophysiology of the hypothalamic-pituitary-adrenal axis: adrenocortical hypofunction and adrenal insufficiency (Addison's disease), adrenocortical hyperfunction, Cushing syndrome, pheochromocytoma.
- Pathophysiology of the hypothalamic-pituitary-ovarian axis: female hypogonadism, menstrual disorders and amenorrhea, hyperandrogenism in females, polyendocrine metabolic ovarian syndrome (PMOS), female infertility.
- Pathophysiology of the hypothalamic-pituitary-testicular axis: male hypogonadism, cryptorchidism, male infertility.
- Overweight, obesity, dyslipidemias and metabolic syndrome.

DIET. SCIENCES

- Human Nutrition: Macronutrients; Micronutrients; Basal Metabolism and Caloric Intakes; The Food Categories; Vitamins and Minerals; The Food Pyramid
- Nutritional needs and guidelines during Pregnancy
- Nutritional needs and guidelines during Lactation
- Nutritional aspects of Maternal and Child Health in Global Health: Maternal and Child mortality; Most common nutritional causes; The impact of nutrition on child development

COURSE STRUCTURE

The course consists of 70 hours of classroom teaching, composed of frontal lessons, working groups and interactive learning activities.

COURSE GRADE DETERMINATION

The final exam will be written and 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.

SUGGESTED TEXTBOOKS AND READING MATERIAL

GYNECOLOGY:

- Pescetto, De Cecco, Pecorari, Ragni. Ginecologia e ostetricia. 2017.
- Ragusa, Crescini; Urgenze ed Emergenze in Sala Parto; Piccin; October 2016.

ENDOCRINOLOGY:

- Manuale di Endocrinologia - Andrea Lenzi, Carocci Editore 2023.

OTHER MODULES:

- Didactic material delivered by the Professors.