DEGREE IN MIDWIFERY

Integrated Teaching: OBSTETRICAL-GYNECOLOGICAL PATHOLOGY, ENDOCRINOLOGY AND SEXOLOGY
SSD: MED/40, MED/13, MED/49
Credits: 5
Responsible Professor: Adele Anna Teleman
E-mail: adeleanna.teleman@unicamillus.org

MODULES: Gynaecology and Obstetrics
SSD: MED/40
Number of Credits: 3

Professor: Carlo Ticconi	CFU: 2	E-mail: carlo.ticconi@unicamillus.org
Professor: Niccolò Giovannini	CFU: 1	E-mail: niccolo.giovannini@unicamillus.org

MODULE: Endocrinology
SSD: MED/13
Number of Credits: 1
Professor: Marco Infante E-mail: marco.infante@unicamillus.org

MODULO: Applied Diet Sciences
SSD: MED/49
Number of Credits: 1
Professor: Adele Anna Teleman E-mail: adeleanna.teleman@unicamillus.org

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 specific learning outcomes of the program are coherent with the general provisions of the Bologna Process and the specific provisions of EC Directive 2005/36/EC. They lie within the European Qualifications Framework (Dublin Descriptors) as follows.
At the end of this teaching, students will be able to:

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

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

COURSE SYLLABUS

TICCONI

Physiopathology of implantation and early pregnancy
Miscarriage: aetiology, clinical forms, diagnosis, principles of treatment
Ectopic pregnancy: aetiology, pathophysiology, clinical presentation, diagnosis, principles of treatment
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

GIOVANNINI

Obstetric interventions
Rhythmic variations of labour, obstructed labour and uterine rupture
Malpositions and malpresentations
Prolapse of the umbilical cord
Shoulder dystocia
Disseminated intravascular coagulation

INFANTE

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: hypocalcaemia, 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, hypoglycaemia.
Pathophysiology of the hypothalamic-pituitary-adrenal axis: adrenocortical hypofunction and adrenocortical insufficiency (Addison's disease), adrenocortical hyperfunction, Cushing syndrome, pheochromocytoma (chromaffin cell tumour of the adrenal medulla).
Pathophysiology of the hypothalamic-pituitary-ovarian axis: hypogonadism, menstrual disorders and amenorrhea, hyperandrogenism and polycystic ovary syndrome, female infertility.
Pathophysiology of the hypothalamic-pituitary-testicular axis: hypogonadism, cryptorchid-ism, male infertility. Obesity, metabolic syndrome, and dyslipidaemias.

TELEMAN

-Human Nutrition: Macronutrients; Micronutients; 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
MODULES OF *TELEMAN*
The preparation of the students will be assessed through a written exam at the end of the course composed of 30 multiple choice questions.
MODULES OF *TICCONI*, *GOVANNINI*, *INFANTE*
The final evaluation of the integrated course will be oral. The evaluation criteria for the oral exam will be acquired knowledge (range score: 0-8), making judgements (range score: 0-8), communication skills (range score: 0-7), learning skills (0-7). The students must be able to demonstrate their knowledge on the contents, to organize in a critical way the topics established by the program, using an appropriate language.

OPTIONAL ACTIVITIES
Students can request optional workshops to deepen some specific topics.

READING MATERIALS
-Mayes' Midwifery. Macdonald, Johnson. Elsevier. 2017
-Ragusa, Crescini; Urgenze ed Emergenze in Sala Parto; Piccin; October 2016
-G. Bolis: Manuale di Ginecologia e Ostetricia – II Edizione 2017 – EdiSES, Napoli
-Dewhurst 's Textbook of Obstetrics and Gynaecology 7th ed. Edited by D. Keith Edmonds. EMSI Editore, Roma. Pag. 265-75, 2012.
-Fredric E. Wondisford. Essentials of Endocrinology and Metabolism. Springer International Publishing (2020). ISBN: 978-3-030-39571-1.
-Aled Rees, Miles Levy, Andrew Lansdown. Clinical Endocrinology and Diabetes at a Glance. Wiley (2017). ISBN-13: 978-1119128717.
-Lanham-New, Susan A. Lanham-New, Ian A. MacDonald, Helen M. Roche. « Nutrition and Metabolism » (The Nutrition Society Textbook Book 6) Wiley-Blackwell. Second Edition 2011.
-Didactic material (lessons in pdf, papers, etc.) delivered by the Professors