**SCHOOL: HEALTH SCIENCES - MEDICAL SCHOOL**

**APPENDIX A9**
Course Outlines

**"Women's Health"**
("MSc in Women's Health")

ATHENS 2024

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**CONTENTS**

**1st SEMESTER OF STUDIES**



**2nd SEMESTER OF STUDIES**



**3rd SEMESTER OF STUDIES**

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**1st SEMESTER OF STUDIES**

(1) GENERAL

COURSE OUTLINE

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(2) LEARNING OUTCOMES

Learning Outcomes
In the Research Methodology - Statistics unit, students are asked to become familiar with the ways they can conduct clinical-laboratory research using international literature through computers. Bibliographic Research using computers is the key to Evidence-Based Medicine and the foundation for writing both research theses and reviews to complete the postgraduate program. Exposure to Statistics, Descriptive Statistics, and Biostatistics through tools such as: T-Test, Chi-Square Test, Non-Parametric Tests, Correlation Coefficients, Simple Linear Regression, ANOVA, Multiple Linear Regression, Logistic Regression teaches us how to evaluate laboratory findings both from our own studies and from other researchers, how to differentiate types of medical research, understand sampling methods and the necessity of repeated measurements. Proper methodology and correct statistical processing of our research results can lead our studies to statistically significant results, enabling us to publish valuable papers in reputable international journals with high impact factors.

**General Competencies**

Taking into account the general competencies that a graduate should have acquired (as stated in the Diploma Supplement and listed below), which of these does the course aim to address?

- Search, analysis, and synthesis of data and information, using the necessary technologies
- Adaptation to new situations
- Decision making
- Independent work

- Teamwork
- Working in an international environment
- Working in an interdisciplinary environment
- Generation of new research ideas
- Project design and management
- Respect for diversity and multiculturalism
- Respect for the natural environment
- Demonstration of social, professional, and ethical responsibility and sensitivity to gender issues
- Exercise of criticism and self-criticism
- Promotion of free, creative, and inductive thinking
- Other...

**The course aims at the following competencies:**

- Search, analysis, and synthesis of data and information using the necessary technologies
- Decision making
- Independent work
- Generation of new research ideas
- Promotion of free, creative, critical, and inductive thinking

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**(3) COURSE CONTENT**

- Evidence-based medicine
- Literature search using computers
- Introduction to Biostatistics
- Definition of Statistics
- Descriptive Statistics
- T-Test
- Chi-Square Test
- Non-parametric tests
- Correlation coefficients

- Simple linear regression
- ANOVA
- Multiple linear regression
- Logarithmic dependence
- Evaluation of laboratory findings
- Types of medical research
- Sampling method
- Repeated measurements

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**(4) TEACHING AND LEARNING METHODS – ASSESSMENT**

**Mode of Delivery:**
Face-to-face, Distance learning, etc.
**Delivery method:** Both face-to-face and distance learning

**USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES**
Use of ICT in Teaching, in Laboratory Training, and in Communication with students
Support of the learning process via the Postgraduate Program's website

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**TEACHING ORGANIZATION**
Detailed description of teaching methods:
Lectures, Seminars, Laboratory Exercises, Field Work, Literature Study & Analysis, Tutorials, Internship (Placement), Clinical Training, Artistic Workshop, Interactive Teaching, Educational Visits, Project Work, Essay/Assignment Writing, Artistic Creation, etc.

Student workload per learning activity and unguided study hours according to ECTS principles:

| **Activity** | **Semester Workload** |
|---|---|
| Lectures | 39 |
| Laboratory/Clinical Exercises | 0 |
| Independent Study | 61 |
| **Total Course Load** | 100 (30 hours per ECTS credit) |

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**STUDENT ASSESSMENT**
**Language of Assessment:** Greek
**Assessment Method:** Written final exam including multiple-choice questions (as per the regulations of the Postgraduate Program)

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**(5) RECOMMENDED BIBLIOGRAPHY**

- **Suggested Bibliography:** Listed in the educational notes of each instructor
- **Relevant Scientific Journals:** Scientific articles are suggested in the educational notes and also mentioned orally

**COURSE OUTLINE**
**(1) GENERAL**

**SCHOOL:** Health Sciences
**DEPARTMENT:** Medical School
**LEVEL OF STUDIES:** Postgraduate
**COURSE CODE:** _
**SEMESTER:** 1st Semester
**COURSE TITLE:** Gynecological Endocrinology

**INDEPENDENT TEACHING ACTIVITIES**
(In case credits are awarded separately for parts of the course, e.g., lectures, lab work, etc. If credits are awarded as a whole, indicate the weekly teaching hours and total ECTS credits)

| Lectures | Weekly Hours: 3 | ECTS Credits: 8 |

**COURSE TYPE**
(General background, specialized background, skills development, specialization)
Core Compulsory

**PREREQUISITE COURSES:** _
**LANGUAGE OF INSTRUCTION AND EXAMINATIONS:** Greek
**COURSE OFFERED TO ERASMUS STUDENTS:** _
**COURSE WEBSITE (URL):** _

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**(2) LEARNING OUTCOMES**

**Learning Outcomes**
This section describes the learning outcomes of the course: the specific knowledge, skills, and competencies of the appropriate level that students will acquire after successfully completing the course.

Refer to Appendix A:

- Description of the level of Learning Outcomes for each cycle of study according to the Qualifications Framework of the European Higher Education Area
- Descriptive Indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning
- Appendix B: Summary Guide for Writing Learning Outcomes

The core of the Gynecological Endocrinology unit is the understanding of the regulation, function, and disorders of the endocrine glands, with a detailed focus on:

- The Hypothalamus–Pituitary–Thyroid Axis
- The Hypothalamus–Pituitary–Ovary–Uterus Axis
- The Hypothalamus–Pituitary–Adrenal–Gonads Axis

We will delve into potential disorders or dysfunctions that may occur within these axes, both during the late reproductive and non-reproductive stages of a woman's life, as well as disorders that may have originated in the reproductive years.

More specifically, students will study the biosynthesis, release, transport, and action of hormones from the endocrine glands, as well as their metabolism and regulatory mechanisms.
The control of the Hypothalamus–Pituitary–Ovary–Uterus Axis will be examined using hormone dynamic testing, and mechanisms behind disorders such as anovulation, menstrual irregularities, and infertility will be analyzed.
Within the Hypothalamus–Pituitary–Adrenal–Gonads Axis, topics include hyperandrogenism, Congenital Adrenal Hyperplasia, pituitary adenomas, and hypogonadism.
Regarding the Hypothalamus–Pituitary–Thyroid Axis, students will explore all forms of thyroid disease relevant to the field of gynecological endocrinology.
The parathyroid glands will be studied in terms of the etiology, diagnosis, and management of primary and secondary hypoparathyroidism, and their impact on bone metabolism and postmenopausal osteoporosis.

**General Competencies**
Taking into account the general competencies a graduate must acquire (as listed in the Diploma Supplement), which of the following does the course aim to develop?

- Searching, analyzing, and synthesizing data and information, using the necessary technologies
- Decision-making
- Autonomous work
- Production of new research ideas

- Promotion of free, creative, critical, and inductive thinking

Other competencies (also included in the full list but not all checked here):

- Adaptation to new situations
- Teamwork
- Working in an international environment
- Working in an interdisciplinary environment
- Project planning and management
- Respect for diversity and multiculturalism
- Respect for the natural environment
- Demonstration of social, professional, and ethical responsibility and sensitivity to gender issues
- Critical and self-critical thinking

**(3) COURSE CONTENT**

- Hypothalamus – Pituitary – Thyroid Axis
- Hypothalamus – Pituitary – Ovary – Uterus Axis
- Hormones: biosynthesis – release
- Hormones: transport – action
- Hormones: metabolism – regulatory mechanisms
- Dynamic hormone testing in female reproduction
- Ovulatory dysfunctions
- Hyperandrogenemia
- Menstrual disorders
- Contraception
- Congenital Adrenal Hyperplasia
- Infertility
- Pituitary adenomas – hypogonadism
- Hypoparathyroidism – Etiopathogenesis – Diagnosis – Management

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**(4) TEACHING AND LEARNING METHODS – ASSESSMENT**

**MODE OF DELIVERY**
In-person and distance learning

**USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT)**
Use of ICT in Teaching, Laboratory Training, and Communication with Students
Support of the learning process via the postgraduate program's website

**TEACHING ORGANIZATION**
Detailed description of the teaching methods:
Lectures, Seminars, Laboratory Exercises, Fieldwork, Literature Study & Analysis, Tutorials, Practicum (Placement), Clinical Practice, Artistic Workshop, Interactive Teaching, Educational Visits, Project Development, Paper Writing, Artistic Creation, etc.

Student study hours are listed for each learning activity, including unguided study hours in accordance with ECTS principles:

| **Activity** | **Semester Workload (hours)** |
|---|---|
| Lectures | 39 |
| Laboratory/Clinical exercises | 0 |
| Independent Study | 61 |
| **Total Course Load** | **100** |

(*30 workload hours = 1 ECTS credit*)

**STUDENT ASSESSMENT**
Language of Assessment: Greek
Assessment Method: Written final examination including multiple-choice questions (Postgraduate Program Regulations)

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**(5) RECOMMENDED BIBLIOGRAPHY**

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**COURSE OUTLINE**

**(1) GENERAL INFORMATION**

**SCHOOL:** School of Health Sciences
**DEPARTMENT:** Medical School – 2nd Surgical Department, Aretaieio Hospital
**LEVEL OF STUDIES:** Postgraduate
**COURSE CODE:** –
**SEMESTER:** First Semester

**COURSE TITLE:** *Climacteric – Menopause*

**INDEPENDENT TEACHING ACTIVITIES**
(when ECTS credits are awarded per activity, e.g., Lectures, Laboratory Exercises, etc.)
If ECTS credits are awarded as a whole, indicate the weekly teaching hours and total credits:

| Weekly Teaching Hours | ECTS Credits |
|---|---|
| Lectures: 3 | 8 |

**COURSE TYPE:** Core compulsory
**PREREQUISITE COURSES:** None
**LANGUAGE OF INSTRUCTION AND EXAMINATIONS:** Greek
**COURSE OFFERED TO ERASMUS STUDENTS:** No
**COURSE WEBSITE (URL):** –

## (2) LEARNING OUTCOMES

### Learning Outcomes
This section describes the learning outcomes of the course — the specific knowledge, skills, and competencies at the appropriate level that students will acquire upon successful completion of the course.

Refer to Appendix A:

- Description of the Level of Learning Outcomes for each cycle of studies according to the Qualifications Framework of the European Higher Education Area.
- Descriptive Indicators of Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning.

And Appendix B:

- Concise Guide to Writing Learning Outcomes.

**Climacteric** is the period in a woman's life during which there is a decline in ovarian function, characterized by changes in the menstrual cycle and often by various symptoms — the most characteristic and bothersome being vasomotor disturbances. It lasts 3 to 10 years before menopause, which typically occurs between the ages of 50 and 52 for Mediterranean populations. Menopause is the permanent cessation of menstruation and is always defined retrospectively, after 12 months of amenorrhea, marking the transition from the reproductive to the non-reproductive stage of a woman's life.

This transition is also marked by psychological disturbances due to hormonal imbalances and the fear of aging. Menopausal symptoms are primarily due to the lack of estrogen and appear in approximately 50% of women. Atrophic changes in the skin and mucous membranes can lead to symptoms of urogenital atrophy. The

lack of estrogen also contributes long-term to increased cardiovascular disease, the onset of osteoporosis, and cognitive disorders.

After individualized clinical and laboratory evaluation, hormone therapy may be administered to women in need, aiming to significantly improve their quality of life and help them cope with the increased demands of modern life due to increased life expectancy.

This section will explore introductory topics and definitions, such as:

- Physiology of climacteric and menopause
- Early menopause
- Primary ovarian insufficiency
- Surgical menopause
- Drug-induced menopause

Additionally, it will examine clinical presentation and symptoms such as:

- Acute climacteric syndrome
- Short-term and long-term effects of menopause

Furthermore, the diagnostic and therapeutic approaches will be studied, including:

- Laboratory diagnosis
- Hormone therapy
- Continuous combined hormone therapy
- Cyclical hormone therapy
- Systemic hormone therapy
- Transdermal hormone therapy
- Local hormone therapy
- Tibolone and SERMs in the prevention and treatment of postmenopausal osteoporosis
- Hormone therapy in autoimmune diseases

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**General Competencies**
Taking into account the general competencies that graduates should have acquired (as listed in the Diploma Supplement and outlined below), which of these does the course aim to develop?

- Search, analysis, and synthesis of data and information using the necessary technologies
- Adaptation to new situations
- Decision-making
- Independent work
- Teamwork
- Work in an international environment
- Work in an interdisciplinary environment
- Generation of new research ideas
- Project planning and management
- Respect for diversity and multiculturalism
- Respect for the natural environment
- Demonstration of social, professional, and ethical responsibility and sensitivity to gender issues
- Critical and self-critical thinking
- Promotion of free, creative, and inductive thinking
- Other...

The course specifically aims to develop the following:

- Search, analysis, and synthesis of data and information using the necessary technologies
- Decision-making
- Independent work
- Generation of new research ideas
- Promotion of free, creative, critical, and inductive thinking

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**(3) COURSE CONTENT**

- Physiology of Climacteric and Menopause
- Early Menopause
- Primary Ovarian Insufficiency
- Surgical Menopause

- Drug-Induced Menopause
- Acute Climacteric Syndrome
- Short-Term Effects
- Long-Term Effects
- Climacteric-Menopause Diagnosis
- Climacteric-Menopause Hormone Therapy
- Continuous Combined Hormone Therapy
- Cyclical Hormone Therapy
- Systemic Hormone Therapy
- Transdermal Hormone Therapy
- Local Hormone Therapy
- Hormone Therapy, Tibolone, and SERMs in the Prevention and Treatment of Postmenopausal Osteoporosis
- Hormone Therapy in Autoimmune Diseases

## (4) TEACHING AND LEARNING METHODS – ASSESSMENT

**MODE OF DELIVERY**
Face-to-face, distance learning, etc.:
**In-person and distance learning**

**USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT)**
Use of ICT in Teaching, Laboratory Education, Communication with students:
**Support of the learning process through the postgraduate program's website**

**TEACHING ORGANIZATION**
Detailed description of teaching methods and approaches:
Lectures, Seminars, Laboratory Exercises, Field Work, Literature Study & Analysis, Tutorials, Internships (Placements), Clinical Practice, Artistic Workshop, Interactive Teaching, Educational Visits, Project Development, Essay Writing, Artistic Creation, etc.

Student study hours for each learning activity are listed, including unguided study hours according to ECTS principles:

| Activity | Semester Workload (Hours) |
|---|---|
| Lectures | 39 |
| Laboratory/Clinical Exercises | 0 |
| Independent Study | 61 |

**Total Course Workload** (30 hours per ECTS credit) **100**

**STUDENT ASSESSMENT**
Language of assessment: **Greek**
Assessment method: **Written final examination including multiple-choice questions (according to the postgraduate program's regulations)**

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**(5) RECOMMENDED BIBLIOGRAPHY**

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**COURSE OUTLINE**

**(1) GENERAL INFORMATION**

**SCHOOL:** School of Health Sciences
**DEPARTMENT:** Medical School – 2nd Surgical Clinic, Aretaieio Hospital
**LEVEL OF STUDY:** Postgraduate
**COURSE CODE:**
**SEMESTER:** 1st Semester
**COURSE TITLE: Skeletal Health in Women**

**INDEPENDENT TEACHING ACTIVITIES**
If credits are awarded for distinct components (e.g., Lectures, Labs), indicate so. If credits are awarded for the course as a whole, indicate weekly teaching hours and total credits:

| Teaching Type | Weekly Hours | Credits |
|---|---|---|
| Lectures | 3 | 8 |

**COURSE TYPE:** Core requirement
**PREREQUISITES:** None
**LANGUAGE OF INSTRUCTION & EXAMINATION:** Greek
**COURSE AVAILABLE TO ERASMUS STUDENTS:** No
**COURSE WEBSITE (URL):** _

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**(2) LEARNING OUTCOMES**

**Learning Outcomes:**
Osteoporosis is classified as primary or secondary.
Primary osteoporosis includes:
a) **Postmenopausal osteoporosis**, occurring in women after menopause
b) **Senile osteoporosis**, affecting both women and men typically after the age of 70.

**Secondary osteoporosis** occurs due to underlying conditions such as: diabetes, hyperparathyroidism, sickle cell anemia, multiple myeloma, prolonged immobility, rheumatoid arthritis, hypogonadism, hyperthyroidism, and malabsorption syndromes. It may also result from long-term medication use (e.g., cortisone, thyroxine, antiepileptics, heparin).

Postmenopausal osteoporosis usually appears after age 50, characterized by reduced bone mass and disturbed bone architecture, leading to increased fragility and fracture risk. Typical fractures are **low-impact**, meaning they occur without significant force. Common fracture sites include the **lumbar spine, wrist, and hip**.

Osteoporosis is significantly more common in women and worsens with age. It often remains **asymptomatic for years**, thus called the “silent disease,” with its first symptom often being a fracture.

It is essential to identify individuals at **high risk of fracture** for timely treatment. The routine diagnosis of osteoporosis is done via **bone density measurement (DXA)** following clinical evaluation. Not all women need immediate testing post-menopause; premenopausal women may be tested if risk factors exist.

Bone density should ideally be measured at the **spine and dominant hip**. If only one site can be assessed, spine measurements are preferred in younger women, and hip measurements in older women.

**Both osteopenia and osteoporosis require regular medical monitoring and treatment**. Medications cannot fully restore lost bone mass or damaged bone architecture, highlighting the importance of **early prevention**.

Modern treatments aim to **inhibit further bone loss**, **increase bone mass**, and **reduce fracture risk**. Therapeutic drugs are tailored to the patient and act by either inhibiting bone resorption or promoting bone formation.

The course module on **bone health and pathology** will cover:

- **Joint anatomy and pathophysiology**
- **Bone biology and remodeling**
- **Genetics of osteoporosis**
- **Endocrine signaling and hormone mechanisms**
- **Hormone receptors, endocrine axes, and target organs**

- **Measurements of Ca, P, Mg, Vitamin D, and Parathyroid Hormone**
- **Inflammatory and autoimmune musculoskeletal diseases**
- **Osteoclastogenesis and metabolic bone disorders**, along with differential diagnosis

**Diagnostic approaches** covered will include:

- Imaging (X-rays, DXA, PqCT)
- Clinical osteoporosis assessment (FRAX tool)
- Interpretation of bone density measurements

**Therapeutic strategies** will include:

- **Anti-resorptive and anabolic agents**, such as:
    - Bisphosphonates
    - Teriparatide
    - Denosumab
    - Strontium ranelate
    - New-generation drugs

The course will also examine conditions and medications affecting **bone metabolism**, including:

- Osteoporosis and corticosteroids
- Thyroid calcium and bone interaction
- MEN1 syndrome and bone
- Skeletal effects in Turner syndrome
- Thyrotropin effects and related disorders
- Osteoporosis treatments and dental implants

**General Competencies**
Taking into account the general competencies that the graduate should have acquired (as listed in the Diploma Supplement and cited below), which one(s) does the course aim to develop?

- Searching, analyzing, and synthesizing data and information, using the necessary technologies
- Adaptation to new situations
- Decision making

- Autonomous work
- Teamwork
- Work in an international environment
- Work in an interdisciplinary environment
- Generation of new research ideas
- Project design and management
- Respect for diversity and multiculturalism
- Respect for the natural environment
- Demonstration of social, professional, and ethical responsibility and sensitivity on gender issues
- Exercise of critical and self-critical thinking
- Promotion of free, creative, and inductive thinking
- … Others …
- …
- Searching, analyzing, and synthesizing data and information, using the necessary technologies
- Decision making
- Autonomous work
- Generation of new research ideas
- Promotion of free, creative, critical, and inductive thinking

**(3) COURSE CONTENT**

- Anatomy - Physiology - Pathology of joints
- Bone Biology
- Bone Remodeling
- Genetics of Osteoporosis
- Transmission of endocrine messages – Hormones – Mechanism of hormone action – Hormone receptors – Endocrine axes and target organs
- Measurement of Ca, P, Mg
- Vitamin D - Parathyroid hormone
- Inflammatory diseases of the Musculoskeletal System

- Autoimmune diseases and osteoclastogenesis
- Metabolic bone diseases – Differential diagnosis
- Imaging methods for skeletal assessment: Simple X-ray
- Bone Densitometry: Dual-energy X-ray Absorptiometry (DXA) - pQCT
- Clinical assessment of Bone Densitometry
- Osteoporosis and corticosteroids
- Osteoporosis treatment - Bisphosphonates
- Osteoporosis treatment - Teriparatide
- Osteoporosis treatment - Denosumab
- Osteoporosis treatment - Strontium ranelate
- Dental implants and osteoporosis treatment
- Thyroid Ca and bones
- MEN 1 syndrome and bones
- Skeletal manifestations of Turner syndrome
- Bone effects of thyroid-stimulating hormone and related disorders
- Male osteoporosis
- Bone effects of androgen deprivation in prostate cancer patients

**(4) TEACHING AND LEARNING METHODS - ASSESSMENT**

**Delivery mode:**
Face-to-face, Distance education, etc.
In-person and remote

**Use of Information and Communication Technologies (ICT):**
Use of ICT in Teaching, Laboratory Training, Communication with students
Support of the learning process through the postgraduate program’s website

**Organization of Teaching:**
Detailed description of teaching methods:
Lectures, Seminars, Laboratory Exercise, Field Exercise, Study & analysis of bibliography, Tutorials, Internship (Placement), Clinical Practice, Artistic Workshop, Interactive teaching, Educational visits, Project preparation, Writing assignments, Artistic creation, etc.

Student study hours for each learning activity and hours of independent study according to ECTS principles are recorded:

| Activity | Semester Workload (hours) |
|---|---|
| Lectures | 39 |
| Laboratory/Clinical work | 0 |
| Independent Study | 61 |
| Total Course Workload | 100 |

**Student Assessment:**
Language of assessment: Greek
Method of assessment: Written final exam including multiple choice questions (Postgraduate Program Operation Regulations)

**(5) RECOMMENDED BIBLIOGRAPHY**

**SECOND SEMESTER OF STUDIES**

**(1) GENERAL**

**COURSE OUTLINE**

SCHOOL: HEALTH SCIENCES
DEPARTMENT: MEDICAL SCHOOL
LEVEL OF STUDY: POSTGRADUATE
COURSE CODE:
SEMESTER: SECOND SEMESTER
COURSE TITLE: METABOLIC DISORDERS AND CARDIOVASCULAR DISEASES IN WOMEN

**INDEPENDENT TEACHING ACTIVITIES**
In case credit units are awarded to distinct parts of the course (e.g., Lectures, Laboratory Exercises, etc.)
If the credit units are awarded for the course as a whole, specify the weekly teaching hours and total credit units:
WEEKLY TEACHING HOURS
Lectures: 3
CREDIT UNITS: 8

COURSE TYPE: Core compulsory
PREREQUISITES: _
LANGUAGE OF INSTRUCTION AND EXAMINATIONS: Greek
COURSE OFFERED TO ERASMUS STUDENTS: _
COURSE WEBSITE (URL): _

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**(2) LEARNING OUTCOMES**

Learning Outcomes
The learning outcomes of the course are described: the specific knowledge, skills, and competencies at an appropriate level that students will acquire after successfully completing the course.
Consult Appendix A:

- Description of the Level of Learning Outcomes for each study cycle according to the European Higher Education Qualifications Framework
- Descriptive Indicators of Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B
- Summary Guide for writing Learning Outcomes

**Content and outcomes of the course:**
During menopause, the decline in estrogen levels affects a woman's metabolism and cardiovascular system. Initially, total cholesterol and LDL cholesterol levels increase while HDL cholesterol decreases. At the same time, there is a marked increase in abdominal fat tissue, along with conditions predisposing to metabolic syndrome, prediabetes, and diabetes, as carbohydrate metabolism is dysregulated and insulin sensitivity decreases. The effect of estrogens on the cardiovascular system may manifest through changes in risk factors such as blood pressure, body weight, insulin resistance, lipid profile, and hematological factors. Estrogens have a protective role in the formation of atherosclerotic plaques in blood vessels and consequently in the occurrence of coronary artery disease and stroke. Therefore, the prevention of cardiovascular diseases by modifying risk factors and lifestyle is important. Cardiometabolic risk factors include hypertension, obesity, dyslipidemia, diabetes, smoking, consumption of fats, salt, and alcohol. Proper nutrition combined with physical activity can limit all predisposing factors for cardiovascular diseases.

In the section on Metabolic Syndrome-Diabetes, students will encounter topics such as metabolic syndrome-obesity, insulin resistance, prediabetes - type II diabetes during menopause transition, the effect of hormone therapy on insulin resistance-prediabetes-diabetes.

In the Metabolism - Lipid Profile section, the lipid profile disorders during menopause transition and the effect of Hormone Therapy on the lipid profile will be analyzed.

Finally, in the Cardiovascular Risk section, cardiovascular effects of premature ovarian failure, cardiovascular effects of early ovarian failure-menopause, prevention of cardiovascular diseases in postmenopausal women, the role of Hormone Therapy in preventing cardiovascular diseases, the reduction of cardiovascular risk with non-hormonal therapy, and Hormone Therapy and cardiovascular risk will be analyzed.

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**General Competencies**
Considering the general competencies that a graduate should have acquired (as

stated in the Diploma Supplement and listed below), which of these does the course aim at?

- Searching, analyzing, and synthesizing data and information using necessary technologies
- Adapting to new situations
- Decision making
- Autonomous work
- Teamwork
- Working in an international environment
- Working in an interdisciplinary environment
- Generating new research ideas
- Project design and management
- Respect for diversity and multiculturalism
- Respect for the natural environment
- Demonstrating social, professional, and ethical responsibility and sensitivity on gender issues
- Exercising critical and self-critical thinking
- Promoting free, creative, and inductive thinking
- Other...
- Searching, analyzing, and synthesizing data and information using necessary technologies
- Decision making
- Autonomous work
- Generating new research ideas
- Promoting free, creative, critical, and inductive thinking
-

**(1) GENERAL**

**SCHOOL:** School of Health Sciences
**DEPARTMENT:** Medical School
**LEVEL OF STUDIES:** Postgraduate
**COURSE CODE:** –

**SEMESTER:** 2nd Semester
**COURSE TITLE: Prevention of Breast and Gynecological Cancers**

**INDEPENDENT TEACHING ACTIVITIES**
(If credits are awarded separately for different parts of the course, e.g., lectures, labs, etc.)
(If credits are awarded as a whole, indicate weekly teaching hours and total ECTS credits)

- **WEEKLY TEACHING HOURS:** –
- **ECTS CREDITS:**
    - Lectures: 3 hours/week
    - Total: 8 ECTS

**COURSE TYPE:** Core (Compulsory)
**PREREQUISITES:** None
**LANGUAGE OF INSTRUCTION AND EXAMINATION:** Greek
**OFFERED TO ERASMUS STUDENTS:** No
**COURSE WEBSITE (URL):** –

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**(2) LEARNING OUTCOMES**

The learning outcomes describe the specific knowledge, skills, and competencies students will acquire upon successful completion of the course.
Refer to Annex A for:

- Description of the Level of Learning Outcomes for each cycle of studies according to the European Higher Education Area Qualifications Framework
- Level Descriptors 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning
- Concise Guide for Writing Learning Outcomes

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**Course Content and Learning Outcomes**

**BREAST CANCER UNIT**

Estrogens appear to promote breast cancer. Men develop breast cancer 100 times less frequently than women. Women with a longer reproductive period (early menarche and late menopause) are considered at slightly higher risk for breast cancer. The same applies to women who have long-term use of hormones through oral contraceptives, multiple IVF attempts, or estrogen-based hormone therapies.

Therefore, hormone therapy must be personalized to ensure the woman's safety while providing the potential benefits of treatment.

This unit covers:

- Preventive laboratory and radiological screening for all women before and during hormone therapy
- The incidence of breast cancer during the pre/perimenopausal period with or without hormone therapy
- Therapeutic management of climacteric symptoms in menopausal women with breast cancer

**GYNECOLOGICAL CANCER UNIT**

During the perimenopausal and postmenopausal periods, women who have been treated for gynecological cancers (e.g., endometrial, cervical, ovarian, vaginal, or vulvar cancer) may require hormone therapy.

This unit covers:

- The cases where hormone therapy can be administered
- Preventive laboratory and radiological screening of the gynecological system before such therapies

Specifically covered:

- Hormone therapy and the incidence of gynecological cancer in the pre/perimenopausal period
- Hormone therapy and the incidence of other cancers during this time
- Therapeutic management of menopausal women with:
    - Endometrial cancer
    - Cervical cancer
    - Ovarian cancer
    - Vaginal cancer
    - Vulvar cancer

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**(3) COURSE CONTENT**

- Atrophy of skin and mucous membranes
- Genitourinary Syndrome of Menopause (GSM)
- Hormonal Therapy for GSM

- Non-Hormonal Therapy for GSM
- Decrease in sexual desire
- Menopause and Mental Health: Research and Future Perspectives
- Psycho-emotional instability
- Neurological disorders
- Cognitive disorders
- Depression
- Dementia / Alzheimer’s Disease
- Tools for managing cognitive and psycho-emotional disorders
- Pharmacological treatment of cognitive disorders
- Pharmacological treatment of psycho-emotional disorders

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**(4) TEACHING AND LEARNING METHODS - EVALUATION**

**DELIVERY METHOD:**
Face-to-face, Distance learning
**Technological Tools:**
Use of ICT in teaching, laboratory training, and communication with students.
Support for the learning process through the MSc program's online platform.

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**TEACHING ORGANIZATION:**
Detailed description of teaching methods:

- Lectures
- Seminars
- Laboratory exercises
- Field practice
- Study & analysis of literature
- Tutorials
- Practicum / Placement
- Clinical training
- Artistic workshops
- Interactive teaching

- Educational visits
- Project implementation
- Essay / paper writing
- Artistic creation, etc.

**Student workload per learning activity and non-guided study hours (as per ECTS standards):**

| **Activity** | **Semester Workload** |
|---|---|
| Lectures | 39 hours |
| Lab/Clinical Exercises | 0 hours |
| Independent Study | 61 hours |
| **Total Course Load** | **100 hours** |

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**STUDENT ASSESSMENT:**

- **Assessment Language:** Greek
- **Assessment Method:** Written final exam with multiple-choice questions (According to the MSc Program Regulations)

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**(5) RECOMMENDED BIBLIOGRAPHY**

– *(To be provided separately or in the actual syllabus materials)*

**COURSE OUTLINE**
**(1) GENERAL**

**SCHOOL**: School of Health Sciences
**DEPARTMENT**: Medical School
**LEVEL OF STUDIES**: Postgraduate
**COURSE CODE**: –
**SEMESTER**: 2nd Semester
**COURSE TITLE**: **Prevention of Breast and Gynecological Cancers**

**INDEPENDENT TEACHING ACTIVITIES**
(If ECTS credits are awarded separately for components such as Lectures, Laboratory Exercises, etc.

If ECTS credits are awarded as a whole, indicate the weekly teaching hours and total credits)

**WEEKLY TEACHING HOURS**: –
**ECTS CREDITS**:

- **Lectures**: 3 hours/week
- **Credits**: 8

**COURSE TYPE**: Core (Compulsory)
**PREREQUISITE COURSES**: None
**LANGUAGE OF INSTRUCTION AND EXAMINATIONS**: Greek
**COURSE AVAILABLE TO ERASMUS STUDENTS**: No
**COURSE WEBPAGE (URL)**: –

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## (2) LEARNING OUTCOMES

**Learning Outcomes**
This section describes the learning outcomes of the course: the specific knowledge, skills, and competencies of an appropriate level that students will acquire upon successful completion of the course.

*Refer to Annex A:*
• Description of the Level of Learning Outcomes for each cycle of studies according to the Qualifications Framework of the European Higher Education Area
• Descriptive Indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning
• Summary Guide for Writing Learning Outcomes

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**Course Content and Learning Outcomes**:

**BREAST CANCER MODULE**

Estrogens appear to favor the development of breast cancer. Men develop breast cancer 100 times less frequently than women. Women with a longer reproductive lifespan — such as those with early menarche and late menopause — are considered at slightly increased risk for breast cancer. The same applies to women who use hormones long-term through contraceptive pills, multiple IVF attempts, or hormonal therapies involving estrogens.

Therefore, hormone therapy should be individualized to ensure the woman's safety while maximizing the potential benefits of such treatment. This module will explore preventive laboratory and radiological screening that should be performed for each woman before and during hormone therapy.

Additionally, the incidence of breast cancer during the premenopausal and perimenopausal periods in women with and without hormone therapy will be examined. Finally, therapeutic approaches to managing climacteric (menopausal) symptoms in women with breast cancer will be addressed.

**GYNECOLOGICAL CANCER MODULE**

During the perimenopausal and postmenopausal periods, women who have been treated for gynecological cancers — such as cancer of the endometrium, cervix, ovaries, vagina, and vulva — may require hormone therapy. This module will examine in which cases hormone therapy can be administered and the necessary preventive laboratory and radiological evaluations of the gynecological system prior to such treatments.

Specifically, the following topics will be studied:

- Hormone therapy and the incidence of gynecological cancer in the pre/perimenopausal period
- Hormone therapy and the incidence of other cancers in the pre/perimenopausal period
- Therapeutic management of women with:
    - Endometrial cancer
    - Cervical cancer
    - Ovarian cancer
    - Vaginal cancer
    - Vulvar cancer during menopause

- **Course Content and Outcomes:**

  **BREAST CANCER UNIT**
  Estrogens appear to promote breast cancer. Men develop breast cancer 100 times less frequently than women. Women who have had a longer reproductive span in their lives, such as early menarche and late menopause, are considered to be at slightly increased risk for breast cancer. The same applies to women who undergo long-term hormone use through contraceptive pills, multiple IVF attempts, and hormonal treatments with estrogens. Therefore, hormone therapy must be administered on an individualized basis to ensure the woman’s safety while also providing the benefits of hormone therapy. In this unit, we will study the preventive laboratory and radiological screening that should be performed on every woman before and during hormone therapy. Additionally, we will examine the incidence of breast cancer in the pre/perimenopausal period among women with and without hormone

therapy. Finally, we will focus on the therapeutic management of climacteric symptoms in menopausal women with breast cancer.

- **GYNECOLOGICAL CANCER UNIT**
  During the perimenopausal and postmenopausal periods, women who have been treated for gynecological cancers—such as endometrial cancer, cervical cancer, ovarian cancer, vaginal cancer, and vulvar cancer—may be in need of hormone therapy. In this unit, we will study the cases in which hormone therapy may be administered, as well as the preventive laboratory and radiological screening of the gynecological system that precedes these treatments. More specifically, we will study: hormone therapy and the incidence of gynecological cancer during the pre/perimenopausal period; hormone therapy and the incidence of other cancers during the pre/perimenopausal period; and the therapeutic management of women with endometrial cancer, cervical cancer, ovarian cancer, vaginal cancer, and vulvar cancer during menopause.

**General Competencies**

Taking into account the general competencies that a graduate should have acquired (as listed in the Diploma Supplement and presented below), which of these does the course aim to develop?

- Search for, analysis and synthesis of data and information, using the necessary technologies
- Adaptation to new situations
- Decision-making
- Autonomous work
- Teamwork
- Working in an international environment
- Working in an interdisciplinary environment
- Generation of new research ideas
- Project planning and management
- Respect for diversity and multiculturalism
- Respect for the natural environment
- Demonstration of social, professional, and ethical responsibility and sensitivity to gender issues
- Critical thinking and self-criticism
- Promotion of free, creative, and inductive thinking

**Selected Competencies for this Course:**

- Search for, analysis and synthesis of data and information, using the necessary technologies
- Decision-making
- Autonomous work
- Generation of new research ideas
- Promotion of free, creative, critical, and inductive thinking
- **(3) COURSE CONTENT**
  Preventive laboratory and radiological breast examination
  Preventive laboratory and radiological examination of the gynecological system
  Therapeutic management of women with Breast Cancer during menopause
  Therapeutic management of women with Endometrial Cancer during menopause
  Therapeutic management of women with Cervical Cancer during menopause
  Therapeutic management of women with Ovarian Cancer during menopause
  Therapeutic management of women with Vaginal Cancer during menopause
  Therapeutic management of women with Vulvar Cancer during menopause
  Hormonal therapy and breast cancer incidence in the pre-/perimenopausal period
  Hormonal therapy and incidence of gynecological cancer in the pre-/perimenopausal period
  Hormonal therapy and incidence of other cancers in the pre-/perimenopausal period

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- **(4) TEACHING AND LEARNING METHODS - ASSESSMENT**
- **MODE OF DELIVERY**
  Face-to-face, Distance learning, etc.
  In-person and distance learning
- **USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES**
  Use of ICT in Teaching, Laboratory Training, Communication with students
  Support of the learning process through the postgraduate program's website
- **TEACHING ORGANIZATION**
  Detailed description of teaching methods and approach.
  Lectures, Seminars, Laboratory Practice, Field Practice, Study & analysis of bibliography, Tutorials, Internship (Placement), Clinical Practice, Artistic Workshop, Interactive teaching, Educational visits, Project preparation, Writing of assignments, Artistic creation, etc.
  Student study hours for each learning activity and hours of independent study according to ECTS principles are stated.

| Activity | Semester Workload (hours) |
|---|---|
| Lectures | 39 |

| Activity | Semester Workload (hours) |
|---|---|
| Laboratory/Clinical exercises | 0 |
| Independent Study | 61 |
| Total Course Load (30 hours per credit unit) | 100 |

**STUDENT ASSESSMENT**
Language of Assessment: Greek
Assessment method: Written final exam including multiple-choice questions (Postgraduate Program Regulations)

**(5) RECOMMENDED BIBLIOGRAPHY**

Recommended Bibliography: Recorded in the teaching notes of each instructor.

Relevant scientific journals: Scientific articles are recommended in the teaching notes and are also mentioned orally.

**COURSE OUTLINE**
(1) GENERAL

**SCHOOL**: HEALTH SCIENCES
**DEPARTMENT**: MEDICAL SCHOOL
**LEVEL OF STUDY**: POSTGRADUATE
**COURSE CODE**:
**SEMESTER**: SECOND SEMESTER
**COURSE TITLE**: WOMEN'S QUALITY OF LIFE (NUTRITION - DIETARY SUPPLEMENTS - WEIGHT MANAGEMENT - PHYSICAL EXERCISE - FALLS AND SARCOPENIA PREVENTION)

**INDEPENDENT TEACHING ACTIVITIES**
In case credits are awarded for distinct parts of the course (e.g., Lectures, Laboratory Exercises, etc.), specify them.
If credits are awarded as a whole for the course, specify weekly teaching hours and total credits.

**WEEKLY TEACHING HOURS**
Lectures: 3
**CREDITS**: 6

**TYPE OF COURSE**: Core mandatory
**PREREQUISITES**: None
**LANGUAGE OF INSTRUCTION AND EXAMS**: Greek
**COURSE OFFERED TO ERASMUS STUDENTS**: No
**COURSE WEBSITE (URL)**: _

(2) LEARNING OUTCOMES

Learning outcomes describe the specific knowledge, skills, and appropriate-level competencies students will acquire upon successful completion of the course. Refer to Appendix A:

- Description of Learning Outcomes levels for each study cycle according to the European Higher Education Qualifications Framework
- Descriptive Indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B
- Summary guide for writing Learning Outcomes

**Course Content and Outcomes:**
**UNIT: QUALITY OF LIFE – PHYSICAL EXERCISE**
Exercise benefits both physical and mental health. Combined with balanced nutrition, exercise can prevent or even treat many chronic diseases caused by modern lifestyle. The benefits are even more critical during climacteric and menopause, as women's bodies undergo changes that can significantly affect their quality of life and overall health. This unit studies all parameters ensuring postmenopausal women's quality of life. Topics include exercise and metabolism, muscle atrophy, sarcopenia, muscle strengthening – methods of measuring muscle strength, exercise programs for the elderly, and identification of patients at high risk of falls.

**UNIT: WEIGHT MANAGEMENT – NUTRITION AND DIETARY SUPPLEMENTS**
Physical activity combined with "good nutrition," i.e., adequate intake of nutrients, benefits women during menopause by preventing decline in physical function typically observed with aging. From perimenopause, proper nutrition and dietary supplements can significantly reduce the risk of metabolic syndrome, diabetes, hypertension, dyslipidemia, and osteopenia - osteoporosis. This unit addresses weight management during menopausal transition, obesity, body composition measurement, nutritional treatment of weight, nutrition and supplements during menopause, calcium and vitamin D in osteoporosis prevention and treatment, and finally smoking, stress, sedentary lifestyle, and their impact on quality of life.

**General Competences**
Considering the general competencies a graduate should have (as listed in the Diploma Supplement and outlined below), which does the course aim to develop?

- Searching, analyzing, and synthesizing data and information using necessary technologies
- Adaptation to new situations

- Decision making
- Autonomous work
- Teamwork
- Work in an international environment
- Work in interdisciplinary environments
- Generation of new research ideas
- Project design and management
- Respect for diversity and multiculturalism
- Respect for the natural environment
- Demonstration of social, professional, and ethical responsibility and sensitivity to gender issues
- Exercising critical and self-critical thinking
- Promotion of free, creative, and inductive thinking
- Others...

Specifically emphasized competencies:

- Searching, analyzing, and synthesizing data and information with the use of necessary technologies
- Decision making
- Autonomous work
- Generation of new research ideas
- Promotion of free, creative, critical, and inductive thinking

(3) COURSE CONTENT

- Parameters ensuring quality of life in postmenopausal women
- Exercise & Metabolism
- Muscle atrophy
- Sarcopenia
- Muscle strengthening – Methods of measuring muscle strength
- Exercise in old age – programs
- Identification of patients at high risk of falls

- Weight management during menopausal transition
- Obesity – Body composition measurement – Nutritional management
- Nutrition during menopausal transition
- Dietary supplements during menopausal transition
- Calcium, vitamin D, and analogues in prevention and treatment of osteoporosis
- Smoking – Stress – Sedentary lifestyle and osteoporosis

(4) TEACHING AND LEARNING METHODS – ASSESSMENT

**MODE OF DELIVERY**
Face-to-face and distance learning

**USE OF ICT**
Use of ICT in teaching, laboratory training, and communication with students
Support of the learning process through the postgraduate program website

**TEACHING ORGANIZATION**
Detailed description of teaching methods: lectures, seminars, laboratory exercises, field exercises, literature study & analysis, tutorials, internships, clinical practice, artistic workshops, interactive teaching, educational visits, project work, writing assignments, artistic creation, etc.
Student study hours for each learning activity and hours of unsupervised study according to ECTS principles:

| **Activity** | **Semester Workload Hours** |
|---|---|
| Lectures | 39 |
| Laboratory/Clinical exercises | 0 |
| Independent Study | 61 |
| Total Course Workload | 100 |

**STUDENT ASSESSMENT**
Language of assessment: Greek
Assessment method: Written final exam including multiple-choice questions (according to the postgraduate program regulations)

(5) RECOMMENDED BIBLIOGRAPHY

- Recommended Bibliography: Recorded in the teaching notes of each instructor.

 Relevant scientific journals: Scientific articles are recommended in the teaching notes and are also mentioned orally.

**3rd SEMESTER OF STUDIES**

(1) GENERAL

**COURSE OUTLINE**

SCHOOL: HEALTH SCIENCES
DEPARTMENT: MEDICAL SCHOOL
LEVEL OF STUDIES: POSTGRADUATE
COURSE CODE:
SEMESTER: 3rd SEMESTER
COURSE TITLE: CASES: CLIMACTERIC-MENOPAUSE AND EARLY OVARIAN INSUFFICIENCY CLINIC / PRACTICAL TRAINING

INDEPENDENT TEACHING ACTIVITIES
In case the credit units are awarded in separate parts of the course, e.g., Lectures, Laboratory Exercises, etc.
If the credit units are awarded uniformly for the entire course, specify the weekly teaching hours and the total credit units:

WEEKLY TEACHING HOURS
Lectures: 3
CREDIT UNITS: 8

COURSE TYPE: Core compulsory
PREREQUISITE COURSES: _
LANGUAGE OF INSTRUCTION AND EXAMINATIONS: Greek
THE COURSE IS OFFERED TO ERASMUS STUDENTS: _
COURSE WEBSITE (URL): _

(2) LEARNING OUTCOMES

Learning Outcomes
The learning outcomes of the course are described — the specific knowledge, skills, and competencies of an appropriate level that students will acquire after successfully completing the course.
Consult Appendix A
• Description of the Level of Learning Outcomes for each study cycle according to the Qualifications Framework of the European Higher Education Area
• Descriptive Indicators of Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B
• Summary Guide for Writing Learning Outcomes

**Content and outcomes of the Course:**

Practical Training

- Physiology of Climacteric and Menopause
- Early Menopause
- Early Ovarian Insufficiency
- Surgical Menopause
- Pharmacological Menopause
- Acute Climacteric Syndrome
- Short-term Effects
- Long-term Effects
- Climacteric-Menopause - Diagnosis
- Climacteric-Menopause Hormonal Therapy
- Continuous Combined Hormonal Therapy
- Cyclical Hormonal Therapy
- Systemic Hormonal Therapy
- Transdermal Hormonal Therapy
- Local Hormonal Therapy
- Hormonal Therapy, Tibolone, and SERMs in the Prevention and Treatment of Postmenopausal Osteoporosis
- Hormonal Therapy in Autoimmune Diseases

**General Competences**

Taking into account the general competences that a graduate should have acquired (as stated in the Diploma Supplement and listed below), which of these does the course aim to develop?

- Searching, analyzing, and synthesizing data and information, using necessary technologies
- Adapting to new situations
- Decision making
- Autonomous work
- Teamwork
- Working in an international environment

- Working in an interdisciplinary environment
- Generating new research ideas
- Project design and management
- Respect for diversity and multiculturalism
- Respect for the natural environment
- Demonstrating social, professional, and ethical responsibility and sensitivity to gender issues
- Exercising critical and self-critical thinking
- Promoting free, creative, and inductive thinking
  … Others…
- Searching, analyzing, and synthesizing data and information, using necessary technologies
- Decision making
- Autonomous work
- Generating new research ideas
- Promoting free, creative, critical, and inductive thinking

(3) COURSE CONTENT

Practical Training in:

- Physiology of Climacteric and Menopause
- Early Menopause
- Early Ovarian Insufficiency
- Surgical Menopause
- Pharmacological Menopause
- Acute Climacteric Syndrome
- Short-term Effects
- Long-term Effects
- Climacteric-Menopause - Diagnosis
- Climacteric-Menopause Hormonal Therapy
- Continuous Combined Hormonal Therapy
- Cyclical Hormonal Therapy

- Systemic Hormonal Therapy
- Transdermal Hormonal Therapy
- Local Hormonal Therapy
- Hormonal Therapy, Tibolone, and SERMs in the Prevention and Treatment of Postmenopausal Osteoporosis
- Hormonal Therapy in Autoimmune Diseases

**(4) TEACHING and LEARNING METHODS - ASSESSMENT**

**MODE OF DELIVERY**
Face-to-face, Distance education, etc.
In-person

**USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES**
Use of ICT in Teaching, in Laboratory Training, in Communication with students
Support of the learning process through the MSc program's website

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**TEACHING ORGANIZATION**
The method and ways of teaching are described in detail.
Lectures, Seminars, Laboratory Practice, Field Exercise, Study & analysis of bibliography, Tutorial, Internship (Placement), Clinical Practice, Artistic Workshop, Interactive teaching, Educational visits, Project work, Writing assignments, Artistic creation, etc.
The student's study hours for each learning activity as well as hours of self-directed study are indicated according to ECTS principles.

| **Activity** | **Semester Workload (hours)** |
|---|---|
| Lectures | 39 |
| Laboratory/Clinical exercises | 61 |
| Independent Study | 0 |
| Total Course Load (30 hours per credit) | 100 |

**STUDENT ASSESSMENT**
Language of Assessment: Greek
Assessment Method: Written final exam including multiple choice questions (MSc Operating Regulation)

## (5) RECOMMENDED BIBLIOGRAPHY

Recommended Bibliography: Recorded in the teaching notes of each instructor.

Relevant scientific journals: Scientific articles are recommended in the teaching notes and are also mentioned orally.

# COURSE OUTLINE

## (1) GENERAL INFORMATION

**SCHOOL:** HEALTH SCIENCES
**DEPARTMENT:** MEDICAL SCHOOL
**LEVEL OF STUDY:** POSTGRADUATE
**COURSE CODE:**
**SEMESTER:** 3rd Semester
**COURSE TITLE:** CASES: OSTEOPOROSIS CLINIC / PRACTICAL EXERCISE

**INDEPENDENT TEACHING ACTIVITIES**
In case credit units are awarded for separate parts of the course, e.g., Lectures, Laboratory Exercises, etc.
If credit units are awarded as a whole for the entire course, list the weekly teaching hours and total credit units.

**WEEKLY TEACHING HOURS**
Lectures: 3
**CREDIT UNITS:** 8
**COURSE TYPE:** Mandatory
**PREREQUISITES:** None
**LANGUAGE OF INSTRUCTION and EXAMS:** Greek
**COURSE OFFERED TO ERASMUS STUDENTS:** No
**COURSE WEBSITE (URL):** _

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## (2) LEARNING OUTCOMES

Learning outcomes describe the specific knowledge, skills, and competencies at the appropriate level that students will acquire after successfully completing the course. Consult Appendix A

- Description of Learning Outcome Levels for each study cycle according to the Qualifications Framework of the European Higher Education Area
- Descriptive Level Indicators 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B
- Summary Guide for Writing Learning Outcomes

## (2) LEARNING OUTCOMES

**Learning Outcomes**
The learning outcomes of the course are described, i.e., the specific knowledge, skills, and appropriate level competencies that students will acquire after successful completion of the course.
Please refer to Appendix A:

- Description of the Level of Learning Outcomes for each cycle of study according to the Qualifications Framework of the European Higher Education Area
- Descriptive Indicators of Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B
- Summary Guide for writing Learning Outcomes

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## (3) COURSE CONTENT
**Practical Training:**

- Anatomy - Physiology - Pathology of joints
- Bone Biology
- Bone Remodeling
- Genetics of Osteoporosis
- Transmission of endocrine signals – Hormones – Mechanism of hormone action – Hormone receptors – Endocrine axes and target organs
- Measurement of Ca, P, Mg
- Vitamin D – Parathyroid hormone
- Inflammatory diseases of the Musculoskeletal System
- Autoimmune Diseases and osteoclastogenesis
- Metabolic bone diseases – Differential diagnosis
- Imaging methods for Skeletal assessment: Plain Radiography
- Bone Densitometry: Dual-energy X-ray Absorptiometry (DXA) – pQCT
- Clinical evaluation of Bone Densitometry
- Osteoporosis and corticosteroids
- Osteoporosis Treatment – Bisphosphonate drugs
- Osteoporosis Treatment with Teriparatide

- Osteoporosis Treatment with Denosumab
- Osteoporosis Treatment with Strontium Ranelate
- Dental implants and Osteoporosis treatment
- Thyroid Ca and bones
- MEN 1 syndrome and bones
- Skeletal manifestations of Turner syndrome
- Bone effects of thyroid-stimulating hormone and its disorders
- Male Osteoporosis
- Bone effects of androgen deprivation in patients with prostate Ca

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**(4) TEACHING and LEARNING METHODS – ASSESSMENT**

**Mode of Delivery**
Face-to-face, Distance education, etc.
In person and remote

**Use of Information and Communication Technologies**
Use of ICT in Teaching, Laboratory Training, Communication with students
Support of the learning process through the MSc program website

**Organization of Teaching**
Detailed description of the teaching methods.
Lectures, Seminars, Laboratory Practice, Field Exercise, Study & analysis of bibliography, Tutorials, Internship (Placement), Clinical Practice, Artistic Workshop, Interactive teaching, Educational visits, Project preparation, Writing assignments, Artistic creation, etc.
Student study hours per learning activity and hours of independent study according to ECTS principles are noted:

| **Activity** | **Semester Workload (hours)** |
|---|---|
| Lectures | 39 |
| Laboratory/Clinical exercises | 61 |
| Independent Study | 0 |
| Total Course Workload (30h/credit unit) | 100 |

**Student Assessment**
Language of assessment: Greek

Assessment method: Written final exam including multiple-choice questions (MSc Program Operation Regulation)

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**(5) RECOMMENDED BIBLIOGRAPHY**

Recommended Bibliography: Recorded in the teaching notes of each instructor.

Relevant scientific journals: Scientific articles are recommended in the teaching notes and are also mentioned orally.

**COURSE OUTLINE**
(1) GENERAL INFORMATION

**SCHOOL:** Health Sciences
**DEPARTMENT:** Medical School
**STUDY LEVEL:** Postgraduate
**COURSE CODE:**
**SEMESTER:** 3rd Semester
**COURSE TITLE:** Cases: Cardiovascular and Metabolic Health Clinic / Practical Exercise

**INDEPENDENT TEACHING ACTIVITIES**
In case credit units are awarded for distinct parts of the course, e.g. Lectures, Laboratory Exercises, etc.
If credit units are awarded uniformly for the entire course, please specify the weekly teaching hours and the total credit units.

**WEEKLY TEACHING HOURS**
Lectures: 3 hours
**CREDIT UNITS:** 8

**COURSE TYPE:** Core compulsory
**PREREQUISITE COURSES:** _
**LANGUAGE OF INSTRUCTION AND EXAMS:** Greek
**COURSE OFFERED TO ERASMUS STUDENTS:** _
**COURSE WEBSITE (URL):** _

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(2) **LEARNING OUTCOMES**

Learning outcomes describe the specific knowledge, skills, and appropriate level competencies that students will acquire upon successful completion of the course. Please consult Appendix A

- Description of the Level of Learning Outcomes for each study cycle according to the Qualifications Framework of the European Higher Education Area

- Descriptive Level Indicators 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B
- Summary Guide for writing Learning Outcomes

**Course Content and Outcomes:**
Practical Exercise

- Metabolic syndrome - obesity
- Insulin resistance
- Prediabetic conditions - Type II diabetes during menopause transition
- Lipid profile disorders during menopause transition
- Cardiovascular effects of premature ovarian failure
- Cardiovascular effects of premature ovarian failure - menopause
- Prevention of cardiovascular diseases in postmenopausal women
- Effect of Hormone Therapy on lipid profile
- Effect of Hormone Therapy on insulin resistance - prediabetes - diabetes
- The role of Hormone Therapy in preventing cardiovascular diseases
- Reduction of cardiovascular risk with non-hormonal therapy
- Hormone therapy and cardiovascular risk

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**General Competencies**
Considering the general competencies that the graduate should have acquired (as listed in the Diploma Supplement and detailed below), which of these does the course aim to develop?

- Searching, analyzing, and synthesizing data and information, including the use of necessary technologies
- Adaptation to new situations
- Decision making
- Autonomous work
- Teamwork
- Working in an international environment
- Working in an interdisciplinary environment
- Generation of new research ideas

- Project design and management
- Respect for diversity and multiculturalism
- Respect for the natural environment
- Demonstration of social, professional, and ethical responsibility and sensitivity to gender issues
- Exercise of critical and self-critical thinking
- Promotion of free, creative, and inductive thinking
- … Others …
- Searching, analyzing, and synthesizing data and information, including the use of necessary technologies
- Decision making
- Autonomous work
- Generation of new research ideas
- Promotion of free, creative, critical, and inductive thinking

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(3) **COURSE CONTENT**
Practical Exercise

- Metabolic syndrome - obesity
- Insulin resistance
- Prediabetic conditions - Type II diabetes during menopause transition
- Lipid profile disorders during menopause transition
- Cardiovascular effects of premature ovarian failure
- Cardiovascular effects of premature ovarian failure - menopause
- Prevention of cardiovascular diseases in postmenopausal women
- Effect of Hormone Therapy on lipid profile
- Effect of Hormone Therapy on insulin resistance - prediabetes - diabetes
- The role of Hormone Therapy in preventing cardiovascular diseases
- Reduction of cardiovascular risk with non-hormonal therapy
- Hormone therapy and cardiovascular risk

**(4) TEACHING AND LEARNING METHODS – ASSESSMENT**

**MODE OF DELIVERY**
Face-to-face, Distance education, etc.
In person

**USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES**
Use of ICT in Teaching, Laboratory Training, Communication with students
Support of the learning process through the postgraduate program's website

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**ORGANIZATION OF TEACHING**
The teaching methods and approach are described in detail.
Lectures, Seminars, Laboratory Exercises, Field Exercise, Study & analysis of bibliography, Tutorial, Internship (Placement), Clinical Practice, Artistic Workshop, Interactive teaching, Educational visits, Project work, Writing assignments, Artistic creation, etc.
The student's study hours for each learning activity as well as the hours of independent study are indicated according to the principles of ECTS.

| Activity | Semester Workload (hours) |
|---|---|
| Lectures | 39 |
| Laboratory/Clinical exercises | 61 |
| Independent Study | 0 |
| Total Course (30 hours workload / credit unit) | 100 |

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**STUDENT ASSESSMENT**
Assessment language: Greek
Assessment method: Written final exam including multiple-choice questions (Regulation of the postgraduate program)

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**(5) RECOMMENDED BIBLIOGRAPHY**

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**COURSE OUTLINE**

**(1) GENERAL**

**SCHOOL**
Health Sciences

**DEPARTMENT**
Medical School

**LEVEL OF STUDY**
Postgraduate

**COURSE CODE**
(Specific code not provided)

**SEMESTER**
3rd Semester

**COURSE TITLE**
Cases: Urogynecology Clinic / Mental Health Clinic / Breast Clinic / Practical Training

**INDEPENDENT TEACHING ACTIVITIES**
In case credit units are awarded separately for parts of the course, e.g. Lectures, Laboratory Exercises, etc.
If credit units are awarded as a whole for the entire course, indicate weekly teaching hours and total credit units.

**WEEKLY TEACHING HOURS**
Lectures: 3

**CREDIT UNITS**
8

**COURSE TYPE**
Compulsory

**PREREQUISITE COURSES:**
None

**LANGUAGE OF INSTRUCTION AND EXAMINATIONS:**
Greek

**COURSE OFFERED TO ERASMUS STUDENTS:**
No

**COURSE WEBSITE (URL):**
Not provided

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## (2) LEARNING OUTCOMES

Learning Outcomes
The learning outcomes of the course are described, including specific knowledge, skills, and competencies of an appropriate level that students will acquire upon successful completion of the course.
Refer to Appendix A:

- Description of Learning Outcome Levels for each study cycle according to the European Higher Education Qualifications Framework

- Descriptive Indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B
- Summary Guide for writing Learning Outcomes

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**Course Content and Outcomes:**

**Practical Training:**

- Atrophy of skin and mucous membranes
- Genitourinary Syndrome of Menopause (GSM)
- Hormonal Therapy for GSM
- Non-hormonal Therapy for GSM
- Decreased sexual desire
- Menopause and Mental Health. Research and prospects.
- Psychosocial instability
- Neurological disorders
- Cognitive disorders
- Depression
- Dementia/Alzheimer’s Disease
- Tools for managing cognitive and psychosocial disorders
- Pharmacological treatment of cognitive disorders
- Pharmacological treatment of psychosocial disorders

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**General Competences**
Considering the general competences that a graduate should have acquired (as listed in the Diploma Supplement and summarized below), which of these does the course aim to develop?

- Searching, analyzing, and synthesizing data and information, including the use of necessary technologies
- Adaptation to new situations
- Decision making
- Independent work
- Teamwork

- Working in an international environment
- Working in an interdisciplinary environment
- Generating new research ideas
- Project design and management
- Respect for diversity and multiculturalism
- Respect for the natural environment
- Demonstration of social, professional, and ethical responsibility and gender sensitivity
- Exercising critical and self-critical thinking
- Promotion of free, creative, and inductive thinking
- Others...
- Searching, analyzing, and synthesizing data and information, including the use of necessary technologies
- Decision making
- Independent work
- Generating new research ideas
- Promotion of free, creative, critical, and inductive thinking

**(3) COURSE CONTENT**

Practical Exercise:

- Atrophy of skin and mucous membranes
- Genitourinary Syndrome of Menopause (GSM)
- Hormonal Therapy for GSM
- Non-hormonal Therapy for GSM
- Decrease in sexual desire
- Menopause and Mental Health. Research and perspectives.
- Psycho-emotional instability
- Neurological disorders
- Cognitive disorders
- Depression
- Dementia / Alzheimer’s Disease

- Tools to address cognitive and psycho-emotional disorders
- Pharmacological treatment of cognitive disorders
- Pharmacological treatment of psycho-emotional disorders

**(4) TEACHING AND LEARNING METHODS - ASSESSMENT**

**METHOD OF DELIVERY**
Face-to-face, Distance learning, etc.
In-person and remote

**USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES**
Use of ICT in Teaching, Laboratory Training, Communication with students
Support of the learning process via the postgraduate program's website

**ORGANIZATION OF TEACHING**
The teaching methods and organization are described in detail.
Lectures, Seminars, Laboratory Exercises, Fieldwork, Study & analysis of bibliography, Tutorials, Practical placement, Clinical Practice, Artistic Workshop, Interactive teaching, Educational visits, Project work, Writing assignments, Artistic creation, etc.
Student study hours for each learning activity and hours of self-study according to ECTS principles are listed:
Activity | Semester Workload
Lectures | 39 hours
Laboratory/Clinical exercises | 61 hours
Independent Study | 0 hours
Total Course (30 hours workload/credit) | 100 hours

**STUDENT ASSESSMENT**
Language of Assessment: Greek
Assessment method: Written final exam including multiple-choice questions (Postgraduate Program Operating Regulation)

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**(5) RECOMMENDED BIBLIOGRAPHY**

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**4th SEMESTER**

**COURSE OUTLINE**

**(1) GENERAL INFORMATION**

SCHOOL: HEALTH SCIENCES
DEPARTMENT: MEDICAL SCHOOL
LEVEL OF STUDY: POSTGRADUATE

COURSE CODE: _
SEMESTER: 4th SEMESTER
COURSE TITLE: DIPLOMA THESIS

**INDEPENDENT TEACHING ACTIVITIES**
In case credits are awarded for separate parts of the course (e.g., Lectures, Laboratory Exercises, etc.)
If credits are awarded as a whole for the course, state weekly teaching hours and total credits

WEEKLY TEACHING HOURS | CREDITS
Diploma Thesis | 30

COURSE TYPE: Thesis
PREREQUISITES: None
LANGUAGE OF INSTRUCTION AND EXAMINATIONS: Greek
COURSE OFFERED TO ERASMUS STUDENTS: No
COURSE WEBSITE (URL): _

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## (2) LEARNING OUTCOMES

Learning Outcomes
Describes the learning outcomes of the course, the specific knowledge, skills, and competencies at an appropriate level that students will acquire after successful completion of the course.
Refer to Appendix A

- Description of Learning Outcomes Levels for each study cycle according to the European Higher Education Qualifications Framework
- Descriptive Level Indicators 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B
- Summary guide for writing Learning Outcomes

**Upon completion of all courses, students are required to carry out a research project from scratch through to its implementation (research, development, presentation, announcement-publication).**
The subject of the thesis must be related to the courses of the program, and it can have a research character or be a literature review. Based on the grade of each student as well as interviews conducted upon completion of the third semester, the topic of the thesis will be determined.
The thesis constitutes the quality control of the postgraduate program (MSc). In this way, postgraduate students can demonstrate how and to what extent they have benefited from the MSc program.
Upon completion of the thesis, students will have:

- studied in depth a specific topic related to the scientific areas of the MSc
- utilized the relevant knowledge acquired during their studies
- used critical thinking and research methodology on the necessary data
- conducted either a research, laboratory, clinical study or a systematic review on a topic related to the scientific areas of the MSc
- gained experience in organizing and managing scientific material, writing scientific texts, and orally presenting the topic of their work.

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**General Competencies**
Taking into account the general competencies that the graduate must have acquired (as stated in the Diploma Supplement and listed below), which of these does the course aim to develop?

- Searching, analyzing, and synthesizing data and information, using the necessary technologies
- Adapting to new situations
- Decision making
- Independent work
- Teamwork
- Working in an international environment
- Working in an interdisciplinary environment
- Generating new research ideas
- Designing and managing projects
- Respect for diversity and multiculturalism
- Respect for the natural environment
- Demonstrating social, professional, and ethical responsibility and sensitivity to gender issues
- Exercising critical and self-critical thinking
- Promoting free, creative, and inductive thinking
  ... Other:
- Searching, analyzing, and synthesizing data and information, using the necessary technologies
- Decision making

- Independent work
- Generating new research ideas
- Promoting free, creative, critical, and inductive thinking

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**(3) COURSE CONTENT**

Upon completion of all courses, students must carry out a research project from scratch through to its implementation (research, development, presentation, announcement-publication).
The subject of the thesis must be related to the program's courses, may have a research character or be a literature review. Based on the grade of each student and interviews conducted after the completion of the third semester, the thesis topic will be determined.
The thesis serves as a quality control of the MSc. Through this, postgraduate students can demonstrate how and to what extent they have benefited from the MSc. Upon completion of the thesis, students will have:

- studied in depth a specific topic within the scientific fields of the MSc
- utilized the relevant knowledge acquired during their studies
- used critical thinking and research methodology on the necessary data
- conducted either a research, laboratory, clinical study or a systematic review on a topic related to the scientific areas of the MSc
- gained experience in organizing and managing scientific material, writing scientific texts, and orally presenting the topic of their thesis.

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**(4) TEACHING AND LEARNING METHODS - ASSESSMENT**

**Mode of Delivery**

Face-to-face, Distance learning, etc.
Face-to-face and distance learning

**Use of Information and Communication Technologies**

Use of ICT in teaching, laboratory education, communication with students
Support of the learning process through the MSc program's website

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**Organization of Teaching**

The teaching methods and organization are described in detail.
Lectures, Seminars, Laboratory Practice, Field Practice, Study & analysis of bibliography, Tutorials, Internship, Clinical Practice, Artistic Workshop, Interactive teaching, Educational visits, Project work, Writing assignments, Artistic creation, etc.

The hours of student study for each learning activity as well as the hours of independent study are listed according to ECTS principles.

| **Activity** | **Semester Workload (hours)** |
|---|---|
| Lectures | 0 |
| Laboratory/Clinical Exercises | 0 |
| Independent Study | 70 |
| Total Course Workload (30 hours workload / credit unit) | 70 |

**Student Assessment**
Assessment Language: Greek

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**(5) RECOMMENDED BIBLIOGRAPHY**

**Recommended Bibliography:** Postgraduate Studies Regulation, Postgraduate Studies Guide, Study and Writing Instructions provided by the supervising professor.