



UNICAMILLUS

Degree Course in Medical Radiology Techniques for Imaging and Radiotherapy

INTEGRATED COURSE: Annual Clinical Practice (Third Year)

Number of ECTS Credits: 23

SSD: MEDS-26/B (ex MED/50)

PREREQUISITES

Musculoskeletal anatomy, principles of physics.

EDUCATIONAL OBJECTIVES

Knowledge of radiotherapy and nuclear medicine techniques and methodologies.

EXPECTED LEARNING OUTCOMES

Knowledge and Understanding

Through this course, the student will be able to:

- understand therapeutic and diagnostic techniques and methods in radiotherapy and nuclear medicine;
- apply patient management procedures;
- understand radiation protection regulations.

Applying Knowledge and Understanding

At the end of the course, the student will:

- be able to use the acquired knowledge to independently perform magnetic resonance imaging (MRI) and computed tomography (CT) examinations.

Communication Skills

At the end of the course, the student will:

- be able to appropriately use specific technical terminology.

Making Judgements

At the end of the course, the student will:

- be able to make basic evaluations related to the topics covered.

Learning Skills

The student will have acquired appropriate learning skills and methods to further develop and improve their competencies, also through consultation of scientific literature.

COURSE SYLLABUS

- Planning CT and treatment for stereotactic brain radiotherapy
- Planning CT and treatment for brain radiotherapy

- Planning CT and treatment for head and neck and supraclavicular region tumors
- Planning CT and treatment for tumors of the respiratory system
- Planning CT and treatment for mediastinal tumors
- Planning CT and treatment for breast cancer in standard position
- Planning CT and treatment for breast cancer in prone position*
- Planning CT and treatment for tumors of the digestive system (upper abdomen)
- Planning CT and treatment for pelvic tumors
- Planning CT and treatment for prone pelvic tumors
- Planning CT and treatment for prostate and urinary tract tumors
- Nuclear Medicine Procedures:
- Renal scintigraphy
- Myocardial scintigraphy
- Bone scintigraphy
- Thyroid scintigraphy
- Parathyroid scintigraphy
- Lung scintigraphy
- Lymphoscintigraphy
- Positive tracer scintigraphy*
- DaTSCAN*
- Octreoscan*
- Whole-body scintigraphy with I-123
- Thyroid uptake study
- SPECT-CT
- Whole-body PET-CT
- Brain PET-CT

- Lower limb PET-CT

TEACHING METHODS

The course consists of technical and practical clinical training organized into morning and afternoon shifts.

ASSESSMENT METHODS

Grades are awarded following completion of an oral examination, which the student may take only after having attended at least 75% of the total annual training hours.

Assessment criteria include: acquired knowledge, autonomy of judgement, communication skills, and learning abilities.

SUPPORT ACTIVITIES

Students may request optional seminars to further explore specific topics of interest.

RECOMMENDED TEXTS AND BIBLIOGRAPHY

Additional materials will be provided during the course, and further reference texts will be indicated.