

## COURSE DETAILS

### "DIAGNOSTIC IMAGING AND RADIOTHERAPY"

**SSD MED/36**

DEGREE PROGRAMME: **DIAGNOSTIC IMAGING AND RADIOTHERAPY**

ACADEMIC YEAR **2024-25**

### GENERAL INFORMATION – TEACHER REFERENCES

Faculty	Position	Scientific Fields	Phone	Reception	E-mail
Alberto Cuocolo	Full Professor	Diagnostic imaging and Radiotherapy	2044	Tuesday /11:00-13:00/Bldg. 10	cuocolo@unina.it
Silvana Del Vecchio	Full Professor	Diagnostic imaging and Radiotherapy	3307	Tuesday/14:00-16:00/Bldg. 10	delvecc@unina.it
Massimo Imbriaco	Full Professor	Diagnostic imaging and Radiotherapy	3560	Monday/15:00-16:00/Bldg. 10	massimo.imbriaco@unina.it
Simone Maurea	Full Professor	Diagnostic imaging and Radiotherapy	2039	Tuesday/15:00-16:00/Bldg. 10	maurea@unina.it
Wanda Acampa	Associate Professor	Diagnostic imaging and Radiotherapy	2110	Tuesday/15:00-17:00/Bldg. 1	acampa@unina.it
Manuel Conson	Associate Professor	Diagnostic imaging and Radiotherapy	3563	Tuesday/15:00-16:00/Bldg. 10	manuel.conson@unina.it
Rosa Fonti	Associate Professor	Diagnostic imaging and Radiotherapy	3307	Tuesday /12:00-14:00/Bldg. 10	rosa.fonti@unina.it

## GENERAL INFORMATION ABOUT THE COURSE

INTEGRATED COURSE (IF APPLICABLE):

MODULE (IF APPLICABLE):

SSD OF THE MODULE (IF APPLICABLE):

TEACHING LANGUAGE: **ENGLISH**

CHANNEL (IF APPLICABLE):

YEAR OF THE DEGREE PROGRAMME (I, II, III): **V**

SEMESTER (I, II, ANNUAL): **I**

CFU: **7**

### PREREQUISITES (IF APPLICABLE)

**NONE**

### LEARNING GOALS

- Autonomy of judgment: The student must be able to know how to independently evaluate the various clinical-diagnostic problems and to indicate the main diagnostic procedures for imaging and appropriate radiotherapy. The necessary tools will be provided to allow students to independently analyze the applications of diagnostic imaging and radiotherapy.
- Communication skills: The student must be able to explain the basics of imaging and radiotherapy to non-experts. He must know how to present the main characteristics and indications of the various procedures during the course and during the examination or summarize in a complete but concise manner the results achieved using the technical language correctly. The student is encouraged to transmit to non-experts the principles, contents and application possibilities with correctness and simplicity.
- Learning skills: Students must be able to keep up to date or broaden their knowledge by drawing independently on scientific texts and articles related to diagnostic imaging and radiotherapy and must be able to gradually acquire the ability to follow specialized seminars, conferences and refresher courses related to the discipline.

### EXPECTED LEARNING OUTCOMES (DUBLIN DESCRIPTORS)

#### **Knowledge and understanding**

The student must demonstrate knowledge and understanding of the problems related to imaging and radiotherapy procedures. He must prove that he knows how to elaborate discussions concerning the discipline starting from the notions learned concerning the physical aspects. The training course of the course aims to provide the basic knowledge and methodological tools needed to analyze diagnostic and therapeutic applications in different pathologies.

#### **Applying knowledge and understanding**

The student must demonstrate to be able to define the appropriate diagnostic and radiotherapeutic pathways in the various pathologies, to solve differential imaging diagnostic problems concerning the different pathological conditions. The training course is aimed at transmitting to the student the operational skills necessary to concretely apply the knowledge of the discipline and to encourage the ability to fully utilize them in clinical practice.

## COURSE CONTENT/SYLLABUS

Week	Date	Time	Lesson Topic	Professor
1° October 07–11	10/10	14-15	Course introduction	A. Cuocolo
		15-16	Principles of diagnostic imaging	S. Maurea
		16-17	Principles of nuclear medicine	S. Del Vecchio
2° October 14–18	17/10	14-15	Radiobiology and radioprotection	M. Conson
		15-16	Contrast media	M. Imbriaco
		16-17	Radiopharmaceuticals	W. Acampa
3° October 21–25	24/10	14-15	Neuroimaging	R. Fonti
		15-16	Respiratory system (Anatomic imaging)	M. Imbriaco
		16-17	Respiratory system (Functional imaging)	W. Acampa
4° October 28–31	31/10	14-15	Diagnostic imaging in pediatrics	M. Imbriaco
		15-16	Cardiovascular system (Anatomic imaging)	M. Imbriaco
		16-17	Cardiovascular system (Functional imaging)	W. Acampa
5° November 04–08	07/11	14-15	Musculoskeletal system	S. Maurea
		15-16	Urogenital system (Anatomic imaging)	S. Maurea
		16-17	Urogenital system (Functional imaging)	W. Acampa
6° November 11–15	14/11	14-15	Gastrointestinal system	R. Fonti
		15-16	Liver and biliary tract	S. Maurea
		16-17	Pancreas	S. Maurea
7° November 18–22	21/11	14-15	Infection and inflammation	W. Acampa
		15-16	Endocrine system (Anatomic imaging)	S. Maurea
		16-17	Endocrine system (Functional imaging)	S. Del Vecchio
8° November 25–29	28/11	14-15	Diagnostic and molecular imaging in oncology	S. Del Vecchio
		15-16	Lung cancer	S. Del Vecchio
		16-17	Head and neck cancer	R. Fonti
9° December 02–06	05/12	14-15	Breast imaging in oncology	M. Imbriaco
		15-16	Colorectal cancer	M. Conson
		16-17	Prostate cancer	M. Conson
10° December 09–13	12/12	14-15	Urogenital cancer	S. Maurea
		15-16	Lymphoma and myeloma	R. Fonti
		16-17	Hybrid imaging in oncology	S. Del Vecchio
11° December 16–20	19/12	14-15	Interventional radiology	M. Imbriaco
		15-16	Radiotherapy	M. Conson
		16-17	Metabolic therapy	S. Del Vecchio

## READINGS/BIBLIOGRAPHY

- Textbook of Radiology and Imaging - 7th Edition - Author: David Sutton - Publisher: Elsevier
- Diagnostic Radiology - 6th Edition - Authors: Andy Adam, Adrian Dixon, Jonathan Gillard, Cornelia Schaefer-Prokop, Ronald Grainger - Publisher: Churchill Livingstone
- Nuclear Medicine Textbook - Editors: Duccio Volterrani, Paola Anna Erba, Ignasi Carrio, H. William Strauss, Giuliano Mariani - Publisher: Springer International Publishing

## TEACHING METHODS

The course is structured in frontal teaching activity and clinical clerkships.

## EXAMINATION/EVALUATION CRITERIA

Exam type	
ORAL	X
PRACTICE	X