MSc Programme

"Forensic Medicine, Anthropology and Imaging" Medical School, University of Crete

PROGRAMME HANDBOOK

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1. General

The School of Medicine of the University of Crete organizes and operates for the academic year 2024–2025 and onwards, a Postgraduate Programme of studies (MSc), hereinafter the Programme, entitled "Forensics, Anthropology and Imaging" in accordance with the internal regulations and the regulations of 4957/2022 (Official Gazette 141 sq. A')

For the operational procedures of the Programme the Administrative Bodies are the following:

- Executive Committee (EC)
- ➤ MSc Programme Director (PD)
- Candidate Evaluation Committee (CEC)
- Objections Committee (ObC)
- General Assembly of the Medical Faculty and other Administrative Bodies of the University of Crete

Foundation and Subject of the MSc Programme "Forensic Medicine, Anthropology and Imaging"

Subject of the MSc is the specialized knowledge in Forensic Medicine, Forensic Anthropology and Forensic Imaging. The individual courses of the Program provide the scientific background of the field of Forensic Medicine and the legal aspects of its implementation, of musculoskeletal and cross-sectional CT anatomy as basic knowledge for the subsequent immersion into the fields of Forensic Anthropology and Imaging and their diagnostic value in medicolegal inquiries.

The aim of the Program is the promotion of knowledge and the acquisition of skills in the fields of Forensic Science, Forensic Anthropology and Forensic Imaging, as well as the training of expert scientists in the fields of Forensic Sciences, equipped to follow career paths in hospitals, medical centers, private sector, Universities, Research Facilities and Forensic Laboratories as forensic and research personnel.

The Programme will equip graduates with knowledge on the field of Forensic Science, the emerging inquiries and the relevant legislations.

Furthermore, the Programme's graduates will acquire sufficient background and knowledge on Anatomy and CT Anatomy tailored in the requirements of the specialized courses in Forensic Medicine, Forensic Anthropology and Forensic Imaging to build the capacity of applying the acquired skills of each specialized subject on forensic casework.

Finally, the Programme's graduates will acquire theoretical background and practical skills on the fields of *Forensic Anthropology* -with emphasis on the reconstruction of biological profile, positive identification, assessment of type and timing of skeletal injuries of human remains- and *Forensic Imaging* -with emphasis

on the interpretation of postmortem CT findings and the reconstruction of traumatic events with the aid of specialized software-. Last, the graduates will acquire experience in team work and the interdisciplinary approach in the forensic investigation of death through a series of simulated forensic cases.

Expected learning outcomes

The expected outcome of the MSc is the acquisition of specialized knowledge and practical skills in the fields of Forensic Anthropology and Medical Imaging. For that purpose, the Programme consists of two interconnected components: theory and research. The theoretical component's goal is for the PG students to acquire basic knowledge in Forensic Medicine, including Musculoskeletal Anatomy, the basic principles of Forensic Pathology and other relevant forensic sciences. The research component's goal is for the PG students to acquire skills in collecting, processing, analyzing and evaluating data pertaining to each specialty.

English is set as the Programme's official language to be used both in teaching and writing of the MSc Thesis.

2. Curriculum Detailed Description

The Programme consists of two interconnected components: theory and research. The theoretical component's goal is for the PG students to acquire basic knowledge in Forensic Medicine, including Musculoskeletal Anatomy, the basic principles of Forensic Pathology and other relevant forensic sciences.

The research component's goal is for the PG students to acquire skills in collecting, processing, analyzing and evaluating data pertaining to each specialty.

The PG students are given the opportunity to select a specialization in Forensic Anthropology or Forensic Imaging, or not.

During the enrollment period each PG student is required to choose: a) whether they opt for a specialization and which one and b) whether they opt not to specialize.

A minimum of 30% of the students need to opt for each specialization in order for it to be made available. The EC can modify the aforementioned percentage to ensure the Programme's unhindered operation. The students are allowed to take all the courses offered by the Programmed but they cannot opt for both specializations.

The Programme issues Master of Science Degrees (MSc), equivalent to a level seven (7) of the National and European Qualifications Framework in accordance to the article 47 of law 4763/2020:

- a) In "Forensic Medicine, Anthropology and Imaging" (MSc in "Forensic Medicine, Anthropology and Imaging")
- b) With Specialization in "Forensic Anthropology" (MSc in "Forensic Medicine, Anthropology and Imaging with specialization in Forensic Anthropology")
- c) With Specialization in "Forensic Imaging" (MSc in "Forensic Medicine, Anthropology and Imaging with specialization in Forensic Imaging")

A total of ninety (90) ECTS is required for the Diploma acquisition.

The requirements for the successful completion of the Programme are:

- a) The acquisition of thirty (30) ECTS during the 1st semester through the attendance and successful completion of mandatory and elective courses as described below.
- b) The acquisition of thirty (30) ECTS during the 2nd semester through the attendance and successful completion of mandatory and elective courses as described below.
- c) Establishment of a research protocol, collection and analysis of data, writing and presentation of the MSc Dissertation during the 3rd semester (30 ECTS)

Requirements a and b are adjusted according to the specialization of the student as is explained later.

The official language for all courses and the MSc Dissertation manuscript is English.

2.1 Awarded Degree

The duration of the Programme for the acquisition of an MSc Degree is set to three (3) academic semesters.

A total of ninety (90) ECTS is according to the European Credit Transfer and Accumulation System. More specificall: (a) 30 ECTS from the successful completion of courses during the 1st semester (b) 30 ECTS from the successful completion of courses during the 2nd semester and (c) 30 ECTS from the successful completion of the MSc Dissertation during the 3rd semester.

Modification of the curriculum, re-allocation of the courses, modification of the ECTS credits for each module, as well as replacement of a module with another one, offered by a different MSc Programme, providing that is relevant to the present Programme and offers equal ECTS credits, are allowed following decrees issued by the responsible Administrative Bodies.

2.1.1 MSc "Forensic Medicine, Anthropology and Imaging"

The mandatory classes for the 1st semester are FMAI-101 (Introduction to Forensic Medicine) and FMAI-102 (Musculoskeletal and Radiological Anatomy). The postgraduate students (PG) can choose two of the elective courses including FMAI-103 (Cross-sectional CT Anatomy), FMAI-104 (Forensic Anthropology Methods) or FMAI-105 (Legal and Bioethical aspects in the medicolegal investigation of death) to acquire the required 30 ECTS.

The 2nd semester includes mandatory course FMAI-202 (Forensic Aspects of Trauma). The PG students can choose from elective courses FMAI-201 (Forensic Taphonomy), FMAI-203 (Applied Statistics), FMAI-204 (Applications of Computed Tomography in Forensic Medicine) or FMAI-205 (Practical Assessment of Simulated Forensic Cases) to acquire the required 30 ECTS.

The subject of Forensic Medicine is the recording, analysis and interpretation of scientific, medical findings in sudden and violent deaths and their well-documented presentation in Court. The interpretation of the aforementioned findings is however often subjective and dependent on the examiner, while at the

same time body decomposition hinders forensic examinations and positive identification of the remains.

Following the completion of the MSc Programme the graduates are expected to:

- ➤ Have acquired a complete insight into Forensic Science, its subspecialties and their capabilities and applicability in forensic practice.
- ➤ Be able to participate in multidisciplinary teams within medicolegal settings.
- ➤ Have acquired a full skillset in data analysis, hypothesis testing and result interpretation within a forensic framework.
- ➤ Be able to answer inquiries posed by the Investigative Authorities within official Forensic Reports.
- ➤ Be able to present their findings in a Court of Law.
- ➤ Be able to design, conduct and present their results in Forensic Anthropology research projects.

2.1.2 Specialization: "Forensic Anthropology"

The mandatory classes for the 1st semester are FMAI-101 (Introduction to Forensic Medicine), FMAI-102 (Musculoskeletal and Radiological Anatomy) and FMAI-104 (Forensic Anthropology Methods). The PG students can choose one of the elective courses including FMAI-103 (Cross-sectional CT Anatomy) or FMAI-105 (Legal and bioethical aspects in the medicolegal investigation of death) to acquire the required 30 ECTS.

The 2nd semester includes two (2) mandatory courses: FMAI-201 (Forensic Taphonomy) and FMAI-202 (Forensic Aspects of Trauma). The PG students can choose two of the elective courses: FMAI-203 (Applied Statistics), FMAI-204 (Applications of Computed Tomography in Forensic Medicine) or FMAI-205 (Practical Assessment of Simulated Forensic Cases) to acquire the required 30 ECTS.

The subject of Forensic Medicine is the recording, analysis and interpretation of scientific, medical findings in sudden and violent deaths and their well documented presentation in Court. The interpretation of the aforementioned findings is however often subjective and dependent on the examiner, while at the same time body decomposition hinders forensic examinations and positive identification of the remains. Of great importance is the rise of accidental deaths occurring along migration pathways, that have afflicted Mediterranean countries

over the path decade. As a result, the need for positive identification of remains in various stages of decomposition has arisen stronger than ever. Forensic Anthropology is a subspecialty of Forensic Science that has a significant input in such casework, especially when skeletonized remains are involved.

Following the completion of the MSc Programme under the Forensic Anthropology specialization the graduates are expected to:

- ➤ Be able to understand and assess postmortem changes, taphonomical and traumatic alterations on the body.
- ➤ Be able to diagnose findings in skeletonized remains that have been subjected to taphonomic alterations.
- ➤ Be able to determine whether the remains are human and of legal significance.
- ➤ Be able to apply specialized Forensic Anthropology Methods to assess biological profile.
- ➤ Be able to participate in multidisciplinary teams within medicolegal Have acquired a full skillset in data analysis, hypothesis testing and result interpretation within a forensic framework.
- ➤ Have acquired a full skillset in data analysis, hypothesis testing and result interpretation within a forensic anthropology framework.
- ➤ Be able to answer inquiries posed by the Investigative Authorities within official Forensic Anthropological Reports.
- ➤ Be able to present their findings in a Court of Law.
- ➤ Be able to design, conduct and present their results in Forensic Anthropology research projects.

2.1.3 Specialization: "Forensic Imaging"

The mandatory classes for the 1st semester are FMAI-101 (Introduction to Forensic Medicine), FMAI-102 (Musculoskeletal and Radiological Anatomy) and FMAI-103 (Cross-sectional CT Anatomy). The PG students can choose one of the elective courses including FMAI-104 (Forensic Anthropology Methods) or FMAI-105 (Legal and bioethical aspects in the medicolegal investigation of death) to acquire the required 30 ECTS.

The 2nd semester includes two (2) mandatory courses: FMAI-202 (Forensic Aspects of Trauma) and FMAI-204 (Applications of Computed Tomography in Forensic Medicine). The PG students can choose two of the optional courses: FMAI-203 (Applied Statistics), FMAI-201 (Forensic Taphonomy) or FMAI-205 (Practical Assessment of Simulated Forensic Cases) to acquire the required 30

ECTS.

The specialization in Forensic Imaging consists a universal innovation of the MSc Programme of the University of Crete. Imaging modalities have developed significantly over the last years, giving birth to validated applications in the medicolegal investigation of death for diagnosis, positive identification and event reconstruction. The Msc Programme in "Forensic Medicine, Anthropology and Imaging" presents a unique opportunity to combine principles of Medical Imaging and Forensic Medicine and Anthropology in order to equip scientists with a distinctive skillset in the field of Forensics.

Following the completion of the MSc Programme under the Forensic Imaging specialization the graduates are expected to:

- ➤ Have excellent knowledge in cross-sectional anatomy
- ➤ Be able to identify the expected postmortem findings in forensic imaging as well as the diagnostic limitation of postmortem imaging.
- ➤ Be able to identify, record and interpret imaging findings of forensic significance.
- ➤ Be able to apply specialized forensic imaging knowledge in challenging forensic cases.
- ➤ Have acquired a full skillset in data analysis and hypothesis formation within a forensic framework and to be able to collaborate with other forensic practitioners for result interpretation and event reconstruction.
- ➤ Be able to answer inquiries posed by the Investigative Authorities within official Forensic Anthropological Reports.
- ➤ Be able to present their findings in a Court of Law.
- ➤ Be able to design, conduct and present their results in Forensic Imaging research projects.

2.1.4 Summary table of the Programmme's courses

Course Title *Mandatory (M), Elective (E)	No specialization Course Category	Specialization 1 Forensic Anthropology Course Category	Specialization 2 Forensic Imaging Course Category	ECTS	
	1st 5	Gemester			
Introduction to Forensic Medicine	М	М	М	10	
Musculoskeletal/Radiological Anatomy	М	М	М	10	
Cross-sectional CT Anatomy	Е	Е	М	6	
Forensic Anthropology methods	Е	М	Е	6	
Legal and Bioethical Aspects in the Medicolegal Investigation of Death	Е	Е	Е	4	
Total ECTS for 1st Semester				>=30	
	2nd S	Gemester		T	
Forensic Taphonomy	E	М	Е	10	
Forensic Aspects of Trauma	М	М	М	5	
Applied Statistics	Е	Е	Е	5	
Application of Computed Tomography in Forensic Medicine	Е	Е	М	10	
Practical assessment of simulated forensic cases	Е	Е	Е	10	
Total ECTS for 2nd Semester				>=30	
3 rd Semester					
Master's Thesis in Forensic Medicine, Anthropology or Imaging	М	М	М	30	
Total ECTS for 3rd Semester				30	

Mandatory (M), Elective (E),

2.2 Course description

2.2.1 Semester 1

FMAI 101: INTRODUCTION TO FORENSIC MEDICINE

COURSE OUTLINE

(1) GENERAL

SCHOOL	Medical				
ACADEMIC UNIT					
LEVEL OF STUDIES	Postgradua	te			
COURSE CODE	FMAI 101		SEMESTER	A	
COURSE TITLE	Introduction	n to Forensi	: Medicine		
COURSE DIRECTOR	ELENA KR	ANIOTI			
INDEPENDENT TEACHIN if credits are awarded for separate complectures, laboratory exercises, etc. If the whole of the course, give the weekly teaching	inponents of the course, e.g. e credits are awarded for the HOURS			CREDITS	
Lectures Seminars and autopsies			4 (in 12w)		10
Add rows if necessary. The organisation of methods used are described in detail at (d).					
general background, special background, specialised general knowledge, skills development PREREQUISITE COURSES:	Specialised None	general kno	wledge		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	English				
IS THE COURSE OFFERED TO ERASMUS STUDENTS	No				
COURSE WEBSITE (URL)	https://mscs.uoc.gr/forensic-				
	med/?cour	ses=introdu	ction-to-forensic-	-me	dicine

(2) LEARNING OUTCOMES

Learning outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.

Consult Appendix A

- Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area
- Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B
- Guidelines for writing Learning Outcomes

Upon completion of the course, the student will have acquired the following:

- Understanding the importance of issuing a medical death certificate by the medical doctor and the legal ramifications of this act
- Acquiring the necessary background in Forensic investigation of death and

how this is approached in different settings.

- Understanding the basic principles and the methodology applied in Forensic medicine and familiarizing with the examination of corpses in order to investigate the circumstances of death.
- Understanding the process of differential diagnosis in forensic cases and the value of circumstantial evidence.
- Understanding the correlation of macroscopic findings with histological and toxicological analysis findings for the comprehensive investigation of a death of medico-forensic significance
- Understanding the importance of medicolegal investigation of violent deaths, sudden deaths and deaths in custody
- Understanding the role of the Forensic Pathologists in mass disasters

General Competences

Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?

Search for, analysis and synthesis of data and information, with the use of the necessary technology

Adapting to new situations Decision-making

Working independently

Team work

Working in an international environment Working in an interdisciplinary environment

Production of new research ideas

Project planning and management Respect for difference and multiculturalism Respect for the natural environment

Showing social, professional and ethical responsibility and

sensitivity to gender issues Criticism and self-criticism

Production of free, creative and inductive thinking

Others...

The course is designed to teach students how to

- systematically record medical evidence in the context of Forensic Medicine
- search, analyze and synthesize data and information also using appropriate technologies
- adjust to a novel situation within the discipline of Forensic Pathology and Medicine
- to perform autonomous work
- to participate in group work
- to make decisions taking into account diversity and multiculturalism
- Be critical and self-critical

(3) SYLLABUS

Lectures

- 1. Introduction to Forensic Medicine
- 2. Crime scene investigation and recovery of evidence
- 3. The Forensic autopsy protocol: procedures-sampling and reporting
- 4. Forensic investigation of Natural deaths
- 5. Forensic Investigation of Violent deaths
- 6. Deaths from Electricity, Gas and Physical agents
- 7. Asphyxia
- 8. Water-related deaths
- 9. Death by Neglect, Starvation and Dehydration.
- 10. Elder abuse.
- 11. Deaths by drug abuse and poisoning
- 12. Deaths of neonates and children
- 13. Forensic Histopathology in the investigation of death

14. Clinical Forensic Medicine

Interactive lectures:

- 1. Practical aspects of Autopsy I,
- 2. Practical aspects of Autopsy II
- 3. Practical aspects of Autopsy III

Seminars:

- 1. Forensic Toxicology
- 2. Presentation/Review of Forensic cases

TEACHING and LEARNING METHODS - EVALUATION

DELIVERY	Physical presence, distance (as exception) and lab-				
Face-to-face, Distance learning, etc.	related/hand's on training				
USE OF INFORMATION AND	Use of ICT in teaching in	exceptional situations			
COMMUNICATIONS					
TECHNOLOGY					
Use of ICT in teaching, laboratory education,					
communication with students					
TEACHING METHODS	Activity	Semester workload			
The manner and methods of teaching are described in detail.	Lectures	28h			
Lectures, seminars, laboratory practice,	Interactive lectures-	12h			
fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art	Autopsies				
workshop, interactive teaching, educational	Seminars	6h			
visits, project, essay writing, artistic creativity,					
etc.	Self-guided study	202			
The student's study hours for each learning	· ·				
activity are given as well as the hours of non-	10ta 2011, 2015	250			
directed study according to the principles of the ECTS					
STUDENT PERFORMANCE					
EVALUATION	Assessment will to	take place with a written			
Description of the evaluation procedure	exam in English.	take place with a written			
Language of evaluation, methods of evaluation,	o o	clude multiple choice and			
summative or conclusive, multiple choice	short-answer ques	-			
questionnaires, short-answer questions, open- ended questions, problem solving, written work,	1				
essay/report, oral examination, public					
presentation, laboratory work, clinical examination of patient, art interpretation, other					
Specifically-defined evaluation criteria are					
given, and if and where they are accessible to students.					

(4) ATTACHED BIBLIOGRAPHY

- 1. Lecture notes
- 2. Catanese C.A. Color Atlas of Forensic Medicine and Pathology. CRC Press, Boca Raton;2017
- 3. Di Maio, VJM, Forensic Pathology, 2nd edition. CRC Press, Boca Raton; 2001.

- 4. Di Maio, VJM, Gunshot Wounds: Practical Aspects of Firearms, Ballistics, and Forensic Techniques, 3rd edition, CRC Press, Boca Raton;2015
- 5. Madea, B. The Estimation of the Time Since Death, Third Edition CRC Press, Boca Raton, 2016
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- 8. Pounder D. [http://www.dundee.ac.uk/forensicmedicine/notes/notes.html]
- 9. Saukko, P, Knight, B (eds). Knight's Forensic Pathology. CRC press; Boca Raton FL, 2015
- 10. Shkrum, MJ, Forensic Pathology of Trauma: Common Problems for the Pathologist, Humana Press; 2007 edition
- 11. Spitz, W 'Fisher's and Spits' Madicolegal Investigation of Death, 4th Ed, Ch.Thomas, Springfield, 2006.
- 12. Spitz, W 'Fisher's and Spits' Madicolegal Investigation of Death, 5th Ed, Ch.Thomas, Springfield, 2020.

FMAI 102: MUSCULOSKELETAL/RADIOLOGICAL ANATOMY

COURSE OUTLINE

(1) GENERAL

SCHOOL	Medical			
ACADEMIC UNIT				
LEVEL OF STUDIES	Postgradua	te		
COURSE CODE	FMAI 102		SEMESTER	A
COURSE TITLE	Musculoske	eletal/Radiolog	gical Anatomy	
COURSE DIRECTOR	APOSTOLO	OS KARANTA	NAS	
if credits are awarded for separate compon laboratory exercises, etc. If the credits ar course, give the weekly teaching ho	onents of the course, e.g. lectures, are awarded for the whole of the			
Lectures and Interactive lectur	res/Practica	l sessions	4 (12w)	10
Add rows if necessary. The organisation of	teaching and th	ie teaching		
methods used are described in detail at (d). COURSE TYPE	C	1 1 1 . 1 .	1.:11. 11.	
general background, special background, specialised general	Special general knowledge, skills development			
knowledge, skills development	3/			
PREREQUISITE COURSES:	Yes			
LANGUAGE OF	English			
INSTRUCTION and				
EXAMINATIONS:				
IS THE COURSE OFFERED TO	No			
ERASMUS STUDENTS				
COURSE WEBSITE (URL)	https://ms	https://mscs.uoc.gr/forensic-		
	med/?cour	ses=musculosk	eletal-anatom	y

(2) LEARNING OUTCOMES

Learning outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.

Consult Appendix A

- Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area
- Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B
- Guidelines for writing Learning Outcomes

This course consists of the detailed study of skeletal and dental anatomy, muscular anatomy and anatomy of great vessels in the human body. It will cover the biology of bones and teeth, the development of the skeleton and the normal skeletal variation that occurs between individuals, the muscular system and the imaging of the skeleton through x-rays. The course comprises twelve lectures followed by interactive/practical sessions on skeletal remains as well as virtual anatomy sessions on the Virtual Anatomy Table. Each session focuses on a particular part of the skeleton.

During this course the students will:

- learn in detail the anatomy of the skeletal and muscular system and large vessels with respect to identification and function per anatomical region of the human body
- get familiar with the anthropological landmarks and the terminology used in recording skeletal material
- be able to arrange all skeletal elements into their correct anatomical position
- apply knowledge of the anatomy of the skeleton to identify skeletal fragments of human origin
- learn the anatomy of the human dentition, the recording process and its significance with respect to aging, health and positive identification
- be taught basic principles of Skeletal Radiological Anatomy of the human body and to apply knowledge of the anatomy of the skeleton to interpret basic X-Ray images
- have the opportunity to study skeletal and virtual material with the objective to identify anatomical parts and understand human anatomical variation and its significance in forensic investigations
- appreciate and respect the human remains that are comprising the teaching collection and are available for their education

General Competences

Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?

Search for, analysis and synthesis of data and Project planning and management information, with the use of the necessary technology

Adapting to new situations

Decision-making Working independently

Team work

Working in an international environment

Working in an interdisciplinary environment Production of new research ideas

Respect for difference and multiculturalism

Respect for the natural environment Showing social, professional and ethical responsibility and

sensitivity to gender issues Criticism and self-criticism

Production of free, creative and inductive thinking

Others...

Systematic identification and recording of skeletal evidence

Autonomous work

Group work

Respect to diversity and multiculturalism

Being critical and self-critical

Working in an international environment

Working in an interdisciplinary environment

Showing social, professional and ethical responsibility and sensitivity to human remains available in teaching collections

(3) SYLLABUS

Lectures

- 1. Anatomy of the Cranium
- 2.Dental Anatomy
- 3. Skeletal Anatomy of Thorax, Spine and Pelvis
- 4.Skeletal Anatomy of the Upper limb
- 5.Skeletal Anatomy of the Lower Limb
- 6.Muscular Anatomy of the head and Neck
- 7. Muscular Anatomy of the Thorax and Abdomen
- 8. Muscular Anatomy of the Pelvis
- 9.Muscular Anatomy of the Upper limb
- 10. Muscular Anatomy of the Lower Limb
- 11.X-Ray Anatomy I
- 12.X-Ray Anatomy II

Interactive/Practical sessions

10x2 Skeletal anatomy practical sessions

4x1 Virtual anatomy practical sessions (Anatomage table)

TEACHING and LEARNING METHODS - EVALUATION

DELIVERY	Physical presence and l	lab-related/hand's on	
Face-to-face, Distance learning, etc.	training		
USE OF INFORMATION AND	ICT in teaching		
COMMUNICATIONS	ici in teaching		
TECHNOLOGY			
Use of ICT in teaching, laboratory education, communication with students			
TEACHING METHODS	Activity	Semester workload	
The manner and methods of teaching are described in detail.	Lectures	24h	
Lectures, seminars, laboratory practice,	Interactive	24h	
fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art	lectures/Practical		
workshop, interactive teaching, educational	sessions		
visits, project, essay writing, artistic creativity,	Exams	4h	
etc.	Self-guided study	198	
The student's study hours for each learning	Total 25-30h/ECTS	250	
activity are given as well as the hours of non- directed study according to the principles of the			
ECTS			
STUDENT PERFORMANCE	Assessment will incl	ude a practical bone	
EVALUATION	identification quiz (50%	(a) and a written exam in	
Description of the evaluation procedure	English (50%).	,	
Language of evaluation, methods of evaluation,			
summative or conclusive, multiple choice questionnaires, short-answer questions, open-			
ended questions, problem solving, written work,			
essay/report, oral examination, public presentation, laboratory work, clinical			
presentation, taboratory work, cumcat			

examination of patient, art interpretation, other
Specifically-defined evaluation criteria are given, and if and where they are accessible to
students.

(4) ATTACHED BIBLIOGRAPHY

- Lecture notes and handouts
- White TD, Folkens PA. 2005 The Human Bone Manual. 1st ed. Academic Press
- White TD, Black MT, Folkens PA. 2011 Human Osteology. 3rd ed. Academic Press
- Scheuer L, Black, S Developmental Juvenile Osteology, 2000, San Diego, CA: Elsevier Academic Press

FMAI 103:CROSS-SECTIONAL CT ANATOMY

COURSE OUTLINE

(1) GENERAL

SCHOOL	Medical				
ACADEMIC UNIT					
LEVEL OF STUDIES	Postgradua	te			
COURSE CODE	FMAI 103		SEMESTER	A	
COURSE TITLE	Cross-section	onal CT Anator	ny		
COURSE DIRECTOR	MICHAEL	KLONTZAS			
INDEPENDENT TEACHI if credits are awarded for separate compon laboratory exercises, etc. If the credits ar course, give the weekly teaching ho	ponents of the course, e.g. lectures, are awarded for the whole of the				
Lectures and interactive			3 (10w)		6
Add rows if necessary. The organisation of methods used are described in detail at (d).					
COURSE TYPE general background, special background, specialised general knowledge, skills development	Specialised	d general kno	wledge, skill	s de	velopment
PREREQUISITE COURSES:	Yes				
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	English				
IS THE COURSE OFFERED TO ERASMUS STUDENTS	No				
COURSE WEBSITE (URL)	https://mscs.uoc.gr/forensic-				
	med/?cou	rses=cross-sec	ctional-ct-ana	aton	ny

(2) LEARNING OUTCOMES

Learning outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.

Consult Appendix A

- Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area
- Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B
- Guidelines for writing Learning Outcomes

This course introduces students to Topographic Anatomy of the human body and expands on the student's knowledge of musculoskeletal human anatomy using computed tomographic images. Students study the anatomical sections of the head, neck, spine, extremities, thorax, pelvis, abdomen, in the transaxial, sagittal, and coronal planes. Cross-sectional anatomy will be learnt through narrated presentations notes and other guided reading as well as interactive practical sessions and guided self-study.

Upon completion of the course, the student will be able to demonstrate

- knowledge of the gross anatomy of main organs of the human body
- Knowledge of the brain and spinal cord anatomy
- understanding the basic functions of a CT scanner
- ability to differentiate major anatomical regions in the transverse, coronal and sagittal plane
- ability to identify major anatomical structures of the head, neck, thorax, abdomen, pelvis, spine and extremities on cross-sectional images in three planes
- ability to identify anatomical variations demonstrated within the CT images in different planes
- knowledge and ability to use CT anatomical terminology to describe findings
- ability to use 2d and 3d images to present findings in a comprehensive manner to non-specialists

General Competences

Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?

Search for, analysis and synthesis of data and Project planning and management information, with the use of the necessary technology Respect for difference and multiculturalism

Adapting to new situations Respect for the natural environment

Decision-making Showing social, professional and ethical responsibility and

Working independently sensitivity to gender issues
Team work Criticism and self-criticism

Working in an international environment Production of free, creative and inductive thinking

Working in an interdisciplinary environment

Production of new research ideas Others...

Systematic recording of medical evidence

Searching, analyzing and synthesizing data and information also using appropriate technologies

Adjusting to a novel situation

Autonomous work

Group work

(3) SYLLABUS

Lectures

- 1. Topographic Anatomy of the Torso
- 2. Anatomy of the Brain and Spinal Cord
- 3.CT Anatomy of the Head and Neck
- 4.CT Anatomy of the Thorax and Spine
- 5.CT Anatomy of the Abdomen
- 6.CT Anatomy of the Pelvis
- 7.CT Anatomy of The Upper limb
- 8.CT Anatomy of the Lower Limb
- 9.Pediatric CT Anatomy

Interactive training

- 1x2h Interactive virtual anatomy lecture/practical session (Anatomage table)
- 5x2 on CT Interactive lectures/Practical sessions on CT Images in Radiological workstations.

TEACHING and LEARNING METHODS - EVALUATION

DELIVERY	Physical presence and lab-related/hand's on				
Face-to-face, Distance learning, etc.	training				
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY Use of ICT in teaching, laboratory education, communication with students					
TEACHING METHODS	Activity	Semester workload			
The manner and methods of teaching are described in detail.	Lectures	18h			
Lectures, seminars, laboratory practice,	Practical sessions	12h			
fieldwork, study and analysis of bibliography,	Exams	4h			
tutorials, placements, clinical practice, art workshop, interactive teaching, educational	Self-guided study	116			
visits, project, essay writing, artistic creativity, etc.	Total 25 / ECTS	150			
The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS					
STUDENT PERFORMANCE					
EVALUATION Description of the evaluation procedure Language of evaluation, methods of evaluation,	The exam will involve multiple and short answer				
summative or conclusive, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other	images.				
Specifically-defined evaluation criteria are given, and if and where they are accessible to students.					

(4) ATTACHED BIBLIOGRAPHY

Lecture notes

Spratt JD Weir & Abrahams` Imaging Atlas of Human Anatomy, 6th Ed. Elvesier 2020

Hofer M. CT Teaching Manual: A Systematic Approach to CT Reading 5th Ed., Thieme, 2021

FMAI 104 FORENSIC ANTHROPOLOGY METHODS

COURSE OUTLINE

(1) GENERAL

SCHOOL	Medical				
ACADEMIC UNIT					
LEVEL OF STUDIES	Postgradua	Postgraduate			
COURSE CODE	FMAI 104		SEMESTER	A	
COURSE TITLE	Forensic Ar	nthropology Me	ethods		
COURSE DIRECTOR	ELENA KR	ANIOTI, JULIA	A G. GARCIA-I	DONAS	
if credits are awarded for separate compone laboratory exercises, etc. If the credits are course, give the weekly teaching he	riponents of the course, e.g. lectures, ts are awarded for the whole of the			CREDITS	
Lectures and interactive	lectures/prac	tical sessions	4	6	
Add rows if necessary. The organisation of methods used are described in detail at (d).					
COURSE TYPE				•	
general background,					
special background, specialised general					
knowledge, skills development PREREQUISITE COURSES:	Yes				
TREREQUISITE COURSES.	ies				
LANGUAGE OF	English				
INSTRUCTION and	Liigiioii				
EXAMINATIONS:					
IS THE COURSE OFFERED TO	No				
ERASMUS STUDENTS	0				
COURSE WEBSITE (URL)					
, , , , , , , , , , , , , , , , , , ,					

(2) LEARNING OUTCOMES

Learning outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.

Consult Appendix A

- Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area
- $\bullet \quad Descriptors \ for \ Levels \ 6, \ 7 \ \& \ 8 \ of \ the \ European \ Qualifications \ Framework \ for \ Lifelong \ Learning \ and \ Appendix \ B$
- Guidelines for writing Learning Outcomes

The course combines lectures and practical sessions on the various methods used by forensic anthropologists in the investigation of heavily decomposed and skeletonised human remains. Students will be introduced in the working framework of the forensic anthropologists, will learn how to

- examine unknown skeletal remains
- differentiate archaeological from modern skeletal remains
- assess differentiate animal from human bones
- estimate minimum number of individuals and sort commingled remains
- estimate age, sex, stature and ethnicity to build a biological profile

- identify and describe skeletal pathology
- apply basic methods of positive identification
- produce an odontogram
- produce a skeletal report for the court or an archaeological survey
- collaborate with other scientist in the investigation of cause and manner of death for a set of heavily decomposed and skeletonised human remains

Students will also be acquainted with the role of Forensic Anthropologist in Humanitarian missions Finally the existing guidelines and code of practise in Forensic Anthropology, the validation of forensic methodology and the requirements for accreditation will be covered.

General Competences

Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?

Search for, analysis and synthesis of data and Project planning and management information, with the use of the necessary technology Respect for difference and multiculturalism

Adapting to new situations

Respect for the natural environment

Chapting to him a control of the control of th

Decision-making Showing social, professional and ethical responsibility and Working independently sensitivity to gender issues

Team work Sensition of genuer issues

Team work Criticism and self-criticism

Working in an international environment Production of free, creative and inductive thinking

Working in an interdisciplinary environment

Production of new research ideas Others...

Systematic recording of medical evidence

Understanding applied statistics in the development of forensic methodology and evaluate existing methods

Searching, analyzing and synthesizing data and information also using appropriate technologies and methods

Adjusting to a novel situation

Autonomous work

Interdisciplinary work

Critical thinking

(3) SYLLABUS

Lectures

- 1.Introduction to Forensic Anthropology: definition, history and active roles
- 2. Human vs Animal bones/ Forensic vs Archaeological remains PMI estimation
- 3. Minimum number of individuals: Sorting commingled remains
- 4.Sex, population affinity & stature estimation
- 5.Age estimation of adult skeletal remains
- 6.Age estimation of juvenile skeletal remains
- 7.Age estimation of living individuals
- 8. Positive identification methods
- 9. The significance of skeletal pathology in forensic anthropology casework
- 10. Humanitarian aspects in Forensic Medical Practice
- 11. The Forensic Anthropology Report

Interactive lectures/Practical sessions: 10 x 2h

TEACHING and LEARNING METHODS - EVALUATION

DELIVERY	Physical presence and lab-related/hand's on		
Face-to-face, Distance learning, etc.	training.		
	O .		
USE OF INFORMATION AND			
COMMUNICATIONS			
TECHNOLOGY Use of ICT in teaching, laboratory education,			
communication with students			
TEACHING METHODS	Activity	Semester workload	
The manner and methods of teaching are described in detail.	Lectures	22h	
Lectures, seminars, laboratory practice,	Interactive	20h	
fieldwork, study and analysis of bibliography,	lectures/practicals		
tutorials, placements, clinical practice, art workshop, interactive teaching, educational	Exams	6h	
visits, project, essay writing, artistic creativity,	Self-guided study	102	
etc.	Total 25/ECTS	150	
The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS			
STUDENT PERFORMANCE			
EVALUATION Description of the evaluation procedure	Assessment will include to a) The examination	two parts of skeletal remains	
Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, openended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other	simulating a forensic case and the submission of a written report with the findings (50%) b) A written exam in English (50%)		
Specifically-defined evaluation criteria are given, and if and where they are accessible to students.			

(4) ATTACHED BIBLIOGRAPHY

Lecture Notes

İşcan MY, Steyn M. Human Skeleton in Forensic Medicine,(3rd ed) Charles C. Thomas , Springfield, IL;2013

Christensen AM, Passalacqua NV, Bartelink EJ. Forensic Anthropology: Current Methods and Practice Academic Press; 2014

Thompson, T., & Black, S. Forensic Human Identification: An Introduction (1st ed.), CRC Press;2006

FMAI 105: LEGAL AND BIOETHICAL ASPECTS IN THE MEDICOLEGAL INVESTIGATION OF DEATH

COURSE OUTLINE

(1) GENERAL

SCHOOL	Medical			
ACADEMIC UNIT				
LEVEL OF STUDIES	Postgraduate			
COURSE CODE	FMAI 105	SEMESTER A		
COURSE TITLE	Legal and Bioethical asp investigation of death	Legal and Bioethical aspects in the medicolegal investigation of death		
COURSE DIRECTOR	EYGENIA SMYRNAKI			
if credits are awarded for separate compor laboratory exercises, etc. If the credits ar course, give the weekly teaching he	nents of the course, e.g. lectures, re awarded for the whole of the	WEEKLY TEACHING HOURS	CREDITS	
	Lectures	(average 2h for 9 weeks)	4	
Add rows if necessary. The organisation of methods used are described in detail at (d).				
COURSE TYPE general background, special background, specialised general knowledge, skills development	Special background in la	aw and bioethics	6	
PREREQUISITE COURSES:	None			
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	English			
IS THE COURSE OFFERED TO ERASMUS STUDENTS	No			
COURSE WEBSITE (URL)	https://mscs.uoc.gr/forensic-med/?courses=legal-			
	and-bioethical-aspects-i	and-bioethical-aspects-in-the-medicolegal-		
	investigation-of-death			

(2) LEARNING OUTCOMES

Learning outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.

Consult Appendix A

- Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area
- $\bullet \quad Descriptors \ for \ Levels \ 6, 7 \ \& \ 8 \ of \ the \ European \ Qualifications \ Framework \ for \ Lifelong \ Learning \ and \ Appendix \ B$
- Guidelines for writing Learning Outcomes

The course aims to introduce basic principles of criminal law with regards to the forensic expert, their evidence, report and testimony. More specifically students will be introduced to:

• The structure of the legal system and the role of medical professionals, forensic experts and coroners

- The legal and ethical obligations of medical doctors and forensic pathologists
- The good practice in medical certificates and experts report in line with the Code of Medical Ethics and the Criminal Law
- The potential problems and difficulties in exercising duties by coroners and experts
- Potential liabilities

General Competences

Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?

Search for, analysis and synthesis of data and information, with the use of the necessary technology

Adapting to new situations Decision-making

Working independently

Team work

Working in an international environment Working in an interdisciplinary environment

Production of new research ideas

Project planning and management Respect for difference and multiculturalism Respect for the natural environment

Showing social, professional and ethical responsibility and

sensitivity to gender issues Criticism and self-criticism

Production of free, creative and inductive thinking

Others...

Analysis and synthesis of data

Adapting to new situations

Decision making

Showing social, professional and ethical responsibility

Production of new research ideas

(3) SYLLABUS

Lectures

- 1)Introduction to medical forensics: The role of Forensic Pathologist in penal and civil legal proceedings.
- 2)Code of Medical Ethics Duties of Forensic Pathologists.
- 3) Medical certificates: legal aspects and procedures
- 4) Medical doctors, Forensic pathologists, and crime investigation.
- 5)Expert's report in criminal procedures.
- 6)Problems and difficulties in exercising duties by the Forensic pathologist (e.g. lack of consent from family members, negative reactions, legal actions against Forensic pathologists, etc.).
- 7) The Forensic Pathologist as a witness.
- 8)Good practice in writing an expert's report.
- 9)Penal Civil and Disciplinary Liability of Forensic Pathologists and other forensic experts.

TEACHING and LEARNING METHODS - EVALUATION

DELIVERY Face-to-face, Distance learning, etc.	Physical presence			
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY Use of ICT in teaching, laboratory education, communication with students	ICT in teaching Communication with students			
TEACHING METHODS	Activity	Semester workload		
The manner and methods of teaching are described in detail.	Lectures Exams	18		
Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography,	Self-guided study	80		
tutorials, placements, clinical practice, art workshop, interactive teaching, educational	Total 25 / ECTS	100		
visits, project, essay writing, artistic creativity, etc. The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS				
STUDENT PERFORMANCE	Assessment will include a written exam in the			
EVALUATION Description of the evaluation procedure	form of multiple questions in English.			
Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, openended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other Specifically-defined evaluation criteria are given, and if and where they are accessible to students.				

(4) ATTACHED BIBLIOGRAPHY

- Lecture notes
- Cyril H. Wecht, Michael A. Graham, and Randy L. Hanzlick, Forensic Pathology in Civil and Criminal Cases Revised Fourth Ed, Juris 2021
- Graham M. Davies, Anthony R. Beech, Forensic Psychology Crime, Justice, Law, Interventions 3rd ed., Crime, Justice, Law, Interventions, John Wiley and Sons Ltd, 2017.
- Larry E. Daniel and Lars E. Daniel, Digital Forensics for Legal Professionals Understanding Digital Evidence From The Warrant To The Courtroom, Syngress, 2011
- William Bailey, Terence McAdam, Law, Science and Experts: Civil and Criminal Forensics, Carolina Academic Press, 2014.

2.2.2 Semester 2

FMAI 201: FORENSIC TAPHONOMY

COURSE OUTLINE

(1) GENERAL

SCHOOL	Medical				
ACADEMIC UNIT					
LEVEL OF STUDIES	Postgraduate				
COURSE CODE	FMAI 201 SEMESTER 2				
COURSE TITLE	Forensic Taphonomy				
COURSE DIRECTOR	ANDREA BONICELLI				
INDEPENDENT TEACHING ACTIVITIES if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits		WEEKLY TEACHING HOURS		CREDITS	
	Lectures and seminars 2 10		10		
Address if The average time of the drive and the tradition					
Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).					
COURSE TYPE general background, special background, specialised general knowledge, skills development	Special back	kground			
PREREQUISITE COURSES:					
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	English				
IS THE COURSE OFFERED TO ERASMUS STUDENTS	No				
COURSE WEBSITE (URL)	https://mscs.uoc.gr/forensic- med/?courses=forensic-taphonomy				
	nea, tourses forefish approximity				

(2) LEARNING OUTCOMES

Learning outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.

Consult Appendix A

- Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area
- Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B
- Guidelines for writing Learning Outcomes

The course aims to offer a broad understanding of the processes that affect the body following death and to highlight their forensic significance as source of information and as evidence. The recording, analysis and interpretation of taphonomic processes play an essential role to meaningful forensic interpretation of the circumstances of death when human remains are discovered. The estimation of post-mortem interval and the reconstruction of the death event are heavily relying on the knowledge of early and late post-mortem changes, the effect of scavenging and the effect of fire on

the human body. The course introduces factors affecting decomposition and putrefaction of soft tissue, the importance of entomology, botany palynology, marine biology and soil analysis. Recovery of human remains from different environments is also covered. Students will be trained in the labs and will be exposed in material from real forensic cases.

This course will offer students a profound understanding of :

- the process and timing of decomposition and putrefaction of a human body
- the intrinsic and extrinsic factors that cause post mortem changes in a dead body
- the effect of burial practices and different environments on bodies found on surface, buried or emerged on water
- the role of entomology, botany and marine biology in the reconstruction of the burial environment and the assessment of the post mortem interval
- the contribution of soil analysis in forensic investigations
- the opportunities for taphonomic research on dedicated taphonomic research facilities that study human decomposition in relation to a variety of factors

General Competences

Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?

Search for, analysis and synthesis of data and information, with the use of the necessary technology

Adapting to new situations

Decision-making Working independently

Team work

Working in an international environment Working in an interdisciplinary environment

Production of new research ideas

Project planning and management Respect for difference and multiculturalism Respect for the natural environment

Showing social, professional and ethical responsibility and

sensitivity to gender issues Criticism and self-criticism

Production of free, creative and inductive thinking

..... Others...

- Respect for the natural environment and understanding the influence of the environment in the process of decomposition
- Learn how to synthesize information from different disciplines in decision making
- Production of new research ideas in investigating taphonomy-related forensic questions

(3) SYLLABUS

- Introduction to Forensic Taphonomy
- Early post mortem changes
- Late post mortem changes
- Forensic Entomology, Botany and Marine Biology
- Post mortem scavenging and environmental influences on human remains
- Effects of fire on the human skeleton
- Forensic archaeology surface recovery and excavation protocol
- Taphonomy research in "body farms": history and current status
- Forensic Soil Analysis
- Forensic applications of isotopic analysis

Seminars/Practical training

- The application of omics and spectroscopic methods for PMI estimation/cause of death
- Forensic recovery
- Forensic entomology
- PMI estimation challenges-Real time cases

TEACHING and LEARNING METHODS - EVALUATION

DELIVERY Face-to-face, Distance learning, etc.	Physical presence			
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY Use of ICT in teaching, laboratory education, communication with students				
TEACHING METHODS	Activity	Semester workload		
The manner and methods of teaching are described in detail.	Lectures	20		
Lectures, seminars, laboratory practice,	Practical sessions 8			
fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art	Exams	4		
workshop, interactive teaching, educational	Self-guided reading	218		
visits, project, essay writing, artistic creativity, etc.	Course total	250		
The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS				
STUDENT PERFORMANCE EVALUATION Description of the evaluation procedure	For the purposes of assessment students are required to do a 10 minutes oral presentation (50%) and a class quiz (50%).			
Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, openended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other Specifically-defined evaluation criteria are given, and if and where they are accessible to students.	velop student's skills in presentation. The topic class within the first tw The quiz is meant to te composite thinking of different taphonomic composite thinking of the different taphonomic composite will consist of the quiz will consist of	point presentation is used to de- ent's skills in preparing a scientific on. The topic will be given in in the first two weeks of the course. meant to test basic knowledge and thinking of the students in evaluating phonomic conditions, interpreting and estimating post-mortem interval. Fill consist of questions of short an- multiple choice questions.		

(4) ATTACHED BIBLIOGRAPHY

Boddington, A., Garland, A.N. & Janaway, R.C. (eds.). 1987. *Death, Decay and Reconstruction: Approaches to Archaeology and Forensic Science*. Manchester University Press.

Byrd J.H. & Castner J.L. (eds.) 2012. Forensic Entomology: The Utility of Arthropods in Legal Investigations, Second Edition. Boca Raton. CRC Press.

Hagland, W. D. & Sorg, M. H. 1997. Forensic Taphonomy: the Postmortem Fate of Human Remains. Boca Raton. CRC Press.

Hagland, W. D. & Sorg, M. H. 2002. *Advances in Forensic Taphonomy: Method, Theory and Archaeological Perspectives*. Boca Raton. CRC Press.

Hunter, J.R., Roberts, C.A. and Martin, A., 1996 *Studies in Crime: An Introduction to Forensic Archaeology*, London, Batsford.

Hunter, J.R and Cox, M., 2005 Advances in Forensic Archaeology, CRC Press Boca Raton.

Janaway, R.C. 1996. The decay of buried human remains. In, Hunter, J., C. Roberts & A. Martin, 1996. *Studies in Crime: An Introduction to Forensic Archaeology*. Routledge. London.

Pokines J.T. & Symes S.A. (eds.) 2013. Manual of Forensic Taphonomy. Boca Raton. CRC Press.

Ritz, K., Dawson, L.A. & Miller, D.R. (eds.) 2009 Criminal and Environmental Forensics. Springer, Dordrecht

Schmidt CW, Steve A, Symes SA (eds.) 2008. The Analysis of Burned Human Remains. New York, Elsevier Press.

Tibbett, M & Carter, D.O. (eds.). 2007. Soil analysis in Forensic Taphonomy: Chemical and Biological effects CRC Press, 2007

Related academic journals:

Forensic Science International International Journal of Forensic Medicine Journal Of Forensic Sciences Medicine Science and the Law Legal Medicine

FMAI 202: FORENSIC ASPECTS OF TRAUMA

COURSE OUTLINE

(1) GENERAL

SCHOOL	Medical				
ACADEMIC UNIT					
LEVEL OF STUDIES	Postgraduate				
COURSE CODE	FMAI 202 SEMESTER 2				
COURSE TITLE	Forensic aspects of trauma				
COURSE DIRECTOR	ELENA KRANIOTI				
INDEPENDENT TEACHING ACTIVITIES credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits		WEEKLY TEACHING HOURS			
LECTURES AN	ID PRACTICAL SESSIONS		2	5	
Add rows if necessary. The organisation of methods used are described in detail at (d). COURSE TYPE general background, special background, specialised general knowledge, skills development					
PREREQUISITE COURSES:	Musculoskeletal/Radiological Anatomy				
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	English				
IS THE COURSE OFFERED TO ERASMUS STUDENTS	No				
COURSE WEBSITE (URL)					

(2) LEARNING OUTCOMES

Learning outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.

Consult Appendix A

- Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area
- $\bullet \quad Descriptors \ for \ Levels \ 6, 7 \ \& \ 8 \ of \ the \ European \ Qualifications \ Framework \ for \ Lifelong \ Learning \ and \ Appendix \ B$
- Guidelines for writing Learning Outcomes

This intensive course details the principles and practice of the analysis and interpretation of skeletal trauma from the perspective of different professionals. Through a series of didactic lectures and interactive practical sessions delivered by a variety of forensic experts, this course will cover trauma biomechanics, the principles and effects of different types of trauma on the skeleton (blunt force, sharp force, gunshot and blast), traumatic evidence of child abuse, the timing of skeletal trauma and how best to record and present skeletal trauma evidence in forensic reports. More specifically the students will:

 Be introduced to the basic principles of bone biomechanics and its applications in forensic settings • Understand the role of different experts in the analysis and interpretation of skeletal

trauma

- Learn how to identify different types of trauma with regards to the timing, the mechanism, and the lethal potential of injury
- Learn how to test forensic scenarios and report the results
- Learn to identify evidence of child abuse
- Understand the limitations when interpreting and giving evidence in court related to skeletal trauma.

General Competences

Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?

Search for, analysis and synthesis of data and information, with the use of the necessary technology

Adapting to new situations

Decision-making
Working independently

Team work Working in an international environment Working in an interdisciplinary environment

Production of new research ideas

Project planning and management Respect for difference and multiculturalism Respect for the natural environment

Showing social, professional and ethical responsibility and

sensitivity to gender issues Criticism and self-criticism

Production of free, creative and inductive thinking

Others...

Adapting to new situations
Decision making
Interpretation skills
Acknowledgment of limitations

(3) SYLLABUS

- Introduction to Forensic Biomechanics
- Applications of Biomechanics in forensic questions
- Timing of injuries: Differential diagnosis of ante-, peri- and postmortem trauma
- Blunt force trauma in forensic contexts
- Sharp force trauma
- Ballistic trauma: diagnosis and interpretation of injuries
- Forensic aspects of pediatric trauma: child abuse and neglect
- Forensic Trauma reconstruction and presentation-trauma simulation

Practical training:

3x2h practical sessions on trauma

TEACHING and LEARNING METHODS - EVALUATION

DELIVERY	Face to face, distance lear	ning in exceptional	
Face-to-face, Distance learning, etc.	situations		
USE OF INFORMATION AND	ICT in teaching, communication with students		
COMMUNICATIONS			
TECHNOLOGY			
Use of ICT in teaching, laboratory education, communication with students			
TEACHING METHODS	Activity	Semester workload	
The manner and methods of teaching are described in detail.	Lectures	14	
Lectures, seminars, laboratory practice,	Practical training	8	
fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art	Exams	4	
workshop, interactive teaching, educational	Self-guided study	99	
visits, project, essay writing, artistic creativity, etc.	Course total	125	
The student's study hours for each learning activity are given as well as the hours of non-			
directed study according to the principles of the ECTS			
STUDENT PERFORMANCE			
EVALUATION Description of the evaluation procedure	 Practical assessme skeletal remains/ 	ent of trauma (50%) on photos etc.	
Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, openended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other			
Specifically-defined evaluation criteria are given, and if and where they are accessible to students.			

(4) ATTACHED BIBLIOGRAPHY

- 1. Lecture notes
- 2. Forensic biomechanic (2014), Peter Zioupos P ed. Journal of the Mechanical Behavior of Biomedical Materials, special issue Volume 33, page 1-136
- 3. Kranioti E. Forensic investigation of cranial injuries due to blunt force trauma: current best practice (2015). *Research and Reports in Forensic Medical Science*;5:25-37
- 4. Kimmerle EH, Baraybar JP (2008) Skeletal trauma:identification of injuries resulting from human rights abuse and armed conflict. CRC Press, LLC, Boca Raton, Florida

FMAI 203 Applied Statistics

COURSE OUTLINE

(1) GENERAL

SCHOOL	Medical		
ACADEMIC UNIT			
LEVEL OF STUDIES	Postgraduate		
COURSE CODE	FMAI 203	SEMESTER 2	
COURSE TITLE	Applied Statistics		
COURSE DIRECTOR	M. KALOCHRISTIANA	KIS, A BONICELL	I
INDEPENDENT TEACHI if credits are awarded for separate compon laboratory exercises, etc. If the credits ar course, give the weekly teaching ho	ents of the course, e.g. lectures e awarded for the whole of the	WEEKLY TEACHING HOURS	CREDITS
	Lectures and tutorial	s 2	5
Add rows if necessary. The organisation of	teaching and the teaching		
methods used are described in detail at (d).			
COURSE TYPE general background, special background, specialised general knowledge, skills development			
PREREQUISITE COURSES:			
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	English		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	No		
COURSE WEBSITE (URL)	https://mscs.uoc.gr/fo.statistics	ensic-med/?course	es=applied-

(2) LEARNING OUTCOMES

Learning outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.

Consult Appendix A

- Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area
- Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B
- Guidelines for writing Learning Outcomes

Upon completion of the course, the students will:

- Understand the basic principles of the scientific method: Measurements, data collection, sampling, sampling bias, experimental design
- Identify different types of data and dataset structure
- Be capable to use fundamental statistic methods to process and analyse data
- Be able to set up and use the R programming language and its libraries for data manipulation, statistical analysis and visualisation
- understand distributions, the importance of the normal distribution, the

measures of central tendency and variability

- Be able to identify different types of problems and apply the appropriate methodologies to answer research questions
- will be capable to process and transform datasets using R
- will be capable to fit simple and multiple linear models, analyses of variance, categorical data analysis and interpret results from real world datasets

General Competences

Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?

Search for, analysis and synthesis of data and information, with the use of the necessary technology

Adapting to new situations Decision-making

Working independently Team work

Working in an international environment

Working in an interdisciplinary environment Production of new research ideas

Project planning and management Respect for difference and multiculturalism

Respect for the natural environment

Showing social, professional and ethical responsibility and

sensitivity to gender issues Criticism and self-criticism

Production of free, creative and inductive thinking

Others...

information, with the use of the necessary technology

Decision-making

Working independently

Production of new research ideas

(3) SYLLABUS

Two hour lectures will be divided in 1 hour theory and 1 of hands on tutorials

- 1. Introduction to Statistical thinking and R Programming
- 2. Summary Statistics
- Visualisation
- 4. Random variables and probability distributions
- 5. Hyposthesis testing
- Single and multiple regressions 6.
- 7. Categorical data analysis
- 8. Introduction to Machine Learning
- 9. ModeCarlo test and Bayesian approaches
- 10. Power Analysis
- 11. Introduction to reporting and R markedown

TEACHING and LEARNING METHODS - EVALUATION

DELIVERY Face-to-face, Distance learning, etc.	Physical presence	
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY Use of ICT in teaching, laboratory education, communication with students		
TEACHING METHODS	Activity	Semester workload
The manner and methods of teaching are described in detail.	Lectures	12
Lectures, seminars, laboratory practice,	Tutorials	12
fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art	Exams	10
workshop, interactive teaching, educational	Self-guided study	91
visits, project, essay writing, artistic creativity, etc.		
The student's study hours for each learning activity are given as well as the hours of non-		
directed study according to the principles of the		
ECTS		
	Course total	125
STUDENT PERFORMANCE		
EVALUATION Description of the evaluation procedure		
	Review of selected peer	r-review articles (30%)
Language of evaluation, methods of evaluation, summative or conclusive, multiple choice	Perform statistical analy	ysis on selected
questionnaires, short-answer questions, open-	datasets and create an I	R Markedown report
ended questions, problem solving, written work, essay/report, oral examination, public	(70%)	_
presentation, laboratory work, clinical examination of patient, art interpretation, other		
Specifically-defined evaluation criteria are		
given, and if and where they are accessible to students.		

(4) ATTACHED BIBLIOGRAPHY

- Suggested bibliography:

- Statistics and Probability in Forensic Anthropology, Obertova Z, Stewart A, Cattaneo C, Elsevier 2020 ISBN:978-0-12-815764-0
- Statistics, An introduction using R, M. J. Crawley, 2nd Edition, 2015, Wiley, ISBN: 978-1-118-94109-6
- Applied Statistics: theory and problem solutions with R, D. Rasch, R. Verdooren, J. Plutz, 2019, Wiley, ISBN: 978-1-119-55154-6
- Discovering statistics using R, A. Field, J. Miles, Z. Field, 2012, Sage Publishing, ISBN: 9781446289136
- Statistics and the Evaluation of Evidence for Forensic Scientists, 3rd Edition, C. Aitken, F. Taroni, S. Bozza, ISBN: 978-1-119-24522-3
- R for Health Data Science, E. Harrison, R. Pius, Routledge, 2021, ISBN 978036742819

FMAI 204 APPLICATION OF COMPUTED TOMOGRAPHY IN FORENSIC MEDICINE

COURSE OUTLINE

(1) GENERAL

SCHOOL	Medical				
ACADEMIC UNIT					
LEVEL OF STUDIES	Postgraduat	te			
COURSE CODE	FMAI 204		SEMESTER	2	
COURSE TITLE	Application Medicine	of Computed	Tomography	in Fo	orensic
COURSE DIRECTOR(S)	G. AMPAN	OZI, K. SPAN	AKIS		
INDEPENDENT TEACHI if credits are awarded for separate compon laboratory exercises, etc. If the credits ar course, give the weekly teaching ho	onents of the course, e.g. lectures, are awarded for the whole of the			CREDITS	
			2		10
Add rows if necessary. The organisation of methods used are described in detail at (d). COURSE TYPE general background, special background, special background, special sed general knowledge, skills development PREREQUISITE COURSES:	Special back	e teaching kground, Skills sectional CT A	•	;	
LANGUAGE OF INSTRUCTION and EXAMINATIONS: IS THE COURSE OFFERED TO	English No				
ERASMUS STUDENTS					
COURSE WEBSITE (URL)	https://ms	scs.uoc.gr/fo	rensic-		
	med/?courses=application-of-computed-				
	-	ny-in-forensic	-		

(2) LEARNING OUTCOMES

Learning outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.

Consult Appendix A

- Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area
- $\bullet \quad Descriptors \ for \ Levels \ 6, 7 \ \& \ 8 \ of \ the \ European \ Qualifications \ Framework \ for \ Lifelong \ Learning \ and \ Appendix \ B$
- Guidelines for writing Learning Outcomes

The course describes the application of radiological imaging techniques, specifically Computed Tomography, in a forensic setting. The lectures refer to a broad spectrum of Forensic Pathology, including identification of deceased, natural and traumatic causes of death. During the practical part, the students are called to identify, describe and depict all forensically relevant findings of selected CT-scanned cases from the Forensic Medicine Unit, University of Crete. After completion of the course, students will be able to assess a forensic PMCT case and define/suggest cause and manner of

death.

General Competences

Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?

Search for, analysis and synthesis of data and information, with the use of the necessary technology

Adapting to new situations Decision-making Working independently

Team work

Working in an international environment Working in an interdisciplinary environment

Production of new research ideas

Project planning and management Respect for difference and multiculturalism Respect for the natural environment

Showing social, professional and ethical responsibility and

sensitivity to gender issues Criticism and self-criticism

Production of free, creative and inductive thinking

..... Others...

Search for, analysis and synthesis of data and information, with the use of the necessary technology

Working in an international environment

Working in an interdisciplinary environment

Working independently

Decision-making

(3) SYLLABUS

Lectures

- 1. Introduction in Postmortem Computed Tomography (PMCT)
- 2. PMCT and Identification of deceased
- 3. PMCT in Cardiovascular Causes of death
- 4. PMCT in other Natural causes of death
- 5. PMCT in blunt trauma cases
- 6. PMCT in sharp force injury
- 7. PMCT in gunshot injuries
- 8. PMCT in pediatric deaths
- 9. Applications of microCT in the medicolegal investigation of death

Practical Training

Hands on training on workstations, assessment of forensic cases from the Forensic Medicine Unit.

TEACHING and LEARNING METHODS - EVALUATION

DELIVERY Face-to-face, Distance learning, etc.	Physical presence/hands on training
USE OF INFORMATION AND	Use of ICT in teaching, Student Communication
COMMUNICATIONS	
TECHNOLOGY	

Use of ICT in tea	ching,	laborate	ry education,
со	mmun	iication '	with students

TEACHING METHODS

The manner and methods of teaching are described in detail.

Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc.

The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS

Activity	Semester workload
Lectures	18
Practical sessions	18
Exams	12
Self-guided study	202
Course total	250

STUDENT PERFORMANCE EVALUATION

Description of the evaluation procedure

Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, openended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other

Specifically-defined evaluation criteria are given, and if and where they are accessible to students.

Language of evaluation: English.

- Written exam with multiple choice and/or short answer questions.
- Predefined PMCT cases for each student to self-evaluate. Most important/relevant forensic findings have to be described. Students are expected to deliver a cause of death for each case.
- Final mark will be formed by both, written exam (30%) and PMCT-cases (70%)

(4) ATTACHED BIBLIOGRAPHY

- Suggested bibliography:

Lecture notes

Brogdon's Forensic Radiology. Thali MJ, Viner MD, Brogdon BG eds, 2nd ed CRC Press, Boca Raton; 2010

The Virtopsy Approach: 3D Optical and Radiological Scanning and Reconstruction in Forensic Medicine Thali MJ, Dirnhofer R, Vock P (eds), CRC Press; 1st ed., Boca Raton; 2009 Forensic Pathology of Fractures and Mechanisms of Injury: Postmortem CT Scanning Burke MP ed., CRC Press, Boca Raton; 2012

Post Mortem CT for Non-Suspicious Adult Deaths: An Introduction Shenton A, Kralt P, Suvarna SK, eds. 1st ed. Cham, Switzerland: Springer Cham; 2021

- Related academic journals:

Forensic Imaging
Forensic Science International
International Journal of Legal Medicine
European Radiology

FMAI 205: PRACTICAL ASSESSMENT OF SIMULATED FORENSIC CASES

COURSE OUTLINE

(5) GENERAL

SCHOOL	Medical				
ACADEMIC UNIT					
LEVEL OF STUDIES	Postgradua	te			
COURSE CODE	FMAI 204		SEMESTER	2	
COURSE TITLE	Practical ass	sessment of sin	nulates forens	ic ca	ses
COURSE DIRECTOR	ELENA KR	ANIOTI			
if credits are awarded for separate compone laboratory exercises, etc. If the credits are course, give the weekly teaching he	nents of the course, e.g. lectures, re awarded for the whole of the				CREDITS
	Self and	group study	15		10
Add rows if necessary. The organisation of methods used are described in detail at (d).					
COURSE TYPE	Special background, specialised general				
general background, special background, specialised general knowledge, skills development	knowledge, skills development				
PREREQUISITE COURSES:					
LANGUAGE OF	English				
INSTRUCTION and	Liigiisii				
EXAMINATIONS:					
IS THE COURSE OFFERED TO	No				
ERASMUS STUDENTS					
COURSE WEBSITE (URL)	https://m	scs.uoc.gr/fo	rensic-		
	med/?cou	rses=practical	l-assessment	-of-	simulated-
	forensic-cases				

(6) LEARNING OUTCOMES

Learning outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.

Consult Appendix A

- Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area
- Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B
- Guidelines for writing Learning Outcomes

This course aims to teach students how to:

- work in a multidisciplinary manner on a forensic case
- evaluate forensic evidence and reconstruct the circumstances of death of an individual
- define the cause and the manner of death
- respond to a Police inquiry with an expert report

 present and defend the content of a report in a mock trial simulating the court environment

General Competences

Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?

Search for, analysis and synthesis of data and Project plann.

information, with the use of the necessary technology Respec

Adapting to new situations

Decision-making
Working independently

Working independently Team work

Working in an international environment

Working in an interdisciplinary environment

Production of new research ideas

Project planning and management Respect for difference and multiculturalism Respect for the natural environment

Showing social, professional and ethical responsibility and

sensitivity to gender issues Criticism and self-criticism

Production of free, creative and inductive thinking

Others...

Search for, analysis and synthesis of data and information, with the use of the necessary technology

Working in an international environment

Working in an interdisciplinary environment

Adapting to new situations

Decision-making

(7) SYLLABUS

Students will be divided in groups and will be given a case to study with the objective to give an expert opinion on the cause and manner of death. Each group will be assigned a supervisor. The available material may include

- crime/death scene and autopsy photographs,
- CT scans of the body, skeletal remains for examination,
- histopathology slides or reports,
- toxicology reports and reports from the police investigation.

After reviewing and analysing the available material the group will produce a forensic report and will be asked to present their case in front of a jury in a mock trial.

TEACHING and LEARNING METHODS - EVALUATION

DELIVERY Face-to-face, Distance learning, etc.	Physical presence/hands on training		
USE OF INFORMATION AND COMMUNICATIONS	Use of ICT in teaching, Student Communication		
TECHNOLOGY			
Use of ICT in teaching, laboratory education, communication with students			
TEACHING METHODS	Activity	Semester workload	
The manner and methods of teaching are described in detail.	Self-guided Study	100	
Lectures, seminars, laboratory practice,	Group Study	100	
fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art	Supervised discussion	10	
workshop, interactive teaching, educational	of cases		
visits, project, essay writing, artistic creativity,			

etc. The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the	Report writing Court simulation Course total	20 20 250
STUDENT PERFORMANCE EVALUATION Description of the evaluation procedure Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, openended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other Specifically-defined evaluation criteria are given, and if and where they are accessible to students.	tic approach ii. Interpreta	nance 50% the following: i. Diagnos- tion of findings iii. iv. Fo- simulation performance-

(8) ATTACHED BIBLIOGRAPHY

Suggested bibliography:

Brogdon's Forensic Radiology. Thali MJ, Viner MD, Brogdon BG eds, 2nd ed CRC Press, Boca Raton; 2010

The Virtopsy Approach: 3D Optical and Radiological Scanning and Reconstruction in Forensic Medicine Thali MJ,Dirnhofer R, Vock P (eds), CRC Press; 1st ed., Boca Raton; 2009Forensic Pathology of Fractures and Mechanisms of Injury: Postmortem CT Scanning Burke MP ed., 2012, CRC Press, Boca Raton

Post Mortem CT for Non-Suspicious Adult Deaths: An Introduction Shenton A, Kralt P, Suvarna SK, eds. 1st ed. Cham, Switzerland: Springer Cham; 2021

Saukko, P, Knight, B (eds). Knight's Forensic Pathology. CRC press; Boca Raton FL, 2015

Shkrum, MJ, Forensic Pathology of Trauma: Common Problems for the Pathologist, Humana Press; 2007 edition

Spitz, W 'Fisher's and Spits' Madicolegal Investigation of Death, 4th Ed, Ch.Thomas, Springfield, 2006.

Spitz, W 'Fisher's and Spits' Madicolegal Investigation of Death, 5th Ed, Ch.Thomas, Springfield, 2020.

Evaluation of practical assessment of simulated forensic cases

A case presentation is required for the conclusion of the module.

Each Simulated Case Assessment is evaluated by an Examination Committee as follows: 8.5 - 10 / 10: Excellent, 6.5 - 8.49 / 10: Very Well, 5 - 6.49 / 10: Well and 0-4.99: Inadequate.

The evaluation follows the axes of: i. Diagnostical approach ii. Interpretation of findings, iii. Presentation, iv. Written report, v. Answer to questions posed by the Examination Committee. In the event of an inadequate case assessment then the

Examining Committee refers the PG student group to edit their Written Report with or without the oral presentation within a specific time frame.

The Examination Committee is allowed to request minor or major edits of the report.

The PG students, following the conclusion of their Simulated Case Assessment must submit an evaluation form, signed by their supervisor.

2.2.3 Semester 3

2.2.3.1 MASTER THESIS

OUTLINE

The dissertation is a piece of independent research supervised by a member of staff, in an area related to the MSc degree. This module allows students to choose their own subject area and specific research topic, define the pace of work and approach, exploit their own strengths and interests by demonstrating originality and creativity. Students are expected to choose a topic that is related to their programme of study and specialisation (if any). By the end of this module, the students will be:

- able to conduct literature review and choose a research topic that is not adequately investigated in their area of research
- able to learn from existing knowledge or expertise in a particular area of interest within the fields of Forensic Medicine, Forensic Anthropology and Forensic Imaging and/or closely related disciplines
- able to apply theories, methods and principles taught in the degree programme using empirical analysis
- able to set specific research questions and choose statistical methods to test their hypotheses, present and interpret their results
- able to engage in scientific writing

A dissertation of 12,000 words. Public defense with a PPT presentation.

The PG student must submit an application to the EC through the Programme's Secretariat by the end of the 2nd semester in which a proposed abstract is included along with the suggested Supervisor and the members of the 3-member Evaluation Committee. The members of the Committee must have a field of expertise relevant to the Programme's field.

The dissertation's subject and the Evaluation Committee are approved by the General Assembly of the Medical Faculty following a well-documented proposal.

In the event the application is not submitted by the end of the 2nd semester the General Assembly is authorized to assign a Supervising Professor belonging to the teaching staff of the Programme as well as the additional 2 members of the Evaluation Committee. The subject of the Dissertation is then selected and assigned to the student by the Committee.

2.2.3.2 MSc Dissertation Supervision

The Dissertation Supervision will be performed in accordance to the legislation and Postgraduate Studies Regulation of the University of Crete.

Public presentation and completion of the MSc Dissertation

Following the completion of the Dissertation Manuscript copies are provided to the Supervisor and co-Supervisors (members of the Evaluation Committee). Upon approval of the manuscript a date and location is set by the EC in which the Dissertation is publicly presented.

In the event of non-completion of the Dissertation by the end of the 3rd semester a deadline extension of up to one academic semester can be given following the approval of the Evaluation Committee, the Executive Committee and the General Assembly of the Medical Faculty.

Following the presentation of the dissertation the Evaluation Committee composes and signs a document of proceedings in which observation, comments and the final grade of the dissertation are included.

In case of negative evaluation, the PG student can re-submit the Dissertation after a time period of 2 months, having conformed to the comments and suggestions of the 3-member Evaluation Committee.

In case of a second negative evaluation the EC proposes the deletion of the Student from the Programme without awarding them with an MSc Diploma.

The Dissertation manuscript must follow the specifications and structure of a scientific research paper. More specifically it must include an introduction, stating the topic and goals of the project, a materials and methods section, the results, a conclusion and discussion section, the cited literature as well as supplementary material if needed (graphs, pictures etc). The Dissertation must be written in English and/or in Greek. The words limit is set to 15.000 (+/- 20%). In the first pages of the manuscript the PG student must declare that the dissertation is not the product of plagiarism.

The final manuscript of the MSc Dissertation is submitted to the Library of the University of Crete in physical and digital form. A physical copy is also kept at the Medical Faculty.

Copyright issues are dictated by the Postgraduate Regulation of the University of Crete and the relevant legislation.

2.3 Obligations and Rights of the Postgraduate Students

2.3.1 General obligations of the Postgraduate Students

Each applicant, prior to their enrollment to the Programme, must be informed of and accept the terms of the Internal Regulation. Accepting the terms of Regulation is a mandatory condition for the acquisition of the PG student status.

The general obligations of the PG students are the following:

- To attend the courses of the curriculum. Unjustified absence is investigated by the EC.
- To submit the assigned projects within the set deadlines.
- To participate in the examinations.
- To respect and act according to the Postgraduate Studies Regulation and to the decisions of the Programme's Administrative Bodies, the University of Crete and the Academic Code of Conduct.

2.3.2 Rights of the Postgraduate Students

The PG students are entitled to the provisions set by the legislation in place, in conjunction with the terms and criteria set by the University of Crete.

The PG students have the right to: use the facilities of the Institution, access the Library by displaying their Student ID card, use the digital services and databases for the support of their educational and research needs, use the laboratory and clinical facilities, following their respective regulations and safety procedures.

2.3.3 Course recognition

Undergraduate courses can be recognized as equivalent to postgraduate courses in cases when the educational contents is corresponding to level 6 in the National Qualification Framework.

Following the PG student's request and the EC's positive decision ECTS acquired from a different undergraduate or postgraduate programme can be transferred.

The course recognition refers to 6-year undergraduate studies in Medicine for the courses of "Musculoskeletal and Radiological Anatomy" and "Introduction to Forensic Medicine" that have been taught extensively on the undergraduate level.

The transferred courses will be included in the Transcript of Records of the PG students but they will not be included in the Diploma Grade.

Additionally, the following restrictions are in place:

- 1. The accredited modules must not exceed 20 ECTS.
- 2. The requests for module accreditation must be submitted at the beginning of the 1st academic semester.

2.3.4 Course Evaluation and Grading system

The students are evaluated at each academic semester. The examination of PG students can take place: During the academic semester, through assignments and/or midterm examinations set by the Course Supervisor and at the end of the academic semester through written and/or oral exams and assignments, as determined by the Course Supervisor.

Each course is graded as follows: 8.5 - 10 / 10: Excellent, 6.5 - 8.49 / 10: Very Well, 5 - 6.49 / 10: Well and 0-4.99: Inadequate.

2.3.5 Course repeat examinations

In the event of failure at a course examination the PG student has the right to a single repeat examination. In the event of a second failure, the PG student can be examined, following their request, by a 3-member Faculty committee with a relevant scientific background. The Course Supervisor is excluded from the aforementioned committee.

2.3.6 Suspension of Studies

The PG students have the right to request suspension of studies only once, for up to 1 academic year. Their request must be approved by the General Assembly of the Medical Faculty for well-documented serious reasons. A suspension of studies for more than 1 academic year can only be granted in cases of severe, chronic illness, certified by public medical entities.

The PG students that have been granted a suspension of studies do not possess the student status during that time period. The suspended academic semesters are not included in the maximum duration of studies.

The Suspension of Studies can be terminated earlier following a well-documented request submitted by the PG student.

Recommencement of Studies following Suspension

The PG students that have suspended their studies must participate in all courses, practical sessions etc for which they had not been evaluated prior to the suspension. The regulation of studies for the year of enrollment is applicable for those PG students.

2.3.7 Dismissal of PG students:

The EC can propose the deletion of PG students to the General Assembly for the following reasons:

- a) Dismissal request made by the PG student
- b) Inadequate performance of the student
- c) Behavior incompatible or insulting to the academic code of conduct according to the legislation

Requirements for the acquisition of an MSc Diploma

For the successful completion of the Programme and the awarding of an MSc Diploma the PG students must have received a minimum of 90 ECTS, more specifically:

- a) A minimum of 30 ECTS for each one of the 1st and 2nd semester
- b) 30 ECTS for the MSc Dissertation

Additionally, the PG students must have fulfilled their financial obligations. Diploma Grade

The final Grade of the Diploma is calculated based on the mean grade of the individual modules and the MSc dissertation. The number of ECTS is set as the weighting coefficient for each module.

2.3.8 Academic Advisors

Academic Advisors are assigned by the EC at the beginning of each study cycle, in accordance to the number of enrolled PG students.

The Academic Advisor's role is to offer guidance to the PG students for the successful completion of their studies. The services provided by the PG students are advisory in nature.

2.3.9 Scholarships

Up to three (3) Excellence Scholarships can be awarded to the PG students taking into account the available cash balance of the Programme.

Explicit requirements for receiving Excellence Scholarships:

- The mean grade of each academic semester (1st and 2nd) must fall within the range of 8,5-10/10. Students that have modules accredited from previous studies are excluded.
- The mean grade of the MSc Dissertation must be the highest in the student cohort and fall within the range of 8,5-10/10
- Students that have received other Scholarships or Awards are excluded.

In the event of a tie the monetary amount of the Scholarship will be divided equally between the compeers.

Scholarship Award process

Following a proposal of the Executive Committee, a call for applications is announced. The candidates must fill out the provided application form and attach the required documents. The application must be submitted to the Programme's Secretariat within the given deadline. The application is considered to be a Self-Declaration in accordance to the law 1599/1986.

The EC evaluates and ranks the applications according to the set criteria and submits a list of valid candidates to the General Assembly of the Medical Faculty. The results are announced to the candidates via e-mail by the Programme's Secretariat.

The candidates can object the decision of the EC within 5 days. The submitted objection will be evaluated by the Objection Committee of the Programme.

Additionally, the PG students are eligible to scholarships awarded by the Medical Faculty or other Institutions. Students that have received such scholarships are excluded from the Programme's Scholarships.

2.3.10 Code of Conduct - Publishing of Research Papers

The scientific research and publishing of research papers falls must abide to the Postgraduate Studies Regulation of the University of Crete and the respective legislation.

Plagiarism

Plagiarism is considered to be a severe academic offense that can lead to penal repercussions. Plagiarism is defined as the replication of another author's

published paper or parts of it, or the exploitation of a published paper without mention of the corresponding citation.

The PG student is obligated to submit the final manuscript of their MSc Dissertation to the Evaluation Committee a minimum of 15 days prior to their presentation for it to be submitted to plagiarism inspection. The Postgraduate Studies Regulation of the University of Crete is applicable in the event of plagiarism or copyright violation detection.

3. Teaching staff

Teaching staff is appointed in accordance to the legislations and the Postgraduate Studies Regulation of the University of Crete. A detailed list with name, current position, affiliation and courses on which the staff members participate are included in Table 1. A short CV is included on the <u>website</u>.

Table 1. List of teaching staff

NAME	POSITION	INSTITUTE	COURSE ID
Adalia Pascal	Professor of Anthropology	UNIVERSITY OF MARSEILLE, FRANCE	FMAI-104
Ampanozi Garyfalia	Forensic Pathologist/Expert in Postmortem Imaging	UNIVERSITY OF ZURICH, SWITZERLAND	FMAI-204
Bonicelli Andrea	Postdoctoral Researcher in Forensic Taphonomy	UNIVERSITY OF CENTRAL LANCASHIRE, UK	FMAI-201, FMAI 203
Bouhaidar Ralph	PERSONAL CHAIR IN FORENSIC MEDICINE	UNIVERSITY OF EDINBURGH, UK	FMAI-101
Chighine Alberto	Fellow in Forensic Medicine	UNIVERSITY OF CAGLIARI, ITALY	FMAI-201
Cunha Eugenia	Professor of Anthropology	UNIVERSITY OF COIMBRA, PORTUGAL	FMAI-104
Dawson Lorna	Professor of Forensic Soil Analysis	JAMES HUTTON INSTITUTE, SCOTLAND,UK	FMAI-201
Dimitriou Rozalia	Ass. Prof of Orthopedics	ΠΑΝΕΠΙΣΤΉΜΙΟ ΚΡΗΤΗΣ	FMAI-102
Ekizoglu Oguzhan	Assoc Prof of Forensic Medicine	UNIVERSITY OF ISMIR, TURKEY	FMAI-101
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