



EVOLUTIONARY MEDICINE

Democritus University of Thrace
University of Zurich



Course Syllabi

TABLE OF CONTENTS

1ST SEMESTER

INTRODUCTION TO EVOLUTIONARY MEDICINE.....	3
HUMAN EVOLUTION AND SKELETAL ADAPTATION.....	7
BIOARCHAEOLOGY OF HEALTH AND DISEASE	11
METHODS IN RESEARCH & DATA MANAGEMENT	15

2ND SEMESTER

HUMAN ADAPTATION AND MISMATCHES IN MODERN HEALTH	19
ADVANCES IN ANCIENT DNA	23
EVOLUTION OF MEDICINE	27
EVOLUTIONARY AND CULTURAL PERSPECTIVES IN GLOBAL HEALTHCARE	31

3RD SEMESTER

MASTER THESIS.....	35
--------------------	----

INTRODUCTION TO EVOLUTIONARY MEDICINE

(1) GENERAL

SCHOOL	HUMANITIES		
ACADEMIC UNIT	HUMANITIES		
LEVEL OF STUDIES	PSP – LEVEL 7		
COURSE CODE	EM1	SEMESTER	1 ST
COURSE TITLE	INTRODUCTION TO EVOLUTIONARY MEDICINE		
INDEPENDENT TEACHING ACTIVITIES <i>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, state the weekly teaching hours and the total credits</i>		WEEKLY TEACHING HOURS	CREDITS
		3	7,5
<i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail in section (4).</i>			
COURSE TYPE <i>general background, special background, specialization, general education, skills development</i>	COMPULSORY		
PREREQUISITE COURSES	NO		
LANGUAGE OF INSTRUCTION AND OF ASSESSMENT	ENGLISH		
MODE OF TEACHING <i>in-person (%) synchronous distance learning (%) asynchronous distance learning (%) (In the case of synchronous distance learning, the total weekly duration of teaching is recorded)</i>	SYNCHRONOUS DISTANCE LEARNING 100%		
AVAILABILITY TO ERASMUS STUDENTS	YES		
COURSE WEBSITE (URL)	https://eclass.duth.gr/courses		

(2) LEARNING OUTCOMES

Learning Outcomes <i>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.</i> <i>Consult Appendix A</i> • <i>Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area</i> • <i>Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B</i> • <i>Brief Guide for drafting Learning Outcomes</i> Upon successful completion of the course, participants will be able to: • explain the core principles, scope, and scientific rationale of evolutionary medicine; • describe major evolutionary mechanisms, including natural selection, adaptation, trade-offs, and evolutionary mismatch;
--

- analyse the contribution of life history, developmental plasticity, and human variation to patterns of health and disease;
- interpret selected chronic, infectious, reproductive, metabolic, and mental health conditions through an evolutionary framework;
- discuss host–pathogen co-evolution and the relevance of ancient pathogens and historical epidemics to current biomedical questions;
- recognise the contribution of palaeopathology and bioarchaeological evidence to the study of disease in past populations;
- critically evaluate evolutionary explanations of biomedical phenomena and distinguish them from proximate or purely mechanistic explanations;
- apply evolutionary reasoning to the interpretation of contemporary human health challenges in a scientifically grounded manner.

General Competences

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

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

Adaptability 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

.....

Other...

.....

- Search, analysis and synthesis of data and information, with the use of the necessary technology
- Adaptability to new situations
- Decision-making
- Working independently
- Working in an international environment
- Working in an interdisciplinary environment
- Production of new research ideas
- Respect for difference and multiculturalism
- Showing social, professional and ethical responsibility
- Criticism and self-criticism
- Production of free, creative and inductive thinking

(3) COURSE SYLLABUS

1. Introduction to the course: what is evolutionary medicine
2. Evolutionary theory, adaptation and selection, micro- and macroevolution
3. Development, life history, adaptive plasticity
4. Human evolution and human variation
5. Cancer in evolutionary perspective
6. Reproduction and the obstetric dilemma
7. Immune system and host–pathogen co-evolution
8. Ancient pathogens and historical epidemics
9. Palaeopathology I: introduction to the field, soft tissue pathologies
10. Palaeopathology II: musculoskeletal disorders
11. Stature, nutrition and metabolism: the human diet, obesity, and metabolic diseases
12. Evolutionary psychiatry and mental health
13. Recapitulation and final discussion

(4) TEACHING AND LEARNING METHODS - ASSESSMENT

MODE OF TEACHING <i>Face-to-face, distance learning, etc.</i>	DISTANCE LEARNING
MODE AND FREQUENCY OF COMMUNICATION WITH THE STUDENTS	Communication with students is maintained: - during scheduled synchronous teaching sessions; - through the institutional learning platform; - via university e-mail; - through course announcements and uploaded teaching material;
ENSURING THE MODE OF COMMUNICATION AMONG STUDENTS <i>Team assignments and discussions, collaborative learning platforms with the use of AI, video conference, QA sessions, κ.α.</i>	Communication and interaction among students are supported through: - guided academic discussion during synchronous online sessions; - small-group discussion activities, where appropriate; - collaborative engagement with selected questions, case-based topics, and course themes; - use of the institutional digital learning environment for course-related interaction and exchange of educational material.
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, in laboratory training, in the communication with students</i>	Use of ICT in teaching and communication with students, including: - digital presentation slides; - audiovisual material and educational videos; - Microsoft Teams for synchronous distance teaching and communication; - Open e-Class for the provision of teaching material, announcements, and course-related communication; - institutional webmail for communication with students.
TECHNOLOGICAL EQUIPMENT REQUIREMENTS	Students are expected to have: - a computer or equivalent device capable of supporting videoconferencing and access to digital learning platforms; - stable internet connection; - camera, microphone, and audio output;
PLAGIARISM POLICY/ PLAGIARISM DETECTION TOOLS	All written assignments must comply with the principles of academic integrity and proper citation practice. Plagiarism, unauthorised reuse of material, or failure to acknowledge sources is not permitted. Written work may be checked through plagiarism-detection software approved and used by the Programme.
ARTIFICIAL INTELLIGENCE POLICY (1) <i>The use of Artificial Intelligence is prohibited in all circumstances</i> (2) <i>The use of Artificial Intelligence is allowed only with the permission of the instructor</i> (3) <i>The use of Artificial Intelligence is</i>	The use of Artificial Intelligence tools is allowed only with the permission of the instructor and with explicit acknowledgement where such use has contributed to the preparation of submitted work. Any use of AI tools must remain consistent with the principles of academic integrity, transparency, and independent student work.

allowed only with an explicit reference to the literature (4) Students are free to use Artificial Intelligence															
ORGANISATION OF TEACHING The mode and methods of teaching are described in detail. Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, work placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artworks, etc. The student's study hours for each learning activity are stated, as well as the hours of independent study, according to the principles of the ECTS.	<table> <tr> <th>Activity</th><th>Semester workload</th></tr> <tr> <td>Lectures</td><td>39</td></tr> <tr> <td>Study and analysis of bibliography</td><td>65</td></tr> <tr> <td>Preparation of individual written assignment</td><td>50</td></tr> <tr> <td>Independent study and preparation for the final examination</td><td>30,5</td></tr> <tr> <td>Final written examination</td><td>3</td></tr> <tr> <td>Course total</td><td>187,5</td></tr> </table>	Activity	Semester workload	Lectures	39	Study and analysis of bibliography	65	Preparation of individual written assignment	50	Independent study and preparation for the final examination	30,5	Final written examination	3	Course total	187,5
Activity	Semester workload														
Lectures	39														
Study and analysis of bibliography	65														
Preparation of individual written assignment	50														
Independent study and preparation for the final examination	30,5														
Final written examination	3														
Course total	187,5														
STUDENT ASSESSMENT Description of the assessment method Language of assessment, methods of assessment, formative or summative assessment, multiple choice questions test, short answer questions, essay questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory assignment, clinical examination of patient, art interpretation, other Specifically-defined evaluation criteria are given, and if and where they are accessible to students.	Student assessment is based on a combination of an individual written assignment and a final written examination. The assessment structure evaluates both the ability to apply evolutionary reasoning to selected questions in human health and disease and the understanding of the course's conceptual and theoretical foundations. The final grade is calculated as follows: • Individual written assignment: 40% • Final written examination: 60% The individual written assignment assesses students' ability to engage with relevant scientific literature, develop a coherent argument, and apply evolutionary perspectives to a defined topic within the scope of the course. The final written examination assesses students' knowledge, comprehension, synthesis, and critical application of the course material. The assessment criteria are communicated to students at the beginning of the course and are made available through the course learning environment.														

(5) RECOMMENDED BIBLIOGRAPHY

<i>Suggested bibliography: XXXXX</i> Brüne, M., & Schiefenhövel, W. (Eds.). (2019). <i>The Oxford handbook of evolutionary medicine</i>. Oxford University Press Gluckman, P. D., Beedle, A. S., & Hanson, M. A. (2016). <i>Principles of Evolutionary Medicine</i> (2nd ed.). Oxford University Press. Stearns, S. C., & Medzhitov, R. (2016). <i>Evolutionary Medicine</i>. Sinauer Associates. - Related academic journals: XXXXX <u>Evolution, Medicine, and Public Health</u> <u>American Journal of Human Biology</u> <u>The Quarterly Review of Biology</u>
--

HUMAN EVOLUTION AND SKELETAL ADAPTATION

(1) GENERAL

SCHOOL	HUMANITIES		
ACADEMIC UNIT	HUMANITIES		
LEVEL OF STUDIES	PSP – LEVEL 7		
COURSE CODE	EM2	SEMESTER	1 ST
COURSE TITLE	HUMAN EVOLUTION AND SKELETAL ADAPTATION		
INDEPENDENT TEACHING ACTIVITIES <i>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, state the weekly teaching hours and the total credits</i>		WEEKLY TEACHING HOURS	CREDITS
		3	7,5
Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail in section (4).			
COURSE TYPE <i>general background, special background, specialization, general education, skills development</i>	COMPULSORY		
PREREQUISITE COURSES	NO		
LANGUAGE OF INSTRUCTION AND OF ASSESSMENT	ENGLISH		
MODE OF TEACHING <i>in-person (%) synchronous distance learning (%) asynchronous distance learning (%) (In the case of synchronous distance learning, the total weekly duration of teaching is recorded)</i>	SYNCHRONOUS DISTANCE LEARNING 100%		
AVAILABILITY TO ERASMUS STUDENTS	YES		
COURSE WEBSITE (URL)	https://eclass.duth.gr/courses		

(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
- Brief Guide for drafting Learning Outcomes

Upon successful completion of the course, participants will be able to:

- describe the main stages, taxa, and interpretive frameworks of human evolution;
- explain the evolutionary significance of bipedalism, hominin diversity, and the emergence of the genus Homo;
- analyse the relationship between skeletal morphology, function, and evolutionary adaptation;

- evaluate how environmental, climatic, and mechanical factors shape skeletal plasticity and variation;
- interpret selected musculoskeletal traits and conditions, including low back pain, osteoporosis, flat feet, and dental crowding, through an evolutionary perspective;
- discuss the obstetrical dilemma and the evolution of the human pelvis in relation to reproduction and locomotion;
- critically assess paleoanthropological, biomechanical, and comparative evidence used in the study of skeletal adaptation;
- integrate evolutionary and biomedical reasoning in the interpretation of modern human skeletal health.

General Competences

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

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

Adaptability 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

.....

Other...

.....

- Search, analysis and synthesis of data and information, with the use of the necessary technology
- Adaptability to new situations
- Decision-making
- Working independently
- Working in an interdisciplinary environment
- Production of new research ideas
- Criticism and self-criticism
- Production of free, creative and inductive thinking

(3) COURSE SYLLABUS

1. Evolution of non-human primates
2. Earliest hominins
3. Evolution of bipedalism
4. Phylogeny and taxonomy, dating techniques, and later hominins
5. Early hominin diversity and adaptive landscapes
6. The genus Homo and Homo sapiens: global variability
7. Neanderthals, Denisovans, and anatomically modern humans
8. Skeletal plasticity under environmental and mechanical stress. Climatic adaptation and ecogeographic skeletal patterns
9. Activity, mobility and workload biomechanics. Bone degeneration and longevity: osteoporosis in post-reproductive life. Sedentary lifestyles and musculoskeletal dysfunction
10. Low back pain in evolutionary perspective
11. Flattened arches and modern locomotion: flat feet as a biomechanical mismatch
12. Masticatory evolution and dental crowding: the case of wisdom teeth
13. Recapitulation and final discussion

(4) TEACHING AND LEARNING METHODS - ASSESSMENT

MODE OF TEACHING <i>Face-to-face, distance learning, etc.</i>	DISTANCE LEARNING
MODE AND FREQUENCY OF COMMUNICATION WITH THE STUDENTS	Communication with students is maintained: - during scheduled synchronous teaching sessions; - through the institutional learning platform; - via university e-mail; - through course announcements and uploaded teaching material;
ENSURING THE MODE OF COMMUNICATION AMONG STUDENTS <i>Team assignments and discussions, collaborative learning platforms with the use of AI, video conference, QA sessions, κ.α.</i>	Communication and interaction among students are supported through: - guided academic discussion during synchronous online sessions; - small-group discussion activities, where appropriate; - collaborative engagement with selected questions, case-based topics, and course themes; - use of the institutional digital learning environment for course-related interaction and exchange of educational material.
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, in laboratory training, in the communication with students</i>	Use of ICT in teaching and communication with students, including: - digital presentation slides; - audiovisual material and educational videos; - Microsoft Teams for synchronous distance teaching and communication; - Open e-Class for the provision of teaching material, announcements, and course-related communication; - institutional webmail for communication with students.
TECHNOLOGICAL EQUIPMENT REQUIREMENTS	Students are expected to have: - a computer or equivalent device capable of supporting videoconferencing and access to digital learning platforms; - stable internet connection; - camera, microphone, and audio output;
PLAGIARISM POLICY/ PLAGIARISM DETECTION TOOLS	All written assignments must comply with the principles of academic integrity and proper citation practice. Plagiarism, unauthorised reuse of material, or failure to acknowledge sources is not permitted. Written work may be checked through plagiarism-detection software approved and used by the Programme.
ARTIFICIAL INTELLIGENCE POLICY <i>(1) The use of Artificial Intelligence is prohibited in all circumstances</i> <i>(2) The use of Artificial Intelligence is allowed only with the permission of the instructor</i> <i>(3) The use of Artificial Intelligence is</i>	The use of Artificial Intelligence tools is allowed only with the permission of the instructor and with explicit acknowledgement where such use has contributed to the preparation of submitted work. Any use of AI tools must remain consistent with the principles of academic integrity, transparency, and independent student work.

allowed only with an explicit reference to the literature (4) Students are free to use Artificial Intelligence															
ORGANISATION OF TEACHING The mode and methods of teaching are described in detail. Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, work placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artworks, etc. The student's study hours for each learning activity are stated, as well as the hours of independent study, according to the principles of the ECTS.	<table border="1"> <thead> <tr> <th>Activity</th><th>Semester workload</th></tr> </thead> <tbody> <tr> <td>Lectures</td><td>39</td></tr> <tr> <td>Study and analysis of bibliography</td><td>65</td></tr> <tr> <td>Preparation of individual written assignment</td><td>50</td></tr> <tr> <td>Independent study and preparation for the final examination</td><td>30,5</td></tr> <tr> <td>Final written examination</td><td>3</td></tr> <tr> <td>Course total</td><td>187,5</td></tr> </tbody> </table>	Activity	Semester workload	Lectures	39	Study and analysis of bibliography	65	Preparation of individual written assignment	50	Independent study and preparation for the final examination	30,5	Final written examination	3	Course total	187,5
Activity	Semester workload														
Lectures	39														
Study and analysis of bibliography	65														
Preparation of individual written assignment	50														
Independent study and preparation for the final examination	30,5														
Final written examination	3														
Course total	187,5														
STUDENT ASSESSMENT Description of the assessment method Language of assessment, methods of assessment, formative or summative assessment, multiple choice questions test, short answer questions, essay questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory assignment, clinical examination of patient, art interpretation, other Specifically-defined evaluation criteria are given, and if and where they are accessible to students.	Student assessment is based on a combination of an individual written assignment and a final written examination. The assessment structure evaluates both the ability to apply evolutionary reasoning to selected questions in human health and disease and the understanding of the course's conceptual and theoretical foundations. The final grade is calculated as follows: • Individual written assignment: 40% • Final written examination: 60% The individual written assignment assesses students' ability to engage with relevant scientific literature, develop a coherent argument, and apply evolutionary perspectives to a defined topic within the scope of the course. The final written examination assesses students' knowledge, comprehension, synthesis, and critical application of the course material. The assessment criteria are communicated to students at the beginning of the course and are made available through the course learning environment.														

(5) RECOMMENDED BIBLIOGRAPHY

- Suggested bibliography:
Tattersall, I. (2022). Understanding human evolution. Cambridge University Press.
Larsen, C. S. (2015). Bioarchaeology: Interpreting behavior from the human skeleton (2nd ed.). Cambridge University Press.
- Related academic journals:
Journal of Human Evolution
Evolutionary Anthropology: Issues, News, and Reviews
American Journal of Biological Anthropology

BIOARCHAEOLOGY OF HEALTH AND DISEASE

(1) GENERAL

SCHOOL	HUMANITIES		
ACADEMIC UNIT	HUMANITIES		
LEVEL OF STUDIES	PSP – LEVEL 7		
COURSE CODE	EM3	SEMESTER	1 ST
COURSE TITLE	BIOARCHAEOLOGY OF HEALTH AND DISEASE		
INDEPENDENT TEACHING ACTIVITIES <i>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, state the weekly teaching hours and the total credits</i>		WEEKLY TEACHING HOURS	CREDITS
		3	7,5
Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail in section (4).			
COURSE TYPE <i>general background, special background, specialization, general education, skills development</i>	COMPULSORY		
PREREQUISITE COURSES	NO		
LANGUAGE OF INSTRUCTION AND OF ASSESSMENT	ENGLISH		
MODE OF TEACHING <i>in-person (%) synchronous distance learning (%) asynchronous distance learning (%) (In the case of synchronous distance learning, the total weekly duration of teaching is recorded)</i>	SYNCHRONOUS DISTANCE LEARNING 100%		
AVAILABILITY TO ERASMUS STUDENTS	YES		
COURSE WEBSITE (URL)	https://eclass.duth.gr/courses		

(2) LEARNING OUTCOMES

Learning Outcomes <i>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.</i> <i>Consult Appendix A</i> • 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 • Brief Guide for drafting Learning Outcomes
Upon successful completion of the course, participants will be able to: • explain the contribution of bioarchaeology and palaeopathology to the reconstruction of health and disease in past populations; • identify the principal categories of skeletal, dental, and soft-tissue evidence used in the study of disease and biological stress; • discuss the application of imaging, histological, osteological, and mummy studies to

- bioarchaeological interpretation;
- analyse developmental stress, parental investment, reproductive strategies, and demographic patterns in past populations;
- interpret trauma, infectious disease, degenerative change, and congenital or developmental conditions within their broader biocultural context;
- evaluate the methodological strengths and limitations of skeletal evidence for assessing health, care, violence, and daily life;
- critically engage with interdisciplinary approaches connecting archaeology, biological anthropology, medicine, and history;
- apply bioarchaeological reasoning to the study of human experience, vulnerability, and adaptation in the past.

General Competences

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

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

Adaptability 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

.....

Other...

.....

- Search, analysis and synthesis of data and information, with the use of the necessary technology
- Decision-making
- Working independently
- Working in an interdisciplinary environment
- Production of new research ideas
- Showing social, professional and ethical responsibility
- Criticism and self-criticism
- Production of free, creative and inductive thinking

(3) COURSE SYLLABUS

1. Palaeopathology: introduction
2. Imaging technology in palaeopathology
3. The adult skeleton and histology
4. Mummy studies
5. The juvenile skeleton
6. The human dentition
7. Evolutionary patterns of bone microstructure and remodelling
8. Parental investment: breastfeeding and weaning patterns
9. Biocultural perspectives on developmental stress and health in past populations
10. Human demographic patterns in historical and contemporary populations
11. Trauma: violence, accidents, and warfare across historical periods
12. Infectious diseases in antiquity and their skeletal signatures
13. Degenerative change, occupation, and daily life in historical populations
14. Developmental and congenital conditions in historical populations

(4) TEACHING AND LEARNING METHODS - ASSESSMENT

MODE OF TEACHING <i>Face-to-face, distance learning, etc.</i>	DISTANCE LEARNING
MODE AND FREQUENCY OF COMMUNICATION WITH THE STUDENTS	Communication with students is maintained: - during scheduled synchronous teaching sessions; - through the institutional learning platform; - via university e-mail; - through course announcements and uploaded teaching material;
ENSURING THE MODE OF COMMUNICATION AMONG STUDENTS <i>Team assignments and discussions, collaborative learning platforms with the use of AI, video conference, QA sessions, κ.α.</i>	Communication and interaction among students are supported through: - guided academic discussion during synchronous online sessions; - small-group discussion activities, where appropriate; - collaborative engagement with selected questions, case-based topics, and course themes; - use of the institutional digital learning environment for course-related interaction and exchange of educational material.
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, in laboratory training, in the communication with students</i>	Use of ICT in teaching and communication with students, including: - digital presentation slides; - audiovisual material and educational videos; - Microsoft Teams for synchronous distance teaching and communication; - Open e-Class for the provision of teaching material, announcements, and course-related communication; - institutional webmail for communication with students.
TECHNOLOGICAL EQUIPMENT REQUIREMENTS	Students are expected to have: - a computer or equivalent device capable of supporting videoconferencing and access to digital learning platforms; - stable internet connection; - camera, microphone, and audio output;
PLAGIARISM POLICY/ PLAGIARISM DETECTION TOOLS	All written assignments must comply with the principles of academic integrity and proper citation practice. Plagiarism, unauthorised reuse of material, or failure to acknowledge sources is not permitted. Written work may be checked through plagiarism-detection software approved and used by the Programme.
ARTIFICIAL INTELLIGENCE POLICY <i>(1) The use of Artificial Intelligence is prohibited in all circumstances</i> <i>(2) The use of Artificial Intelligence is allowed only with the permission of the instructor</i> <i>(3) The use of Artificial Intelligence is allowed only with an explicit reference to the literature</i>	The use of Artificial Intelligence tools is allowed only with the permission of the instructor and with explicit acknowledgement where such use has contributed to the preparation of submitted work. Any use of AI tools must remain consistent with the principles of academic integrity, transparency, and independent student work.

(4) Students are free to use Artificial Intelligence		
ORGANISATION OF TEACHING The mode and methods of teaching are described in detail. Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, work placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artworks, etc. The student's study hours for each learning activity are stated, as well as the hours of independent study, according to the principles of the ECTS.	Activity Semester workload	
	Lectures	39
	Study and analysis of bibliography	65
	Preparation of individual written assignment	50
	Independent study and preparation for the final examination	30,5
	Final written examination	3
	Course total	187,5
STUDENT ASSESSMENT Description of the assessment method Language of assessment, methods of assessment, formative or summative assessment, multiple choice questions test, short answer questions, essay questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory assignment, clinical examination of patient, art interpretation, other Specifically-defined evaluation criteria are given, and if and where they are accessible to students.	Student assessment is based on a combination of an individual written assignment and a final written examination. The assessment structure evaluates both the ability to apply evolutionary reasoning to selected questions in human health and disease and the understanding of the course’s conceptual and theoretical foundations. The final grade is calculated as follows: • Individual written assignment: 40% • Final written examination: 60% The individual written assignment assesses students’ ability to engage with relevant scientific literature, develop a coherent argument, and apply evolutionary perspectives to a defined topic within the scope of the course. The final written examination assesses students’ knowledge, comprehension, synthesis, and critical application of the course material. The assessment criteria are communicated to students at the beginning of the course and are made available through the course learning environment.	

(5) RECOMMENDED BIBLIOGRAPHY

- Suggested bibliography:
- Buikstra, J. E. (Ed.). (2019). *Ortner's identification of pathological conditions in human skeletal remains* (3rd ed.). Academic Press.
- Grauer, A. L. (Ed.). (2012). *A companion to paleopathology*. Wiley-Blackwell.
- Larsen, C. S. (2015). *Bioarchaeology: Interpreting behavior from the human skeleton* (2nd ed.). Cambridge University Press.
- Related academic journals:
- [International Journal of Paleopathology](#)
- [Bioarchaeology International](#)
- [American Journal of Biological Anthropology](#)

METHODS IN RESEARCH & DATA MANAGEMENT

(1) GENERAL

SCHOOL	HUMANITIES		
ACADEMIC UNIT	HUMANITIES		
LEVEL OF STUDIES	PSP – LEVEL 7		
COURSE CODE	EM4	SEMESTER	1 ST
COURSE TITLE	METHODS IN RESEARCH & DATA MANAGEMENT		
INDEPENDENT TEACHING ACTIVITIES <i>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, state the weekly teaching hours and the total credits</i>		WEEKLY TEACHING HOURS	CREDITS
		3	7,5
Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail in section (4).			
COURSE TYPE <i>general background, special background, specialization, general education, skills development</i>	COMPULSORY		
PREREQUISITE COURSES	NO		
LANGUAGE OF INSTRUCTION AND OF ASSESSMENT	ENGLISH		
MODE OF TEACHING <i>in-person (%) synchronous distance learning (%) asynchronous distance learning (%) (In the case of synchronous distance learning, the total weekly duration of teaching is recorded)</i>	SYNCHRONOUS DISTANCE LEARNING 100%		
AVAILABILITY TO ERASMUS STUDENTS	YES		
COURSE WEBSITE (URL)	https://eclass.duth.gr/courses		

(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
- Brief Guide for drafting Learning Outcomes

Upon successful completion of the course, participants will be able to:

- explain the basic principles of scientific research design and methodological planning;
- distinguish between quantitative, qualitative, and mixed research approaches and identify their appropriate uses;
- design sampling, measurement, and data quality strategies while recognising common sources of bias;

- apply core principles of data management, standardisation, FAIR practice, reproducibility, and open science;
- interpret descriptive and inferential statistics, including estimation, confidence intervals, hypothesis testing, group comparisons, regression, and multivariable modelling;
- recognise the role of artificial intelligence, machine learning, and digital tools in anthropological and interdisciplinary research;
- critically evaluate methodological choices, data limitations, and the impact of confounding factors on research interpretation;
- develop a structured and scientifically sound approach to the collection, organisation, analysis, and presentation of research data.

General Competences

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

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

Adaptability 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

.....

Other...

.....

- Search, analysis and synthesis of data and information, with the use of the necessary technology
- Adaptability to new situations
- Decision-making
- Working independently
- Project planning and management
- Working in an interdisciplinary environment
- Production of new research ideas
- Criticism and self-criticism
- Production of free, creative and inductive thinking

(3) COURSE SYLLABUS

1. Principles of scientific research
2. Quantitative and qualitative methods
3. Sampling design, measurement, and sources of bias
4. Data quality control and standardization
5. Data management principles and FAIR standards
6. Descriptive statistics and exploratory data analysis
7. Inferential statistics: estimation, confidence intervals, and hypothesis testing
8. Statistical tests for group comparison
9. Imaging data production, process and interpretation: Regression Modelling
10. Multivariable modelling and confounding control
11. Artificial intelligence and machine learning
12. Digital tools in anthropology
13. Recapitulation and final discussion

(4) TEACHING AND LEARNING METHODS - ASSESSMENT

MODE OF TEACHING <i>Face-to-face, distance learning, etc.</i>	DISTANCE LEARNING
MODE AND FREQUENCY OF COMMUNICATION WITH THE STUDENTS	Communication with students is maintained: - during scheduled synchronous teaching sessions; - through the institutional learning platform; - via university e-mail; - through course announcements and uploaded teaching material;
ENSURING THE MODE OF COMMUNICATION AMONG STUDENTS <i>Team assignments and discussions, collaborative learning platforms with the use of AI, video conference, QA sessions, κ.α.</i>	Communication and interaction among students are supported through: - guided academic discussion during synchronous online sessions; - small-group discussion activities, where appropriate; - collaborative engagement with selected questions, case-based topics, and course themes; - use of the institutional digital learning environment for course-related interaction and exchange of educational material.
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, in laboratory training, in the communication with students</i>	Use of ICT in teaching and communication with students, including: - digital presentation slides; - audiovisual material and educational videos; - Microsoft Teams for synchronous distance teaching and communication; - Open e-Class for the provision of teaching material, announcements, and course-related communication; - institutional webmail for communication with students.
TECHNOLOGICAL EQUIPMENT REQUIREMENTS	Students are expected to have: - a computer or equivalent device capable of supporting videoconferencing and access to digital learning platforms; - stable internet connection; - camera, microphone, and audio output;
PLAGIARISM POLICY/ PLAGIARISM DETECTION TOOLS	All written assignments must comply with the principles of academic integrity and proper citation practice. Plagiarism, unauthorised reuse of material, or failure to acknowledge sources is not permitted. Written work may be checked through plagiarism-detection software approved and used by the Programme.
ARTIFICIAL INTELLIGENCE POLICY <i>(1) The use of Artificial Intelligence is prohibited in all circumstances</i> <i>(2) The use of Artificial Intelligence is allowed only with the permission of the instructor</i> <i>(3) The use of Artificial Intelligence is allowed only with an explicit reference to the literature</i>	The use of Artificial Intelligence tools is allowed only with the permission of the instructor and with explicit acknowledgement where such use has contributed to the preparation of submitted work. Any use of AI tools must remain consistent with the principles of academic integrity, transparency, and independent student work.

(4) Students are free to use Artificial Intelligence															
ORGANISATION OF TEACHING <i>The mode and methods of teaching are described in detail.</i> <i>Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, work placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artworks, etc.</i> <i>The student's study hours for each learning activity are stated, as well as the hours of independent study, according to the principles of the ECTS.</i>	<table><tr><th>Activity</th><th>Semester workload</th></tr><tr><td>Lectures</td><td>39</td></tr><tr><td>Study and analysis of bibliography</td><td>65</td></tr><tr><td>Preparation of individual written assignment</td><td>50</td></tr><tr><td>Independent study and preparation for the final examination</td><td>30,5</td></tr><tr><td>Final written examination</td><td>3</td></tr><tr><td>Course total</td><td>187,5</td></tr></table>	Activity	Semester workload	Lectures	39	Study and analysis of bibliography	65	Preparation of individual written assignment	50	Independent study and preparation for the final examination	30,5	Final written examination	3	Course total	187,5
	Activity	Semester workload													
	Lectures	39													
	Study and analysis of bibliography	65													
	Preparation of individual written assignment	50													
	Independent study and preparation for the final examination	30,5													
	Final written examination	3													
	Course total	187,5													
STUDENT ASSESSMENT <i>Description of the assessment method</i> <i>Language of assessment, methods of assessment, formative or summative assessment, multiple choice questions test, short answer questions, essay questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory assignment, clinical examination of patient, art interpretation, other</i> <i>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i>	Student assessment is based on a combination of an individual written assignment and a final written examination. The assessment structure evaluates both the ability to apply evolutionary reasoning to selected questions in human health and disease and the understanding of the course’s conceptual and theoretical foundations. The final grade is calculated as follows: • Individual written assignment: 40% • Final written examination: 60% The individual written assignment assesses students’ ability to engage with relevant scientific literature, develop a coherent argument, and apply evolutionary perspectives to a defined topic within the scope of the course. The final written examination assesses students’ knowledge, comprehension, synthesis, and critical application of the course material. The assessment criteria are communicated to students at the beginning of the course and are made available through the course learning environment.														

(5) RECOMMENDED BIBLIOGRAPHY

- Suggested bibliography:
Creswell, J. W., & Creswell, J. D. (2023). Research design: Qualitative, quantitative, and mixed methods approaches (6th ed.). SAGE.
- Knapp, H. (2025). *Introductory statistics using R: An easy approach*. SAGE Publications.
- Related academic journals:
[Scientific Data](#)
[PLOS ONE](#)

HUMAN ADAPTATION AND MISMATCHES IN MODERN HEALTH

(1) GENERAL

SCHOOL	HUMANITIES		
ACADEMIC UNIT	HUMANITIES		
LEVEL OF STUDIES	PSP – LEVEL 7		
COURSE CODE	EM5	SEMESTER	2 nd
COURSE TITLE	HUMAN ADAPTATION AND MISMATCHES IN MODERN HEALTH		
INDEPENDENT TEACHING ACTIVITIES <i>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, state the weekly teaching hours and the total credits</i>		WEEKLY TEACHING HOURS	CREDITS
		3	7,5
Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail in section (4).			
COURSE TYPE <i>general background, special background, specialization, general education, skills development</i>	COMPULSORY		
PREREQUISITE COURSES	NO		
LANGUAGE OF INSTRUCTION AND OF ASSESSMENT	ENGLISH		
MODE OF TEACHING <i>in-person (%) synchronous distance learning (%) asynchronous distance learning (%) (In the case of synchronous distance learning, the total weekly duration of teaching is recorded)</i>	SYNCHRONOUS DISTANCE LEARNING 100%		
AVAILABILITY TO ERASMUS STUDENTS	YES		
COURSE WEBSITE (URL)	https://eclass.duth.gr/courses		

(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
- Brief Guide for drafting Learning Outcomes

Upon successful completion of the course, participants will be able to:

- explain the biological and evolutionary foundations of human adaptation across ecological and historical settings;
- describe the concept of evolutionary trade-offs and assess its relevance to contemporary health;
- analyse how diet, lifestyle, body composition, microbial interactions, and environmental pressures shape human biology;

- interpret mismatch as a framework for understanding selected modern physical and mental health challenges;
- discuss short-term and long-term adaptive responses, including high-altitude adaptation and historical changes in human populations;
- evaluate the role of evolutionary thinking in clinical interpretation, public health, and the study of athletic ability;
- critically assess evidence linking past environments, cultural change, and present-day patterns of disease;
- apply evolutionary perspectives to the analysis of contemporary health vulnerabilities and biomedical questions.

General Competences

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

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

Adaptability 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

.....

Other...

.....

- Search, analysis and synthesis of data and information, with the use of the necessary technology
- Adaptability to new situations
- Decision-making
- Working independently
- Working in an international environment
- Working in an interdisciplinary environment
- Production of new research ideas
- Showing social, professional and ethical responsibility
- Criticism and self-criticism
- Production of free, creative and inductive thinking

(3) COURSE SYLLABUS

1. Introduction: short-term adaptations of human morphology and health
2. Trade-offs
3. Human adaptation to hunter-gatherer lifeways
4. Human nutrition and body composition
5. Human-microbe interactions
6. Past pandemics
7. Aspects of evolution in human physiology
8. Adaptation to high altitude
9. Short-term adaptations through historical times
10. Mismatch and mental health
11. How evolution shapes our health and athletic abilities
12. Clinical applications in evolutionary medicine
13. Recapitulation and final discussion

(4) TEACHING AND LEARNING METHODS - ASSESSMENT

MODE OF TEACHING	DISTANCE LEARNING
<i>Face-to-face, distance learning, etc.</i>	

MODE AND FREQUENCY OF COMMUNICATION WITH THE STUDENTS	Communication with students is maintained: - during scheduled synchronous teaching sessions; - through the institutional learning platform; - via university e-mail; - through course announcements and uploaded teaching material;
ENSURING THE MODE OF COMMUNICATION AMONG STUDENTS <i>Team assignments and discussions, collaborative learning platforms with the use of AI, video conference, QA sessions, κ.α.</i>	Communication and interaction among students are supported through: - guided academic discussion during synchronous online sessions; - small-group discussion activities, where appropriate; - collaborative engagement with selected questions, case-based topics, and course themes; - use of the institutional digital learning environment for course-related interaction and exchange of educational material.
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, in laboratory training, in the communication with students</i>	Use of ICT in teaching and communication with students, including: - digital presentation slides; - audiovisual material and educational videos; - Microsoft Teams for synchronous distance teaching and communication; - Open e-Class for the provision of teaching material, announcements, and course-related communication; - institutional webmail for communication with students.
TECHNOLOGICAL EQUIPMENT REQUIREMENTS	Students are expected to have: - a computer or equivalent device capable of supporting videoconferencing and access to digital learning platforms; - stable internet connection; - camera, microphone, and audio output;
PLAGIARISM POLICY/ PLAGIARISM DETECTION TOOLS	All written assignments must comply with the principles of academic integrity and proper citation practice. Plagiarism, unauthorised reuse of material, or failure to acknowledge sources is not permitted. Written work may be checked through plagiarism-detection software approved and used by the Programme.
ARTIFICIAL INTELLIGENCE POLICY <i>(1) The use of Artificial Intelligence is prohibited in all circumstances</i> <i>(2) The use of Artificial Intelligence is allowed only with the permission of the instructor</i> <i>(3) The use of Artificial Intelligence is allowed only with an explicit reference to the literature</i> <i>(4) Students are free to use Artificial Intelligence</i>	The use of Artificial Intelligence tools is allowed only with the permission of the instructor and with explicit acknowledgement where such use has contributed to the preparation of submitted work. Any use of AI tools must remain consistent with the principles of academic integrity, transparency, and independent student work.

ORGANISATION OF TEACHING <i>The mode and methods of teaching are described in detail.</i> <i>Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, work placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artworks, etc.</i> <i>The student's study hours for each learning activity are stated, as well as the hours of independent study, according to the principles of the ECTS.</i>	Activity	Semester workload
	Lectures	39
	Study and analysis of bibliography	65
	Preparation of individual written assignment	50
	Independent study and preparation for the final examination	30,5
	Final written examination	3
	Course total	187,5
STUDENT ASSESSMENT <i>Description of the assessment method</i> <i>Language of assessment, methods of assessment, formative or summative assessment, multiple choice questions test, short answer questions, essay questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory assignment, clinical examination of patient, art interpretation, other</i> <i>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i>	Student assessment is based on a combination of an individual written assignment and a final written examination. The assessment structure evaluates both the ability to apply evolutionary reasoning to selected questions in human health and disease and the understanding of the course's conceptual and theoretical foundations. The final grade is calculated as follows: • Individual written assignment: 40% • Final written examination: 60% The individual written assignment assesses students' ability to engage with relevant scientific literature, develop a coherent argument, and apply evolutionary perspectives to a defined topic within the scope of the course. The final written examination assesses students' knowledge, comprehension, synthesis, and critical application of the course material. The assessment criteria are communicated to students at the beginning of the course and are made available through the course learning environment.	

(5) RECOMMENDED BIBLIOGRAPHY

- Suggested bibliography:

Shapiro, B., Barlow, A., Heintzman, P. D., Hofreiter, M., Pajmans, J. L. A., & Soares, A. E. R. (Eds.). (2019). *Ancient DNA: Methods and protocols* (2nd ed.). Humana Press.

Orlando, L., Gilbert, M. T. P., & Willerslev, E. (2015). Reconstructing ancient genomes and epigenomes. *Nature Reviews Genetics*, 16, 395–408. <https://doi.org/10.1038/nrg3935>

Spyrou, M. A., Bos, K. I., Herbig, A., & Krause, J. (2019). Ancient pathogen genomics as an emerging tool for infectious disease research. *Nature Reviews Genetics*, 20, 323–340. <https://doi.org/10.1038/s41576-019-0119-1>

- Related academic journals:

[Nature Reviews Genetics](#)

[Molecular Biology and Evolution](#)

[Genome Biology](#)

ADVANCES IN ANCIENT DNA

(1) GENERAL

SCHOOL	HUMANITIES		
ACADEMIC UNIT	HUMANITIES		
LEVEL OF STUDIES	PSP – LEVEL 7		
COURSE CODE	EM6	SEMESTER	2 nd
COURSE TITLE	ADVANCES IN ANCIENT DNA		
INDEPENDENT TEACHING ACTIVITIES <i>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, state the weekly teaching hours and the total credits</i>		WEEKLY TEACHING HOURS	CREDITS
		3	7,5
Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail in section (4).			
COURSE TYPE <i>general background, special background, specialization, general education, skills development</i>	COMPULSORY		
PREREQUISITE COURSES	NO		
LANGUAGE OF INSTRUCTION AND OF ASSESSMENT	ENGLISH		
MODE OF TEACHING <i>in-person (%) synchronous distance learning (%) asynchronous distance learning (%) (In the case of synchronous distance learning, the total weekly duration of teaching is recorded)</i>	SYNCHRONOUS DISTANCE LEARNING 100%		
AVAILABILITY TO ERASMUS STUDENTS	YES		
COURSE WEBSITE (URL)	https://eclass.duth.gr/courses		

(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
- Brief Guide for drafting Learning Outcomes

Upon successful completion of the course, participants will be able to:

- explain the development, scope, and significance of ancient DNA and ancient biomolecular research;
- describe the basic principles of ancient DNA preservation, sampling, extraction, sequencing, and authentication;
- discuss the contribution of next-generation sequencing and genomic analysis to the study of ancient populations;

- analyse applications of ancient DNA to human population genetics, pathogen evolution, diet, and the domestication of animals and plants;
- interpret ancient biomolecular evidence within a One Health framework linking humans, animals, microbes, and environments;
- recognise methodological challenges, including contamination, degradation, data quality, and interpretive limits;
- critically evaluate interdisciplinary evidence from genetics, archaeology, anthropology, and disease ecology;
- apply ancient DNA perspectives to broader questions in evolutionary medicine and bioarchaeological research.

General Competences

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

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

Adaptability 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

.....

Other...

.....

- Search, analysis and synthesis of data and information, with the use of the necessary technology
- Decision-making
- Working independently
- Working in an international environment
- Working in an interdisciplinary environment
- Production of new research ideas
- Showing social, professional and ethical responsibility
- Criticism and self-criticism
- Production of free, creative and inductive thinking

(3) COURSE SYLLABUS

1. Introduction to ancient biomolecules
2. History of ancient DNA
3. Ancient DNA and Next Generation Sequencing
4. Analysis of ancient DNA
5. Human population genetics and ancient DNA
6. Human–microbe interactions
7. Ancient DNA and pathogens
8. Introduction to One Health
9. One Health across time
10. Diet and ancient biomolecules
11. Domestication of animals and plants from ancient DNA
12. Recapitulation and final discussion

(4) TEACHING AND LEARNING METHODS - ASSESSMENT

MODE OF TEACHING <i>Face-to-face, distance learning, etc.</i>	DISTANCE LEARNING
MODE AND FREQUENCY OF COMMUNICATION WITH THE STUDENTS	Communication with students is maintained: • during scheduled synchronous teaching sessions; • through the institutional learning platform;

	• via university e-mail; • through course announcements and uploaded teaching material;				
ENSURING THE MODE OF COMMUNICATION AMONG STUDENTS <i>Team assignments and discussions, collaborative learning platforms with the use of AI, video conference, QA sessions, κ.α.</i>	Communication and interaction among students are supported through: • guided academic discussion during synchronous online sessions; • small-group discussion activities, where appropriate; • collaborative engagement with selected questions, case-based topics, and course themes; • use of the institutional digital learning environment for course-related interaction and exchange of educational material.				
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, in laboratory training, in the communication with students</i>	Use of ICT in teaching and communication with students, including: • digital presentation slides; • audiovisual material and educational videos; • Microsoft Teams for synchronous distance teaching and communication; • Open e-Class for the provision of teaching material, announcements, and course-related communication; • institutional webmail for communication with students.				
TECHNOLOGICAL EQUIPMENT REQUIREMENTS	Students are expected to have: • a computer or equivalent device capable of supporting videoconferencing and access to digital learning platforms; • stable internet connection; • camera, microphone, and audio output;				
PLAGIARISM POLICY/ PLAGIARISM DETECTION TOOLS	All written assignments must comply with the principles of academic integrity and proper citation practice. Plagiarism, unauthorised reuse of material, or failure to acknowledge sources is not permitted. Written work may be checked through plagiarism-detection software approved and used by the Programme.				
ARTIFICIAL INTELLIGENCE POLICY (1) <i>The use of Artificial Intelligence is prohibited in all circumstances</i> (2) <i>The use of Artificial Intelligence is allowed only with the permission of the instructor</i> (3) <i>The use of Artificial Intelligence is allowed only with an explicit reference to the literature</i> (4) <i>Students are free to use Artificial Intelligence</i>	The use of Artificial Intelligence tools is allowed only with the permission of the instructor and with explicit acknowledgement where such use has contributed to the preparation of submitted work. Any use of AI tools must remain consistent with the principles of academic integrity, transparency, and independent student work.				
ORGANISATION OF TEACHING <i>The mode and methods of teaching are described in detail.</i> <i>Lectures, seminars, laboratory</i>	<table> <tr> <th>Activity</th><th>Semester workload</th></tr> <tr> <td>Lectures</td><td>39</td></tr> </table>	Activity	Semester workload	Lectures	39
Activity	Semester workload				
Lectures	39				

<i>practice, fieldwork, study and analysis of bibliography, tutorials, work placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artworks, etc.</i> <i>The student's study hours for each learning activity are stated, as well as the hours of independent study, according to the principles of the ECTS.</i>	Study and analysis of bibliography	65
	Preparation of individual written assignment	50
	Independent study and preparation for the final examination	30,5
	Final written examination	3
	Course total	187,5
STUDENT ASSESSMENT <i>Description of the assessment method</i> <i>Language of assessment, methods of assessment, formative or summative assessment, multiple choice questions test, short answer questions, essay questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory assignment, clinical examination of patient, art interpretation, other</i> <i>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i>	Student assessment is based on a combination of an individual written assignment and a final written examination. The assessment structure evaluates both the ability to apply evolutionary reasoning to selected questions in human health and disease and the understanding of the course's conceptual and theoretical foundations. The final grade is calculated as follows: • Individual written assignment: 40% • Final written examination: 60% The individual written assignment assesses students' ability to engage with relevant scientific literature, develop a coherent argument, and apply evolutionary perspectives to a defined topic within the scope of the course. The final written examination assesses students' knowledge, comprehension, synthesis, and critical application of the course material. The assessment criteria are communicated to students at the beginning of the course and are made available through the course learning environment.	

(5) RECOMMENDED BIBLIOGRAPHY

- Suggested bibliography:

Shapiro, B., Barlow, A., Heintzman, P. D., Hofreiter, M., Pajmans, J. L. A., & Soares, A. E. R. (Eds.). (2019). Ancient DNA: Methods and protocols (2nd ed.). Humana Press.

Orlando, L., Gilbert, M. T. P., & Willerslev, E. (2015). Reconstructing ancient genomes and epigenomes. *Nature Reviews Genetics*, 16, 395–408. <https://doi.org/10.1038/nrg3935>

Spyrou, M. A., Bos, K. I., Herbig, A., & Krause, J. (2019). Ancient pathogen genomics as an emerging tool for infectious disease research. *Nature Reviews Genetics*, 20, 323–340. <https://doi.org/10.1038/s41576-019-0119-1>

- Related academic journals:

Nature Reviews Genetics

Molecular Biology and Evolution

Genome Biology

EVOLUTION OF MEDICINE

(1) GENERAL

SCHOOL	HUMANITIES		
ACADEMIC UNIT	HUMANITIES		
LEVEL OF STUDIES	PSP – LEVEL 7		
COURSE CODE	EM7	SEMESTER	2 nd
COURSE TITLE	EVOLUTION OF MEDICINE		
INDEPENDENT TEACHING ACTIVITIES <i>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, state the weekly teaching hours and the total credits</i>		WEEKLY TEACHING HOURS	CREDITS
		3	7,5
Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail in section (4).			
COURSE TYPE <i>general background, special background, specialization, general education, skills development</i>	COMPULSORY		
PREREQUISITE COURSES	NO		
LANGUAGE OF INSTRUCTION AND OF ASSESSMENT	ENGLISH		
MODE OF TEACHING <i>in-person (%) synchronous distance learning (%) asynchronous distance learning (%) (In the case of synchronous distance learning, the total weekly duration of teaching is recorded)</i>	SYNCHRONOUS DISTANCE LEARNING 100%		
AVAILABILITY TO ERASMUS STUDENTS	YES		
COURSE WEBSITE (URL)	https://eclass.duth.gr/courses		

(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
- Brief Guide for drafting Learning Outcomes

Upon successful completion of the course, participants will be able to:

- describe major developments in medical thought and practice from classical antiquity to the present;
- explain how concepts of the body, disease, healing, and public health have changed across historical periods;
- analyse the historical formation of nosology, epidemiology, vaccination, and modern public health

systems;

- discuss the social, political, and cultural dimensions of medical knowledge, including colonial medicine and global health;
- interpret epidemics and pandemics as historical phenomena shaped by biological, environmental, and social factors;
- critically examine continuity and change in the understanding of selected medical entities across time;
- evaluate how historical and evolutionary perspectives contribute to the interpretation of contemporary biomedical and public health questions;
- synthesise historical evidence in a clear, critical, and scientifically informed manner.

General Competences

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

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

Adaptability 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

.....

Other...

.....

- Search, analysis and synthesis of data and information, with the use of the necessary technology
- Working independently
- Working in an international environment
- Working in an interdisciplinary environment
- Production of new research ideas
- Respect for difference and multiculturalism
- Showing social, professional and ethical responsibility
- Criticism and self-criticism
- Production of free, creative and inductive thinking

(3) COURSE SYLLABUS

1. Introduction to evolution of medicine
2. Classical Greek and Roman medicine: from art to science
3. Medical entities through time: epilepsy, cancer, mental disorders
4. From medieval to Renaissance medicine: anatomy, surgery, remedies
5. The birth of modern medicine
6. Fundamentals of historical nosology and disease ecology
7. Epidemics: mechanisms, transmission, historical impact
8. Medieval and early modern epidemics: plague, quarantine, lazarettos
9. Colonial medicine and global public health (18th–20th c.)
10. History of vaccination
11. Public health systems: origins and evolution
12. The rise of modern epidemiology and statistical medicine
13. Modern pandemics and the future of public health

(4) TEACHING AND LEARNING METHODS - ASSESSMENT

MODE OF TEACHING <i>Face-to-face, distance learning, etc.</i>	DISTANCE LEARNING
MODE AND FREQUENCY OF COMMUNICATION WITH THE STUDENTS	Communication with students is maintained: • during scheduled synchronous teaching sessions;

	- through the institutional learning platform; - via university e-mail; - through course announcements and uploaded teaching material;				
ENSURING THE MODE OF COMMUNICATION AMONG STUDENTS <i>Team assignments and discussions, collaborative learning platforms with the use of AI, video conference, QA sessions, κ.α.</i>	Communication and interaction among students are supported through: - guided academic discussion during synchronous online sessions; - small-group discussion activities, where appropriate; - collaborative engagement with selected questions, case-based topics, and course themes; - use of the institutional digital learning environment for course-related interaction and exchange of educational material.				
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, in laboratory training, in the communication with students</i>	Use of ICT in teaching and communication with students, including: - digital presentation slides; - audiovisual material and educational videos; - Microsoft Teams for synchronous distance teaching and communication; - Open e-Class for the provision of teaching material, announcements, and course-related communication; - institutional webmail for communication with students.				
TECHNOLOGICAL EQUIPMENT REQUIREMENTS	Students are expected to have: - a computer or equivalent device capable of supporting videoconferencing and access to digital learning platforms; - stable internet connection; - camera, microphone, and audio output;				
PLAGIARISM POLICY/ PLAGIARISM DETECTION TOOLS	All written assignments must comply with the principles of academic integrity and proper citation practice. Plagiarism, unauthorised reuse of material, or failure to acknowledge sources is not permitted. Written work may be checked through plagiarism-detection software approved and used by the Programme.				
ARTIFICIAL INTELLIGENCE POLICY <i>(1) The use of Artificial Intelligence is prohibited in all circumstances</i> <i>(2) The use of Artificial Intelligence is allowed only with the permission of the instructor</i> <i>(3) The use of Artificial Intelligence is allowed only with an explicit reference to the literature</i> <i>(4) Students are free to use Artificial Intelligence</i>	The use of Artificial Intelligence tools is allowed only with the permission of the instructor and with explicit acknowledgement where such use has contributed to the preparation of submitted work. Any use of AI tools must remain consistent with the principles of academic integrity, transparency, and independent student work.				
ORGANISATION OF TEACHING <i>The mode and methods of teaching are described in detail.</i>	<table> <tr> <th>Activity</th><th>Semester workload</th></tr> <tr> <td>Lectures</td><td>39</td></tr> </table>	Activity	Semester workload	Lectures	39
Activity	Semester workload				
Lectures	39				

<i>Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, work placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artworks, etc.</i> <i>The student's study hours for each learning activity are stated, as well as the hours of independent study, according to the principles of the ECTS.</i>	Study and analysis of bibliography	65
	Preparation of individual written assignment	50
	Independent study and preparation for the final examination	30,5
	Final written examination	3
	Course total	187,5
STUDENT ASSESSMENT <i>Description of the assessment method</i> <i>Language of assessment, methods of assessment, formative or summative assessment, multiple choice questions test, short answer questions, essay questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory assignment, clinical examination of patient, art interpretation, other</i> <i>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i>	Student assessment is based on a combination of an individual written assignment and a final written examination. The assessment structure evaluates both the ability to apply evolutionary reasoning to selected questions in human health and disease and the understanding of the course's conceptual and theoretical foundations. The final grade is calculated as follows: • Individual written assignment: 40% • Final written examination: 60% The individual written assignment assesses students' ability to engage with relevant scientific literature, develop a coherent argument, and apply evolutionary perspectives to a defined topic within the scope of the course. The final written examination assesses students' knowledge, comprehension, synthesis, and critical application of the course material. The assessment criteria are communicated to students at the beginning of the course and are made available through the course learning environment.	

(5) RECOMMENDED BIBLIOGRAPHY

- Suggested bibliography:
Bynum, W. (2008). The history of medicine: A very short introduction. Oxford University Press.
Jackson, M. (Ed.). (2011). The Oxford handbook of the history of medicine. Oxford University Press.
Porter, R. (1997). The greatest benefit to mankind: A medical history of humanity. W. W. Norton & Company.
- Related academic journals:
Medical History
Social History of Medicine
Bulletin of the History of Medicine

EVOLUTIONARY AND CULTURAL PERSPECTIVES IN GLOBAL HEALTHCARE

(1) GENERAL

SCHOOL	HUMANITIES		
ACADEMIC UNIT	HUMANITIES		
LEVEL OF STUDIES	PSP – LEVEL 7		
COURSE CODE	EM8	SEMESTER	2 nd
COURSE TITLE	EVOLUTIONARY AND CULTURAL PERSPECTIVES IN GLOBAL HEALTHCARE		
INDEPENDENT TEACHING ACTIVITIES <i>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, state the weekly teaching hours and the total credits</i>		WEEKLY TEACHING HOURS	CREDITS
		3	7,5
Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail in section (4).			
COURSE TYPE <i>general background, special background, specialization, general education, skills development</i>	COMPULSORY		
PREREQUISITE COURSES	NO		
LANGUAGE OF INSTRUCTION AND OF ASSESSMENT	ENGLISH		
MODE OF TEACHING <i>in-person (%)</i> <i>synchronous distance learning (%)</i> <i>asynchronous distance learning (%)</i> <i>(In the case of synchronous distance learning, the total weekly duration of teaching is recorded)</i>	SYNCHRONOUS DISTANCE LEARNING 100%		
AVAILABILITY TO ERASMUS STUDENTS	YES		
COURSE WEBSITE (URL)	https://eclass.duth.gr/courses		

(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
- Brief Guide for drafting Learning Outcomes

Upon successful completion of the course, participants will be able to:

- explain how evolutionary and cultural perspectives contribute to the study of health and healthcare in global contexts;
- discuss the relevance of personalised and precision medicine, ancestry-informed genomic data, and disease risk interpretation;
- analyse sex and gender differences in modern health and disease with attention to biological and

sociocultural dimensions;

- interpret cultural frameworks of illness, healing, diet, breastfeeding, parental care, kinship, and demographic change;
- describe the basic principles of epigenetics and assess their relevance to environment, development, intergenerational effects, and biosocial approaches;
- evaluate issues of cultural sensitivity, medical ethics, science communication, misinformation, and public trust;
- critically integrate biomedical, anthropological, evolutionary, and public health perspectives;
- apply interdisciplinary reasoning to contemporary challenges in global healthcare.

General Competences

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

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

Adaptability 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

.....

Other...

.....

- Search, analysis and synthesis of data and information, with the use of the necessary technology
- Adaptability to new situations
- Decision-making
- Working independently
- Project planning and management
- Working in an interdisciplinary environment
- Production of new research ideas
- Criticism and self-criticism
- Production of free, creative and inductive thinking

(3) COURSE SYLLABUS

1. Evolutionary foundations of personalised and precision medicine
2. Using ancestry-informed genomic data in clinical care and disease risk
3. Sex and gender differences in modern health and disease
4. Cultural frameworks of health, illness, and healing
5. Cultural dietary systems: fasting, feast–famine rhythms, and food taboos
6. Breastfeeding, weaning, and parental care across cultures
7. Kinship structures, endogamy, and their impacts on health
8. Demographic transitions and global health vulnerabilities
9. Epigenetics I: fundamental principles and mechanisms
10. Epigenetics II: environment, development, and health
11. Epigenetics III: intergenerational effects and biosocial approaches
12. Cultural sensitivity and ethics in medical practice
13. Science communication, misinformation, and public trust

(4) TEACHING AND LEARNING METHODS - ASSESSMENT

MODE OF TEACHING <i>Face-to-face, distance learning, etc.</i>	DISTANCE LEARNING
MODE AND FREQUENCY OF COMMUNICATION WITH THE	Communication with students is maintained: • during scheduled synchronous teaching sessions;

STUDENTS	- through the institutional learning platform; - via university e-mail; - through course announcements and uploaded teaching material;				
ENSURING THE MODE OF COMMUNICATION AMONG STUDENTS <i>Team assignments and discussions, collaborative learning platforms with the use of AI, video conference, QA sessions, κ.α.</i>	Communication and interaction among students are supported through: - guided academic discussion during synchronous online sessions; - small-group discussion activities, where appropriate; - collaborative engagement with selected questions, case-based topics, and course themes; - use of the institutional digital learning environment for course-related interaction and exchange of educational material.				
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, in laboratory training, in the communication with students</i>	Use of ICT in teaching and communication with students, including: - digital presentation slides; - audiovisual material and educational videos; - Microsoft Teams for synchronous distance teaching and communication; - Open e-Class for the provision of teaching material, announcements, and course-related communication; - institutional webmail for communication with students.				
TECHNOLOGICAL EQUIPMENT REQUIREMENTS	Students are expected to have: - a computer or equivalent device capable of supporting videoconferencing and access to digital learning platforms; - stable internet connection; - camera, microphone, and audio output;				
PLAGIARISM POLICY/ PLAGIARISM DETECTION TOOLS	All written assignments must comply with the principles of academic integrity and proper citation practice. Plagiarism, unauthorised reuse of material, or failure to acknowledge sources is not permitted. Written work may be checked through plagiarism-detection software approved and used by the Programme.				
ARTIFICIAL INTELLIGENCE POLICY <i>(1) The use of Artificial Intelligence is prohibited in all circumstances</i> <i>(2) The use of Artificial Intelligence is allowed only with the permission of the instructor</i> <i>(3) The use of Artificial Intelligence is allowed only with an explicit reference to the literature</i> <i>(4) Students are free to use Artificial Intelligence</i>	The use of Artificial Intelligence tools is allowed only with the permission of the instructor and with explicit acknowledgement where such use has contributed to the preparation of submitted work. Any use of AI tools must remain consistent with the principles of academic integrity, transparency, and independent student work.				
ORGANISATION OF TEACHING <i>The mode and methods of teaching are described in detail.</i>	<table> <tr> <th>Activity</th><th>Semester workload</th></tr> <tr> <td>Lectures</td><td>39</td></tr> </table>	Activity	Semester workload	Lectures	39
Activity	Semester workload				
Lectures	39				

Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, work placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artworks, etc. The student's study hours for each learning activity are stated, as well as the hours of independent study, according to the principles of the ECTS.	Study and analysis of bibliography	65
	Preparation of individual written assignment	50
	Independent study and preparation for the final examination	30,5
	Final written examination	3
	Course total	187,5
STUDENT ASSESSMENT Description of the assessment method Language of assessment, methods of assessment, formative or summative assessment, multiple choice questions test, short answer questions, essay questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory assignment, clinical examination of patient, art interpretation, other Specifically-defined evaluation criteria are given, and if and where they are accessible to students.	Student assessment is based on a combination of an individual written assignment and a final written examination. The assessment structure evaluates both the ability to apply evolutionary reasoning to selected questions in human health and disease and the understanding of the course's conceptual and theoretical foundations. The final grade is calculated as follows: • Individual written assignment: 40% • Final written examination: 60% The individual written assignment assesses students' ability to engage with relevant scientific literature, develop a coherent argument, and apply evolutionary perspectives to a defined topic within the scope of the course. The final written examination assesses students' knowledge, comprehension, synthesis, and critical application of the course material. The assessment criteria are communicated to students at the beginning of the course and are made available through the course learning environment.	

(5) RECOMMENDED BIBLIOGRAPHY

Suggested bibliography:

Wiley, A. S., & Allen, J. S. (2020). Medical anthropology: A biocultural approach (4th ed.). Oxford University Press.

Lock, M., & Nguyen, V.-K. (2018). An anthropology of biomedicine (2nd ed.). Wiley-Blackwell.

Singer, M., Erickson, P. I., & Abadía-Barrero, C. E. (Eds.). (2022). A companion to medical anthropology (2nd ed.). Wiley-Blackwell.

- Related academic journals:

Social Science & Medicine

Medical Anthropology Quarterly

Global Public Health

MASTER THESIS

(1) GENERAL

SCHOOL	HUMANITIES		
ACADEMIC UNIT	HUMANITIES		
LEVEL OF STUDIES	PSP – LEVEL 7		
COURSE CODE	EM9	SEMESTER	3 rd
COURSE TITLE	MASTER THESIS		
INDEPENDENT TEACHING ACTIVITIES <i>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, state the weekly teaching hours and the total credits</i>		WEEKLY TEACHING HOURS	CREDITS
		0	30
Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail in section (4).			
COURSE TYPE <i>general background, special background, specialization, general education, skills development</i>	COMPULSORY		
PREREQUISITE COURSES	NO		
LANGUAGE OF INSTRUCTION AND OF ASSESSMENT	ENGLISH		
MODE OF TEACHING <i>in-person (%) synchronous distance learning (%) asynchronous distance learning (%) (In the case of synchronous distance learning, the total weekly duration of teaching is recorded)</i>	SYNCHRONOUS DISTANCE LEARNING 100%		
AVAILABILITY TO ERASMUS STUDENTS	YES		
COURSE WEBSITE (URL)	https://eclass.duth.gr/courses		

(2) LEARNING OUTCOMES

Learning Outcomes <i>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.</i> <i>Consult Appendix A</i> • 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 • Brief Guide for drafting Learning Outcomes
Upon successful completion of the Master's Thesis, students will be able to: • identify and define a relevant research topic within the field of evolutionary medicine or a related interdisciplinary area; • formulate clear research questions, objectives and, where applicable, hypotheses; • independently search for, select, critically evaluate and synthesise relevant scientific

literature;

- develop an appropriate theoretical and methodological framework for the selected topic;
- select and apply suitable research methods and analytical approaches, according to the nature of the thesis;
- collect, organise, manage and analyse research material or data, where applicable;
- interpret findings critically and relate them to existing literature and broader scientific debates;
- integrate evolutionary perspectives into the study of human health, disease, adaptation and related biomedical or anthropological questions;
- produce a coherent, well-structured and academically documented written thesis in English;
- apply principles of research ethics, academic integrity, correct citation and responsible use of scientific information;
- present and defend the thesis clearly and effectively
- demonstrate the capacity for independent postgraduate-level research and scholarly communication.

General Competences

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

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

Adaptability 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

.....

Other...

.....

- Search, analysis and synthesis of data and information, with the use of the necessary technology
- Adaptability to new situations
- Decision-making
- Working independently
- Project planning and management
- Working in an interdisciplinary environment
- Production of new research ideas
- Criticism and self-criticism
- Production of free, creative and inductive thinking

(3) COURSE SYLLABUS

The Master's Thesis constitutes an individual piece of postgraduate research undertaken under the supervision of an appointed member of the teaching staff. The thesis topic must fall within the scientific scope of the Joint MSc Programme in Evolutionary Medicine and may involve a critical literature review, theoretical or methodological research, analysis of existing data or published evidence, or an empirical study, where applicable.

The preparation of the Master's Thesis includes the definition of the research topic and objectives, the formulation of the research question, the critical review of relevant literature, the development of the theoretical and methodological framework, the collection and/or organisation of research material or data where required, the analysis and interpretation of findings, the writing and revision of the thesis, and its final oral defence before a Three-Member Examination Committee.

(4) TEACHING AND LEARNING METHODS - ASSESSMENT

MODE OF TEACHING <i>Face-to-face, distance learning, etc.</i>	DISTANCE LEARNING	
MODE AND FREQUENCY OF COMMUNICATION WITH THE STUDENTS	Communication with students is maintained: • through the institutional learning platform; • via university e-mail; • through course announcements and uploaded teaching material;	
ENSURING THE MODE OF COMMUNICATION AMONG STUDENTS <i>Team assignments and discussions, collaborative learning platforms with the use of AI, video conference, QA sessions, κ.α.</i>	Communication and interaction among students are supported through: • guided academic discussion during synchronous online sessions; • collaborative engagement with selected questions, case-based topics, and course themes; • use of the institutional digital learning environment for course-related interaction and exchange of educational material.	
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, in laboratory training, in the communication with students</i>	Use of ICT in teaching and communication with students, including: • Microsoft Teams for synchronous distance teaching and communication; • institutional webmail for communication with students.	
TECHNOLOGICAL EQUIPMENT REQUIREMENTS	Students are expected to have: • a computer or equivalent device capable of supporting videoconferencing and access to digital learning platforms; • stable internet connection; • camera, microphone, and audio output;	
PLAGIARISM POLICY/ PLAGIARISM DETECTION TOOLS	All written assignments must comply with the principles of academic integrity and proper citation practice. Plagiarism, unauthorised reuse of material, or failure to acknowledge sources is not permitted. Written work may be checked through plagiarism-detection software approved and used by the Programme.	
ARTIFICIAL INTELLIGENCE POLICY (1) <i>The use of Artificial Intelligence is prohibited in all circumstances</i> (2) <i>The use of Artificial Intelligence is allowed only with the permission of the instructor</i> (3) <i>The use of Artificial Intelligence is allowed only with an explicit reference to the literature</i> (4) <i>Students are free to use Artificial Intelligence</i>	The use of Artificial Intelligence tools is allowed only with the permission of the instructor and with explicit acknowledgement where such use has contributed to the preparation of submitted work. Any use of AI tools must remain consistent with the principles of academic integrity, transparency, and independent student work.	
ORGANISATION OF TEACHING <i>The mode and methods of teaching are described in detail.</i>	Activity	Semester workload

<i>Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, work placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artworks, etc.</i> <i>The student's study hours for each learning activity are stated, as well as the hours of independent study, according to the principles of the ECTS.</i>	Communication and Academic Guidance with the Thesis Supervisor	39
	Literature Search, Review and Critical Analysis	356
	Preparation of the Master's Thesis, Analysis of Research Material/Data and Academic Writing	355
	Course total	750
STUDENT ASSESSMENT <i>Description of the assessment method</i> <i>Language of assessment, methods of assessment, formative or summative assessment, multiple choice questions test, short answer questions, essay questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory assignment, clinical examination of patient, art interpretation, other</i> <i>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i>	Submission of the written Master's Thesis and oral presentation and defence before a Three-Member Examination Committee: 100%. Throughout the preparation of the Master's Thesis, students receive formative feedback from their supervisor on the development of the research topic, the literature review, the methodological approach, the analysis of research material and/or data, and the drafting of the thesis. Final assessment is summative and is conducted by the Three-Member Examination Committee on the basis of the submitted thesis and the oral defence. Assessment Criteria: • clarity and relevance of the research topic, objectives and research question; • quality, relevance and critical use of the scientific literature; • appropriateness of the theoretical and methodological framework; • quality of the organisation, analysis and interpretation of research material and/or data, where applicable; • coherence of the argument and substantiation of the conclusions; • contribution of the thesis to the scientific field of the Programme; • quality of academic writing, structure, documentation and presentation; • compliance with principles of academic integrity, research ethics and correct referencing; • clarity of the oral presentation and ability to respond critically to questions raised by the Examination Committee.	

(5) RECOMMENDED BIBLIOGRAPHY

Due to the individual and research-based nature of the Master's Thesis, the recommended bibliography is determined according to the specific topic, research question, theoretical framework and methodological approach of each thesis.

Students are expected to consult:

- current international peer-reviewed scientific literature relevant to their thesis topic;
- specialised monographs and edited volumes related to the selected field of study;
- appropriate methodological literature relevant to the design, analysis and interpretation of their research;

- academic writing and referencing guidelines, including the required citation style;
- relevant ethical and research integrity guidelines, where applicable.

The selection of bibliography is undertaken by the student in consultation with the thesis supervisor and is progressively enriched throughout the preparation and writing of the Master's Thesis.