UNIVERSITY OF THESSALY

Department of Nutrition and Dietetics

Course Outlines

Academic Year 2022-2023 (Update 2025-2026)

Index of Courses

1st Year - 1st Semester of Studies (winter period)								
Nr.	Code	Course Title	Course Type	Teaching Hours/Week			Workload	ECTS
				Lect.	Lab Exer.	Tut.		
01	1101	General and Inorganic Chemistry	C	3	2		125	5
02	1102	Biology	C	3	2		125	5
03	1103	Biostatistics	C	3	2		125	5
04	1104	Human Physiology	C	3			125	5
05	1105	Introduction to Food Science and Nutrition	C	2		1	150	6
06	1106	English Terminology I	C	2		2	100	4
Summaries of mandatory prerequisites				16	6	3	750	30
C: Compulsory Course								

1o Year - 2nd Semester of Studies (spring period)								
Nr.	Code	Course Title	Course Type	Teaching Hours/Week			Workload	ECTS
				Lect.	Lab Exer.	Tut.		
01	2101	Organic Chemistry	C	2	2		125	5
02	2102	Food Microbiology	C	3	2		150	6
03	2103	Introduction to Psychology	C	2		1	100	4
04	2105	Nutritional Assessment	C	2	2		150	6
05	2107	English Terminology II	C	2		2	100	4
06	2108	Physical Activity, Mental Health and Quality of Life	C	2		1	125	5
Summaries of mandatory prerequisites				13	6	4	750	30
C: Compulsory Course								

2nd Year - 3rd Semester of Studies (winter period)								
Nr.	Code	Course Title	Course Type	Teaching Hours/Week			Workload	ECTS
				Lect.	Lab Exer.	Tut.		
01	3101	Food Chemistry And Analysis	C	2	2		125	5
02	3102	Biochemistry	C	3	2		125	5
03	3103	Research Methods	C	3		1	125	5
04	3104	Nutrition Through the Life Cycle	C	3		2	125	5
05	3105	Metabolism I	C	2		1	125	5
06	3106	Nutrition Education	C	2		1	125	5
Summaries of mandatory prerequisites				15	4	5	750	30
C: Compulsory Course								

2nd Year - 4th Semester of Studies (spring period)								
Nr.	Code	Course Title	Course Type	Teaching Hours/Week			Workload	ECTS
				Lect.	Lab Exer.	Tut.		
01	4101	Food Toxicology	C	3			100	4
02	4102	Introduction to Clinical Nutrition-Dietetics	C	2	1		100	4
03	4103	Exercise Physiology	C	3	1		100	4
04	4104	Metabolism II	C	2		1	125	5
05	4105	Nutritional Epidemiology	C	3		1	125	5
06	4106	Nutrition Counseling and Interpersonal Skills	C	2		1	75	3
07	4107	Pathophysiology	C	3			125	5
Summaries of mandatory prerequisites				18	2	3	750	30
C: Compulsory Course								

3rd Year - 5th Semester of Studies (winter period)								
Nr.	Code	Course Title	Course Type	Teaching Hours/Week			Workload	ECTS
				Lect.	Lab Exer.	Tut.		
01	5101	Clinical Nutrition I	C	3	2		150	6
02	5102	Molecular Biology	C	2	2		125	5
03	5103	Sports Nutrition	C	3	2		150	6
04	5104	Introduction to Systematic Reviews	C	3			75	3
05	5105	Pediatric Nutrition	C	3			75	3
06	5106	Introduction to Evidence-based Practice in Health Sciences	C	3		1	100	4
07	5107	Pharmacology	CE	3			75	3
08	5108	Developmental Psychology I	E	2		1	75	3
09	5109	Ethics and Deontology	CE	3			75	3
10	5110	Applied Anatomy	E	3			125	5
11	5121	Introduction to Entrepreneurship	E	3			150	6
Summaries of mandatory prerequisites				20	6	1	750	30
C: Compulsory Course. E: Elective Course (credits are accounted above the minimum of 30 ECTS per each semester of studies). CE: Compulsory Elective Course (students must select 1 of 2 CE courses - 3 ECTS are accounted).								
To be able to continue to the 3rd year of studies, a student must have accumulated at least 70 ECTS from courses of the first 2 years of studies.								

3rd Year - 6th Semester of Studies (spring period)								
Nr.	Code	Course Title	Course Type	Teaching Hours/Week			Workload	ECTS
				Lect.	Lab Exer.	Tut.		
01	6101	Artificial Nutrition	C	3			75	3
02	6102	Public Health Nutrition	C	2		1	125	5
03	6103	Clinical Exercise Physiology	C	2	2		125	5
04	6104	Technology, Safety and Quality Control of Food	C	2	2		125	5
05	6105	Clinical Nutrition II	C	3	2		150	6
06	6106	Developmental Psychology II	E	2		1	75	3
07	6107	Functional Foods	CE	3			75	3
08	6108	Marketing of Products and Services	CE	3			75	3
09	6109	Health Education	E	2		1	75	3
10	6111	Pathophysiology of Metabolic and Cardiovascular Diseases and Gastrointestinal System	E	3			125	5
11	6112	Nutritional Anthropology	CE	3			75	3
12	6121	Development of Business Plans	E	3			150	6
13	6122	Health Economics	E	2			75	3
14	6123	Food History and Health	E	2			75	3
Summaries of mandatory prerequisites				18	6	1	750	30
C: Compulsory Course. E: Elective Course (credits are accounted above the minimum of 30 ECTS per each semester of studies). CE: Compulsory Elective Course (students must select 2 of 3 CE courses - 6 ECTS are accounted).								

4th Year - 7th Semester of Studies (winter period)								
Nr.	Code	Course Title	Course Type	Teaching Hours/Week			Workload	ECTS
				Lect.	Lab Exer.	Tut.		
01	7101	Nutrigenetics - Nutrigenomics	C	3			125	5
02	7102	Nutrition and Aging	C	2		1	125	5
03	7103	Nutritional Management of Disease in Childhood and Adolescence	C	3			125	5
04	7104	Psychology and Nutrition	CE	3			75	3
05	7105	Scientific/Academic Writing Using ICT	CE	3			75	3
06	7106	Research and Development of New Products	CE	3			75	3
07	7107	Current Research Topics in Nutrition and Exercise	CE	3			75	3
08	7108	Free Radicals and Antioxidants in Nutrition	CE	3			75	3
09	7109	Hygiene and Food Service Management	CE	3			75	3
10	7110	Genetic Predisposition and Lifestyle - Critical Review of the Literature using ICT	CE	3			75	3
11	7111	Educational Psychology	E	2			75	3
12	7112	Teaching Life Skills in Education	E	2			75	3
13	7113	Modern Pedagogical Trends	E	2			75	3
14	7114	School Teaching Practice in Primary and Secondary Education Units	E	4			100	4
15	7121	Bioinformatics	E	2			75	3
Summaries of mandatory prerequisites				23		1	750	30
C: Compulsory Course. E: Elective Course (credits are accounted above the minimum of 30 ECTS per each semester of studies). CE: Compulsory Elective Course (students must select 5 of 7 CE courses - 15 ECTS are accounted).								

4th Year - 8th Semester of Studies (spring period)					
Nr.	Code	Course Title	Course Type	Duration	ECTS
01	TH	Thesis	C	(at least 4 months)	12
02	PL	Placement for Practical Training	C	5 months	18
Summaries of mandatory prerequisites					30
Students can begin their Placement (for practical training) and their Thesis at anytime within the 4th year of studies. For starting a Thesis: Condition is that students must have complete at least 120 ECTS and have copleted the 6th semester. For starting a Placement: (see Appendix I below).					

Lect.: Lecture, Lab Exer.: Laboratory Exercises (attendance book is kept), Tut.: Tutoring
Each Compulsory Elective Course (CE) has a duration of 3 hours and accounts for 3 ECTS.
Each Elective Course (E) is optional, while its credit units (ECTS) are accounted above the minimum of 30 ECTS per each semester of studies.

Appendix I Prerequired courses for being able to start the compulsory Placement for practical training (Further condition is that students must have complete at least 135 ECTS)				
Nr.	**Code**	**Course Title**	**Semester**	**ECTS**
01	**1105**	Introduction to Food Science and Nutrition	**1st**	**6**
02	**2105**	Nutritional Assessment	**2nd**	**6**
03	**3101**	Food Chemistry And Analysis	**3rd**	**5**
04	**3104**	Nutrition Through the Life Cycle	**3rd**	**5**
05	**3105**	Metabolism I	**3rd**	**5**
06	**3106**	Nutrition Education	**3rd**	**5**
07	**4102**	Introduction to Clinical Nutrition-Dietetics	**4th**	**4**
08	**4104**	Metabolism II	**4th**	**5**
09	**4107**	Pathophysiology	**4th**	**5**
10	**5101**	Clinical Nutrition I	**5th**	**6**
11	**5103**	Sports Nutrition	**5th**	**6**
12	**5105**	Pediatric Nutrition	**5th**	**3**
13	**6101**	Artificial Nutrition	**6th**	**3**
14	**6104**	Technology, Safety and Quality Control of Food	**6th**	**5**
15	**6105**	Clinical Nutrition II	**6th**	**6**

Course Outline: "1101 - General and Inorganic Chemistry"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**1101**	**SEMESTER**	**1st**
COURSE TITLE	**General and Inorganic Chemistry**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	3	
Laboratory Exercises	2	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**5**	**5**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	General Knowledge
PREREQUISITE COURSES	No
LANGUAGE OF INSTRUCTION	GREEK
LANGUAGE OF EXAMINATION/ASSESSMENT	GREEK
THE COURSE IS OFFERED TO ERASMUS STUDENTS	YES (in English)
COURSE WEBSITE (URL)	

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and* ***APPENDIX B***
- *Guidelines for writing Learning Outcomes*

To teach the student the basic concepts and principles of chemistry and chemical analysis, to conduct simple laboratory exercises aimed at familiarizing with the utensils, instruments and devices of a chemical laboratory, the sample processing techniques and other basic concepts, principles and applications in statistical processing of experimental data. Upon completion of the course it is expected that the student will be able to:

1. Recognize the categories of chemical reactions and perform under these calculations.
2. Perform the necessary calculations for preparing, mixing-dilution solutions.
3. Understand the state of simple chemical reactions over time.
4. Understand the condition of chemical equilibrium and to perform the calculations.
5. Understand the concept of active acidity and ways of assessment.
6. Understand the establishment of buffers.
7. Perform experiments correctly implementing the above theoretical knowledge.
8. Know the meanings of different techniques, methods and determinations of Chemical Analysis.

9. Suitably handle a sample depending on its origin and the desired analysis.

10. Evaluate and select the necessary laboratory equipment for making the analysis.

11. Perform single determinations of classical chemical analysis.

12. Process using basic statistical techniques experimental results.

13. Perform the necessary calculations based on experimental results.

14. Apply principles of Quality Control in an Analytical Laboratory.

15. Apply principles of Health and Safety in an Analytical Laboratory.

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies, Adapting to new situations Decision-making Individual/Independent work Group/Team work Working in an international environment Working in an interdisciplinary environment Introduction of innovative research

Project planning and management Respect for diversity and multiculturalism Environmental awareness Social, professional and ethical responsibility and sensitivity to gender issues Critical thinking Development of free, creative and inductive thinking …… (Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….

- Individual/Independent work
- Group/Team work

3. COURSE CONTENT

• Units Systems. Structure of the Atom. Elements System. Nomenclature of inorganic compounds. Chemical reactions, chemical equations.

• Chemical bonds. Molecular geometry.

• Introduction to chemical thermodynamics.

• Introduction to the states of matter.

• Introduction to ideal and non-ideal solutions and in colloidal dispersion systems.

• Introduction to chemical kinetics.

• The chemical equilibrium of acids, bases, salts and complexes.

• Introduction to Chemical Analysis. Data sources. Techniques and Methods of Quantitative Chemical Analysis.

• Reagents and utensils. Sampling and preservation of samples.

• Physical and chemical processes in Chemical Analysis.

• Statistical analysis of experimental results.

• Measurement of mass and volume: principles of operation and control of scales, errors in weighing. Utensils volume measurement and control them.

• Principles, methods and applications of gravimetric analysis. Gravimetric analysis of precipitation. Methods vent. Electrogravimetric resolution. Thermogravimetric analysis.

• Principles, methods and applications of titrametric analysis: titration acid - base, precipitation, complexometric, redox.

• Introduction to the techniques of Instrumental Analysis.

•Quality control. Hygiene and laboratory safety.

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	In class lecturing	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	E class	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	50
	Laboratory Classes	50
	Personal Study	25
	Total	***125***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:* *Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc.* *Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	Written final exam (100%) which includes: - Multiple choice questions - short- answer questions, - open-ended questions, - problem solving, - written work, essay/report	

5. SUGGESTED BIBLIOGRAPHY

-Suggested bibliography:

1. Χημεία - Μοριακή Προσέγγιση, Έκδοση: 1η έκδ./2011, Tro N. Εκδότης: BROKEN HILL PUBLISHERS LTD
2. ΣΥΓΧΡΟΝΗ ΓΕΝΙΚΗ ΧΗΜΕΙΑ (10η Διεθνής Έκδοση), Έκδοση: 1η/2014, Darrell Ebbing, Steven Gammon, Εκδότης: ΤΡΑΥΛΟΣ & ΣΙΑ ΟΕ
3. Αναλυτική χημεία και ενόργανη ανάλυση στον τομέα της διατροφής. Έκδοση: 1η έκδ./2011, Γεώργιος Βλάτσιος, Εκδότης: UNIVERSITY STUDIO PRESS - ΑΝΩΝΥΜΟΣ ΕΤΑΙΡΙΑ ΓΡΑΦΙΚΩΝ ΤΕΧΝΩΝ ΚΑΙ ΕΚΔΟΣΕΩΝ
4. Εισαγωγή στην ποσοτική χημική ανάλυση, Έκδοση: 1η έκδ./1999, Βουλγαρόπουλος Αναστάσιος, Ζαχαριάδης Γεώργιος, Στρατής Ιωάννης, Εκδότης: Ζήτη Πελαγία & Σια Ι.Κ.Ε

Course Outline: "1102 - Biology"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**1102**	**SEMESTER**	**1st**
COURSE TITLE	**Biology**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	3	
Laboratory Exercises	2	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**5**	**5**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	General Knowledge
PREREQUISITE COURSES	No
LANGUAGE OF INSTRUCTION	GREEK
LANGUAGE OF EXAMINATION/ASSESSMENT	GREEK
THE COURSE IS OFFERED TO ERASMUS STUDENTS	YES (in English)
COURSE WEBSITE (URL)	https://eclass.uth.gr/courses/DND_U_277/

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and* ***APPENDIX B***
- *Guidelines for writing Learning Outcomes*

Biology is the main introductory course on the concepts of cell structure and function and the effect of genetics and heredity on the occurrence of genetic diseases. Upon successful completion of the course, the students will have the required background to understand the content of relevant courses in the following semesters. Specifically, he/she will have acquired the knowledge regarding the basic functions of the cell, the mechanisms of DNA replication, transcription and translation as well as the basic fields of ecology and evolution.

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies, Adapting to new situations Decision-making Individual/Independent work Group/Team work Working in an international environment Working in an interdisciplinary environment Introduction of innovative research

Project planning and management Respect for diversity and multiculturalism Environmental awareness Social, professional and ethical responsibility and sensitivity to gender issues Critical thinking Development of free, creative and inductive thinking …… (Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….

- Search for, analysis and synthesis of data and information
- Adapting to new situations
- Working in an interdisciplinary environment
- Acquisition of the appropriate theoretical cognitive background so that further education is possible.

3. COURSE CONTENT

1. Introduction to Biology
2. Fundamental knowledge of biological chemistry
3. Chemical composition of the cell
4. Structure and organization of the cell
5. Cellular functions
6. DNA replication, Transcription and Translation
7. Cell Cycle and Division
8. Mutations and Polymorphisms
9. Inheritance Patterns
10. Applied Genetics-Genetic Syndromes
11. Photosynthesis
12. Evolution
13. Ecology

Laboratory

1. Introduction to Biology
2. Safety and Hygiene rules in a laboratory setting
3. Optical microscopy
4. Observation of samples in the microscope
5. Eukaryotic and prokaryotic cells
6. Animal and plant cells
7. The blood
8. DNA isolation from kiwi
9. Mitosis –Meiosis
10. Karyotype analysis-Chromosomes
11. Observation of animal tissues
12. Educational visits
13. Videos

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	Face to face	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	1. Lectures in power point documents 2. Research or review papers in pdf documents 3. Laptops for the projection of relevant videos 4. The lectures in pdf documents that are announced to the students through the eclass platform The students get in touch with the instructor either directly (through face to face contact or email) or indirectly (through notes posted on the poster boards and the website of the Department).	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	3 × 13 = 39
	Laboratory exercises	2 × 13 = 26
	Literature analysis	15
	Preparation for the exams	454
	Total	***125***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:* *Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work,*	For both the Theory and the Lab, the performance of the students is assessed through written exams (100%).	

essay/report, oral exam, presentation, laboratory work, other……etc. *Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	

5. SUGGESTED BIBLIOGRAPHY

- Suggested bibliography:

- Campbell Biology: Concepts & Connections (8th Edition), Pearson, 2020.
- Alberts B, Bray D, Johnson A et al. Essential Cell Biology. 5th edition London: Garland Publishing, 2019**.**

- Scientific journals:

- Biochemistry
- Biochemical journal
- Journal of Biological Chemistry
- PNAS
- EMBO Journal

Course Outline: "1103 - Biostatistics"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**1103**	**SEMESTER**	**1st**
COURSE TITLE	**Biostatistics**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	3	
Laboratory Exercises	2	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**5**	**5**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	Background knowledge, Scientific Expertise, General Knowledge, Skills Development
PREREQUISITE COURSES	NO
LANGUAGE OF INSTRUCTION	Greek, English
LANGUAGE OF EXAMINATION/ASSESSMENT	Greek, English
THE COURSE IS OFFERED TO ERASMUS STUDENTS	NO
COURSE WEBSITE (URL)	https://eclass.uth.gr/courses/DND_U_154/

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills, and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:

APPENDIX A

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and*

APPENDIX B

- *Guidelines for writing Learning Outcomes*

The aim of the course is to familiarize students with the basic data analysis using the Statistical Package for the Social Science (SPSS). More specifically, students upon completion of the course will be able to:

• Understand and select the different statistical analyzes in relation to the research question
• To perform basic statistical analyzes through the statistical program SPSS
• Evaluate the statistical findings in relation to the research question

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies, adapting to new situations Decision-making Individual/Independent work Group/Team work Working in an international environment Working in an interdisciplinary environment Introduction of innovative research

Project planning and management Respect for diversity and multiculturalism Environmental awareness Social, professional, and ethical responsibility and sensitivity to gender issues Critical thinking Development of free, creative, and inductive thinking …… (Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….

Upon successful completion of the course, students would be able to:

- Manage their knowledge through autonomous or group work and final exams.
- Practice their critical ability and self-criticism.
- Understand issues in an international environment.
- Promote creative and inferential thinking.
- Cooperate and create interpersonal relations.

- Use verbal and non-verbal communication skills effectively in a wide range of activities.
- Familiarize themselves with the use of IT.
- Apply their scientific knowledge in practice.
- Be able to apply the appropriate statistical analyses in the field of biological sciences.

3. COURSE CONTENT

1. Descriptive Statistics
- 1.1. Position and Dispersion measures
- 1.2. Prevalence, Incidence, Mortality

2. Clinical Biostatistics
- 2.1. Sensitivity, Specificity, ROC curve, Positive Predictive Value, Negative Predictive Value

3. Hypothesis testing
- 3.1. Chi square- Odds Ratio & Relative risk
- 3.2. T- test- Independent & Dependent samples
- 3.3. One- way Analysis of Variance
- 3.4. Pearson correlation coefficient

4. Regression analysis
- 4.1. Linear regression
- 4.2. Logistic regression
- 4.3. Cox proportional hazards model

5. Evaluation of scientific articles and abstracts

6. Revision

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	Face-to-face, in-class lecturing, distance teaching and learning	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	Use of ICT in teaching (e.g. PowerPoint, Videos etc.), communication with students via e-mails and general support of the educational process via the platform e-class.	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	40
	Personal Assignment (Microsoft Word). Students should be able to recognize, analyse and write the results in a number of research hypotheses.	25
	Simulation Assignment	20
	Individual study	40
	Total	***125***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:* *Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc.* *Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	The final evaluation of the students will be done with the following two ways: • Delivery of a mandatory personal assignment in the form of a report, which includes simulated research questions that must be solved with the help of the SPSS statistical package that will be taught during the semester. • Final written exam, where one part of the subjects consists of questions on the theory and the interpretation of published results, while the other part of questions on the results (output) of an analysis from the statistical package SPSS.	

	The final grade is calculated in the following way: **Final grade = 0,2*(Personal assignment) + 0,8*(Final written exam)** **In order to take into account the assignment's grade, the students should pass the final exam (Grade of written exam>= 5).**

5. SUGGESTED BIBLIOGRAPHY

-Suggested bibliography:

1. Δημοσθένης Β. Παναγιωτάκος (2011). ΜΕΘΟΔΟΛΟΓΙΑ ΤΗΣ ΕΡΕΥΝΑΣ & ΤΗΣ ΑΝΑΛΥΣΗΣ ΔΕΔΟΜΕΝΩΝ ΓΙΑ ΤΙΣ ΕΠΙΣΤΗΜΕΣ ΤΗΣ ΥΓΕΙΑΣ.
2. Μπερσίμης Σωτήριος, Μπερσίμης Φραγκίσκος, Σαχλάς Αθανάσιος (2022). Εισαγωγή στη Στατιστική και στις Πιθανότητες, 2η Έκδοση.
3. Πετρίδης Δημήτριος (2021). ΕΦΑΡΜΟΣΜΕΝΗ ΣΤΑΤΙΣΤΙΚΗ ΣΤΗΝ ΕΠΙΣΤΗΜΗ ΤΡΟΦΙΜΩΝ ΚΑΙ ΔΙΑΤΡΟΦΗΣ.

Course Outline: "1104 - Human Physiology"

1. General information

FACULTY/SCHOOL	**School of Physical Education, Sport Science & Dietetics**		
DEPARTMENT	**Department of Nutrition and Dietetics**		
LEVEL OF STUDY	**Undergraduate**		
COURSE UNIT CODE	**1104**	**SEMESTER**	**1st**
COURSE TITLE	**Human Physiology**		

INDEPENDENT TEACHING ACTIVITIES	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	3	5
	3	**5**

COURSE TYPE	Background Knowledge Scientific Expertise
PREREQUISITE COURSES	No
LANGUAGE OF INSTRUCTION	GREEK
LANGUAGE OF EXAMINATION/ASSESSMENT	GREEK
THE COURSE IS OFFERED TO ERASMUS STUDENTS	YES
COURSE WEBSITE (URL)	

2. LEARNING OUTCOMES

Learning Outcomes

The aim of the course is the understanding by the students of the structure, the organization and the physiological functions of the human body and more specific topics such as the physiology of digestion and metabolism, useful in daily practices in their professional career regarding human nutrition.

Upon completion of the course of Human Physiology, the student will be able to:

- Understand basic concepts and terms of physiology
- Be familiar with human physiology and its applications at both cellular and systemic levels
- Understand how each individual system of the organism and their functions interact with each other in a way that allows them to present a complete picture regarding the physiological functions of the human body
- Understand the activation of the compensatory/homeostatic mechanisms in cases of systemic dysfunction and the induction of pathological processes and diseases due to inadequate compensatory/homeostatic mechanisms.
- Know ways to deal with problems related to the subject of physiology
- Manage scientific research methods in the field of physiology

General Competences

- Acquisition of the appropriate theoretical cognitive background so that further education is possible
- Search for, analysis and synthesis of data and information
- Promotion of free, creative and deductive thinking
- Working in an interdisciplinary environment
- Individual/Independent work

3. COURSE CONTENT

- Introduction to Physiology and Homeostasis
- Cellular Physiology
- Cytoplasmic Membrane and Membrane Potential
- Physiology of the Nervous System
- Physiology of the Muscles
- Cardiovascular Physiology
- Blood and immune system physiology
- Respiratory Physiology
- Physiology of the Urinary System
- Physiology of the Gastrointestinal System
- Physiology of the Endocrine System
- Physiology of the Reproductive System
- Energy Balance and thermoregulation

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY	Face-to-face	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY	-Use of PowerPoint presentation program during the educational process -Support of the Learning Process through the e-class platform -Communication with the students via email	
COURSE DESIGN	***Activity/Method***	***Semester workload***
	Lectures	40
	Study and analysis of bibliography	20
	Self-directed Study	65
	Total	***125***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT	Written final exam (100%) which includes: - Multiple choice questions - Short-answer questions	

5. SUGGESTED BIBLIOGRAPHY

-Suggested bibliography:

- Εισαγωγή στη Φυσιολογία του Ανθρώπου - Lauralee Sherwood. Ακαδημαϊκές Εκδόσεις Μπάσδρα & Σία Ο.Ε., 2016
- Vander's Φυσιολογία του Ανθρώπου – Οι μηχανισμοί του σώματος. Widmaier P. Eric, Raff Hershel, Strang T. Kevin. Ιατρικές Εκδόσεις Πασχαλίδης, 2016
- Ganong's Ιατρική Φυσιολογία. Kim E. Barrett, Susan M. Barman, Scott Boitano, Heddwen L. Brooks, 2η Βελτιωμένη Έκδοση, Ιατρικές Εκδόσεις Πασχαλίδης, 2014

-Relative Scientific journals:

- Human Physiology, https://link.springer.com/journal/10747
- Journal of Applied Physiology, https://www.physiology.org/journal/jappl
- Journal of General Physiology, http://jgp.rupress.org/
- European Journal of Applied Physiology, https://link.springer.com/journal/421
- European Journal of Anatomy, http://www.eurjanat.com/web/
- Applied Physiology, Nutrition and Metabolism, https://www.nrcresearchpress.com/journal/apnm

Course Outline: "1105 - Introduction to Food Science and Nutrition"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**1105**	**SEMESTER**	**1st**
COURSE TITLE	**Introduction to Food Science and Nutrition**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	2	
Tutoring	1	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**3**	**6**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	Scientific expertise
PREREQUISITE COURSES	non
LANGUAGE OF INSTRUCTION	Greek
LANGUAGE OF EXAMINATION/ASSESSMENT	Greek
THE COURSE IS OFFERED TO ERASMUS STUDENTS	No
COURSE WEBSITE (URL)	

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and* ***APPENDIX B***
- *Guidelines for writing Learning Outcomes*

This module is designed to help students to learn the basics of food and nutrition and become familiar with the terminology of nutrition. The course aims to introduce students to concepts such as: the composition, nutritional value, chemical properties of foods and the main principles of food technology. It emphasizes the nutritional value of macronutrients (carbohydrates, proteins, lipids), their digestion, absorption and their sources as well as the important role of vitamins, minerals and water in the maintenance of health.

Students will be introduced to topics such as Food labeling, weight control and energy balance, ways to measure energy expenditure, dietary reference values, key elements of a balanced diet, composition tables of foods and Greek dishes and the importance of Mediterranean Diet. Moreover any deviation from the balanced diet that could lead to the occurrence of chronic non-communicable diseases is also discussed.

Finally, it introduces the student to the importance of research in the field of nutrition, in the design of nutritional studies

Upon successful completion of the module, the student will be able to understand:

• The sources, the optimal daily amounts in each stage of the lifecycle, the function and the role that each nutrient plays in a balanced diet.

• Digestion, absorption and metabolism of macronutrients

• The role of vitamins and minerals in ensuring health

• Dietary reference values and the importance of dietary guidelines

• Food labeling for informed consumer's choices, and the notion of "food waste" and its role in sustainable development
- Principles of food technology and their importance in food safety and nutrition evaluation
• Energy balance, ways to determine energy expenditure for weight management
• Sustainable diets
• Malnutrition and obesity
• The importance of nutritional research

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies, Adapting to new situations Decision-making Individual/Independent work Group/Team work Working in an international environment Working in an interdisciplinary environment Introduction of innovative research

Project planning and management Respect for diversity and multiculturalism Environmental awareness Social, professional and ethical responsibility and sensitivity to gender issues Critical thinking Development of free, creative and inductive thinking …… (Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….

- Individual/Independent work Group
- Team work
- Development of free, creative and inductive thinking
- Environmental awareness

3. COURSE CONTENT

Indicative:
i. Structure and function of proteins
ii. Structure and function of fats
iii. Structure and function of carbohydrates
iv. Vitamins and their role in health
v. Minerals and their role in health
vi. Total energy expenditure and its measurement
vii. Dietary Reference Values
viii. Principles of food technology, safety and nutrition evaluation
ix. Mediterranean diet, DASH diet, blue zones, Scandinavian diet
x Food labeling, consumer information, "food waste" and sustainability
xi Malnutrition, obesity
xii The role of water in health

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	*in-class lecturing, distance guidance*	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	*Communication with students via MS teams (e-class)*	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	52
	Individual and team Exercises	24
	Self-directed study	74

	Total	***150***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:* *Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc.* *Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	*1*. Written examination (90%) which includes : - multiple choice- questions (MCQ) -Quiz -Problem solving -short- answer questions - Power Point presentations in class 2. In class active participation (10%)	

5. SUGGESTED BIBLIOGRAPHY

-Suggested bibliography:

Duyrf R.-L. Handbook of Food and Nutrition of the American Dietetic Association. Adapted in Greek dietary pattern by Koindou E., ed. Sofia
Sflomos K. Human Nutrition, eds Tsotras, 2019

Course Outline: "1106 - English Terminology I"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**1106**	**SEMESTER**	**1st**
COURSE TITLE	**English Terminology I**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	2	
Tutoring	2	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**4**	**4**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	Background knowledge, Scientific Expertise, General Knowledge, Skills Development
PREREQUISITE COURSES	
LANGUAGE OF INSTRUCTION	English
LANGUAGE OF EXAMINATION/ASSESSMENT	English
THE COURSE IS OFFERED TO ERASMUS STUDENTS	No
COURSE WEBSITE (URL)	http://eclass.uth.gr/courses/DND_U_106

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and* ***APPENDIX B***
- *Guidelines for writing Learning Outcomes*

The course aims at exploring, developing and enriching students' knowledge in the English language with cognitive subjects of the Department of Nutrition & Dietetics.

The objectives of the course include the students' introduction to the major concepts of Nutrition & Dietetics in English in order to broaden their knowledge and acquire an effective management of scientific approach on relevant concepts in English.

Last but not least, the students' in-depth understanding of the English Bibliography and the composition of written texts based on the related terminology in the English language is another aim of paramount importance.

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies, Adapting to new situations Decision-making Individual/Independent work Group/Team work Working in an international environment Working in an interdisciplinary environment Introduction of innovative research

Project planning and management Respect for diversity and multiculturalism Environmental awareness Social, professional and ethical responsibility and sensitivity to gender issues Critical thinking Development of free, creative and inductive thinking …… (Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….

Upon successful completion of the course, students would be able to:

- Manage their knowledge through autonomous or group work and final exams
- Exercise critical ability and self-criticism
- Understand issues in an international environment

- Promote creative and inferential thinking
- Cooperate and create interpersonal relations
- Familiarize themselves with the use of IT
- Evaluate their different language proficiency skills
- Apply their scientific knowledge in practice

3. COURSE CONTENT

Terminology of specified terms and concepts and the teaching of scientific texts related to:

- Basic categories of Nutrients (vitamins, carbohydrates, proteins, fats, minerals etc.) with their subsequent analysis as well as reference on their proper intake from the human organism,
- Physiology (digestive, neural, hormonal system etc.)
- Eating habits, eating disorders, vegetarian diet, nutrition and children, nutrition and pregnancy, nutrition and alcohol, nutrition and cancer, nutrition and diabetes, nutrition and exercise, nutrition and disease prevention,
- Organic food and GMOs,
- Description of food labels.

Comprehension exercises on texts and videos and final exams.
Writing and presentation of individual or group assignments in PowerPoint on theory issues.

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	Face-to-face, in-class lecturing, distance teaching and learning	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	Use of ICT in teaching (e.g. PowerPoint, Videos etc.), communication with students via e-mails and general support of the educational process via the platform e-class.	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	35
	Practice exercises that focus on the application of methodologies and analysis of case studies to smaller groups of students.	25
	Group or individual projects in presentation format (PowerPoint).	20
	Individual study	20
	Total	***100***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:* *Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc.*	I. Final written exam (60%) including: Multiple choice questions II. Oral exam which includes: Presentation of individual or group work in PowerPoint (30%) III. Written evaluation of videos concerning nutritional issues (10%)	

Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.	

5. SUGGESTED BIBLIOGRAPHY

-Suggested bibliography:

Mihailidis, G. I. & Vezou-Magkouti, N. (2005). English-Greek & Greek-English Dictionary of Medical terms. Athens: Medical Editions Konstantaras (ISBN: 960-88361-2-3)

Dolard's (2002). Medical Dictionary (English-Greek & Greek-English). Cyprus: Broken Hill Publishers. LTD

Course Outline: "2101 - Organic Chemistry"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**2101**	**SEMESTER**	**2nd**
COURSE TITLE	**Organic Chemistry**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	2	
Laboratory Exercises	2	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**4**	**5**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	General Knowledge
PREREQUISITE COURSES	No
LANGUAGE OF INSTRUCTION	GREEK
LANGUAGE OF EXAMINATION/ASSESSMENT	GREEK
THE COURSE IS OFFERED TO ERASMUS STUDENTS	YES (in English)
COURSE WEBSITE (URL)	

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and* ***APPENDIX B***
- *Guidelines for writing Learning Outcomes*

The course aims to present and explain

• The fundamental principles and concepts of Organic Chemistry.

• The nomenclature of organic compounds

• The classification of reactions, investigation of the mechanism by which they evolve.

• The applications thereof to various functional groups of organic compounds.

The course aims to make students able to:

1. Write and call the main organic compounds.

2. They study, evaluate and apply the methods employed in food production, food preservation and analysis which induce reactions between organic compounds.

3. Study related disciplines such as Food Chemistry and Biochemistry as they know the properties of the building blocks.

4. Monitor the developments in the international literature

General Competences *Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?*	
Search for, analysis and synthesis of data and information by the use of appropriate technologies, Adapting to new situations Decision-making Individual/Independent work Group/Team work Working in an international environment Working in an interdisciplinary environment Introduction of innovative research	*Project planning and management Respect for diversity and multiculturalism Environmental awareness Social, professional and ethical responsibility and sensitivity to gender issues Critical thinking Development of free, creative and inductive thinking …… (Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….*

- Individual/Independent work
- Group/Team work

3. COURSE CONTENT

• Creation, writing and stereochemistry of organic compounds.

• Chemical bonds, atomic and molecular - Hybridization, Coordination.

• Stereochemistry and stereoisomerism.

• Aromaticity conjugated-Inductive effect.

• Aliphatic and aromatic hydrocarbons, alcohols, phenols, ethers, sulfur compounds, carboxylic acids, esters, amines, synthetic polymers, heterocyclic compounds (nomenclature properties, the manufacture, use).

• Structural Biochemistry: Lipids, carbohydrates, amino acids, peptides, proteins (classification, origin, structure, isomerism, main members, physical and chemical properties).

• Nucleosides, nucleotides, nucleic acids (distinction, structures, states and properties).

• Summary Dynamic Biochemistry: Enzymes, coenzymes (structure, mode of action).

• Introduction to the metabolism-Bioenergetic

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	In class lecturing	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	E class	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	50
	Laboratory Classes	50
	Personal Study	25
	Total	***125***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS		

Detailed description of the evaluation procedures: *Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc.* *Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	Written final exam (100%) which includes: - Multiple choice questions - short- answer questions, - open-ended questions, - problem solving, - written work, essay/report,

5. SUGGESTED BIBLIOGRAPHY

-Suggested bibliography:

5. Αρχές και εφαρμογές της ανοργάνου, οργανικής και βιολογικής χημείας, 1η / 2000, Caret/Denniston/Topping, Εκδότης: BROKEN HILL PUBLISHERS LTD
6. ΟΡΓΑΝΙΚΗ ΧΗΜΕΙΑ, Έκδοση: 1η/2017, John McMurry, Εκδότης: ΙΔΡΥΜΑ ΤΕΧΝΟΛΟΓΙΑΣ & ΕΡΕΥΝΑΣ-ΠΑΝΕΠΙΣΤΗΜΙΑΚΕΣ ΕΚΔΟΣΕΙΣ ΚΡΗΤΗΣ
7. Οργανική χημεία, Έκδοση: 3η έκδ./2001, Meislich Herbert,Neckamkin Howard,Sharefkin Jacob,Εκδότης: ΕΚΔΟΣΕΙΣ Α. ΤΖΙΟΛΑ & ΥΙΟΙ Α.Ε.
8. Βασική οργανική χημεία, Έκδοση: 1η έκδ./2008, Σπηλιόπουλος Ιωακείμ, Εκδότης: ΕΚΔΟΣΕΙΣ ΣΤΑΜΟΥΛΗ ΑΕ

Course Outline: "2102 - Food Microbiology"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**2102**	**SEMESTER**	**2nd**
COURSE TITLE	**Food Microbiology**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	3	
Laboratory Exercises	2	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**5**	**6**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	General knowledge
PREREQUISITE COURSES	No
LANGUAGE OF INSTRUCTION	Greek
LANGUAGE OF EXAMINATION/ASSESSMENT	Greek
THE COURSE IS OFFERED TO ERASMUS STUDENTS	No
COURSE WEBSITE (URL)	https://eclass.uth.gr/courses/DND_U_146/

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and* ***APPENDIX B***
- *Guidelines for writing Learning Outcomes*

The course aims to help the students comprehend the impact of microorganisms on foods. Initially, the basic principles of Microbiology regarding the several categories of microorganisms and the factors that affect their development will be presented. Then, the role of microorganisms in the food spoilage and in the pathogenesis of several human diseases will be examined in detail. In particular, the main themes of the course will be the kinds of food spoilage induced by microorganisms, and the microbiological properties of processed foods, namely foods preserved in low temperature and in modified packaging atmosphere, foods after the addition of preservatives and dehydrated, thermal processed and irradiated foods. Additionally, the microbiology of canned and fermented foods will be studied, and the marker microorganisms will be extensively examined. Finally, under the frame of Laboratory Microbiology, the students will be informed about the necessary equipment of a Microbiology Research Lab, whereas the procedure of food sampling for analysis, the dilution liquids and the nutrient mediums as well as the Gram staining will be presented. Moreover, the students will also obtain the necessary knowledge and skills to continue their studies in postgraduate and PhD levels in relevant fields. They will also be able to seek research studies from the international literature by using the most established search engines (e.g., Pubmed) and, finally, they will develop the ability to publically present a scientific article, which is relevant to the research field of the course.

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies, Adapting to new situations Decision-making Individual/Independent work Group/Team work Working

Project planning and management Respect for diversity and multiculturalism Environmental awareness Social, professional and ethical responsibility and sensitivity to gender issues Critical thinking Development of free, creative and inductive thinking ……

in an international environment Working in an interdisciplinary environment Introduction of innovative research	*(Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….*

- Individual/Independent work
- Group/Team work
- Working in an interdisciplinary environment
- Introduction of innovative research
- Development of free, creative and inductive thinking

3. COURSE CONTENT

- Introduction - Historic overview of food microbiology
- Microorganisms in foods
- Factors affecting microorganism development/growth
- Food spoilage
- Microbiology of foods preserved in low temperature
- Microbiology of foods preserved in modified packaging atmosphere
- Microbiology of foods with preservatives
- Microbiology of dehydrated foods
- Microbiology of thermal processed foods
- Microbiology of canned foods
- Microbiology of fermented foods
- Microorganisms as markers of food quality and safety
- Microbiology of irradiated foods
- Food microbiological analysis

Laboratory exercises

- Food Microbiology Lab - Introduction
- Safety rules
- Laboratory mathematics
- Sampling procedure of microorganisms present in foods
- Preparation of culture media and diluents
- Staining in microorganisms
- Introduction in microscopy
- Observation of samples using microscopy
- Proliferation of bacteria
- Rules for the measurement of microorganism populations
- DNA and RNA electrophoresis
- Isolation of nucleic acids and proteins
- Review

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	Face to face	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	1. Lectures in power point documents 2. Research or review papers in pdf documents 3. Laptops for the projection of relevant videos 4. The lectures in pdf documents that are announced to the students The students get in touch with the instructor either directly (through face to face or email) or indirectly (through notes posted on poster boards and the website of the Department or uploaded at the eclass platform)	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational*	***Activity/Method***	***Semester workload***
	Lectures	3 × 10 = 30
	Laboratory exercises	2 x 13 = 26
	Presentations	3 × 3 = 9

visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.	Literature analysis	25
	Preparation of public presentation	25
	Preparation for the exams	35
	Total	***150***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:* *Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc.* *Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	The assessment language is Greek. Regarding theory, the performance of the students is assessed through written exams (80%) and the presentation of an article relevant to the scope of the course (20%). The performance of the students in the laboratory is assessed through the written laboratory exams (100%).	

5. SUGGESTED BIBLIOGRAPHY

-Suggested bibliography:

- Karl R. Matthews, Kalmia E. Kniel, Thomas J. Montville, Food Microbiology: An Introduction. ASM Press, 4th Edition, 2017
- Lynne McLandsborough, Food Microbiology Laboratory. CRC Press, 1st Edition, 2017.

-Scientific Journals:

- Journal of Applied Microbiology
- Frontiers in Microbiology
- International Journal of Food Microbiology
- Food Microbiology

Course Outline: "2103 - Introduction to Psychology"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**2103**	**SEMESTER**	**2nd**
COURSE TITLE	**Introduction to Psychology**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	**2**	
Tutoring	**1**	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**3**	**4**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	Background knowledge General Knowledge
PREREQUISITE COURSES	None
LANGUAGE OF INSTRUCTION	Greek
LANGUAGE OF EXAMINATION/ASSESSMENT	Greek
THE COURSE IS OFFERED TO ERASMUS STUDENTS	Yes in English
COURSE WEBSITE (URL)	https://eclass.uth.gr/courses/DND_U_227/

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and* ***APPENDIX B***
- *Guidelines for writing Learning Outcomes*

The course is an introduction to the basic principles and methods of Psychology. It aims to introduce students to the major subjects of psychological research. In particular, a brief historical review and the main schools of thought in Psychology are critically presented. The main research methods used by psychologists and ethical issues are discussed. The course also includes an introduction to cognitive functions (perception, attention, memory, language, thinking, intelligence), emotions, and psychological disorders.

Learning outcomes

Upon successful completion of the course, students are expected to:

- have an understanding of the main principles of Psychology and be able to apply them in everyday life
- are able to compare and critically evaluate main psychological theories
- have become familiar with the main methods used in Psychology.
- be able to identify the factors that influence and shape human behavior
- know ethical principles that guide psychological research

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies, Adapting to new situations Decision-making Individual/Independent work Group/Team work Working in an international environment Working in an interdisciplinary environment Introduction of innovative research	*Project planning and management Respect for diversity and multiculturalism Environmental awareness Social, professional and ethical responsibility and sensitivity to gender issues Critical thinking Development of free, creative and inductive thinking …… (Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….*

Individual/Independent work

Working in an international environment

Adapting to new situations

3. COURSE CONTENT

1. ***History of Psychology.*** Main schools of thought
2. ***Fields of Psychology****.* Ethical issues.
3. ***Methods..***
4. ***Learning*****.** Behavioral and cognitive learning theories
5. ***Introduction to cognitive functions.*** Information-processing model.
6. ***Perception.*** Sensation vs Perception. Attention.
7. ***Memory.*** Short-term vs Long-term Memory. Coding – Storing – Retrieving. Forgetting and memory failure***.*** Mnemonic strategies.
8. ***Thinking.*** Cognition and problem-solving strategies
9. ***Language.*** Theories of language acquisition and development. Language and thinking.
10. ***Emotions.*** Main theories. Emotions and cognition. Emotional expression and communication.
11. ***Intelligence.*** Measurement. Modern theories. Emotional Intelligence. Mental retardation. .
12. ***Psychological disorders.*** Definition and classification.

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	In-class lecturing	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	Use of ICT in teaching if necessary	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	80
	Essay writting	20
	Total	***100***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:* *Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc.*	Written exams at the end of the semester involving multiple choice questions. In addition, during semester students are encouraged to engage in five (optional) exercises. Participants who have successfully completed the examination receive extra credit for these exercises.	

Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.	Evaluation criteria (for written exercises): Relevance to the topic, critical comprehension of the topic, correct use of terminology.

5. SUGGESTED BIBLIOGRAPHY

-Suggested bibliography:

Nolen-Hoeksema, S., Fredrickson, B., Loftus, G. R., & Lutz, C. (2014). *Introduction to psychology*. Washington: Cengage Learning.

Relative Scientific Journals

Psychology : The Journal of Hellenic Psychological Society.
Hellenic Journal of Psychology
Cognitive development
Cognition
Intelligence
Emotions
British Journal of Psychology

Course Outline: "2105 - Nutritional Assessment"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**2105**	**SEMESTER**	**2nd**
COURSE TITLE	**Nutritional Assessment**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	2	
Laboratory Exercises	2	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**4**	**6**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	General Knowledge Scientific expertise Skills Development
PREREQUISITE COURSES	No
LANGUAGE OF INSTRUCTION	GREEK (available in English for incoming ERASMUS students)
LANGUAGE OF EXAMINATION/ASSESSMENT	GREEK (available in English for incoming ERASMUS students)
THE COURSE IS OFFERED TO ERASMUS STUDENTS	Yes
COURSE WEBSITE (URL)	

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and*

APPENDIX B

- *Guidelines for writing Learning Outcomes*

Through this course students will be trained to develop the appropriate skills to assess the nutritional status of individuals or population groups, healthy or ill, of all age groups. The course focuses on tools to assess nutritional status or body composition, as well as nutritional screening tools that are used by dietitians-nutritionists in daily practice, in clinical practice, in research or other settings.

Upon the completion of the course students are expected to be able to:

1) Use tools to assess nutritional status, body composition and nutritional risk.
2) Explain the results obtained by the nutritional assessment and use them to design diet plans.

General Competences *Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?*	
Search for, analysis and synthesis of data and information by the use of appropriate technologies, Adapting to new situations Decision-making Individual/Independent work Group/Team work Working in an international environment Working in an interdisciplinary environment Introduction of innovative research	*Project planning and management Respect for diversity and multiculturalism Environmental awareness Social, professional and ethical responsibility and sensitivity to gender issues Critical thinking Development of free, creative and inductive thinking …… (Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….*
• Search for, analysis and synthesis of data and information • Decision-making • Individual/Independent work Group/Team work • Working in an interdisciplinary environment • Introduction of innovative research • Respect for diversity and multiculturalism • Social, professional and ethical responsibility and sensitivity to gender issues • Development of free, creative and inductive thinking	

3. COURSE CONTENT

Indicative topics to be covered:

1. Nutritional assessment
2. Clinical examination
3. Anthropometric measurements
4. Body composition
5. Assessment of nutritional intake
6. Estimation of energy requirements
7. Nutritional risk assessment

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	Face-to-face	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	• Software to assess nutritional intake • Software to assess risk for development of diseases • Software to assess body composition • eClass	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	35
	Laboratory practice	25
	Educational visits	15
	Projects	25
	Personal Study	50
	Total	***150***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS	Written final exam (80%) which includes: • Multiple choice questions	

Detailed description of the evaluation procedures: *Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc.* *Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	• Short- answer questions Laboratory work (projects): 20%

5. SUGGESTED BIBLIOGRAPHY

- Suggested bibliography:

1. Manios Y (2006) Nutritional assessment. Athens: Paschalides Medical Publisher.

COURSE OUTLINE "2107 - English Terminology II"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**2107**	**SEMESTER**	**2nd**
COURSE TITLE	**English Terminology II**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	2	
Tutoring	2	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	4	4

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	Background knowledge, Scientific Expertise, General Knowledge, Skills Development
PREREQUISITE COURSES	English Terminology I
LANGUAGE OF INSTRUCTION	English
LANGUAGE OF EXAMINATION/ASSESSMENT	English
THE COURSE IS OFFERED TO ERASMUS STUDENTS	No
COURSE WEBSITE (URL)	

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and*

APPENDIX B

- *Guidelines for writing Learning Outcomes*

The course aims at exploring, developing and enriching students' knowledge in the English language with cognitive subjects of the Department of Nutrition & Dietetics.

The objectives of the course include the students' introduction to the major concepts of Nutrition & Dietetics in English in order for students to acquire the ability to read, communicate and attend lectures in English on topics related to nutrition and dietetics.

Finally, the students' understanding of the English Bibliography and the composition of written texts based on the related terminology in the English language is another aim of paramount importance.

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies, Adapting to new situations Decision-making Individual/Independent work Group/Team work Working in an international environment Working in an interdisciplinary environment Introduction of innovative research

Project planning and management Respect for diversity and multiculturalism Environmental awareness Social, professional and ethical responsibility and sensitivity to gender issues Critical thinking Development of free, creative and inductive thinking …… (Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….

Upon successful completion of the course, students would be able to:

- Manage their knowledge through autonomous or group work and final exams
- Exercise critical ability and self-criticism

- Understand issues in an international environment
- Promote creative and inferential thinking
- Cooperate and create interpersonal relations
- Familiarize themselves with the use of IT
- Evaluate their different language proficiency skills
- Apply their scientific knowledge in practice

3. COURSE CONTENT

Terminology of specified terms and concepts and the teaching of scientific texts related to:

- Biology and Physiology (digestive, neural, hormonal system, enzymes, antibodies etc.)
- Eating habits, drug and nutrient interactions,
- Writing and presentation of assignments in PowerPoint or Web on topics related to Nutrition and Dietetics,
- Comprehension of texts with exercises-questions, audiovisual media and final exams.

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	Face-to-face, distance teaching and learning	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	Use of ICT in teaching (e.g. PowerPoint, Videos etc.), communication with students via e-mails and general support of the educational process via the platform e-class.	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	35
	Practice exercises that focus on the application of methodologies and analysis of case studies to smaller groups of students.	25
	Group or individual projects in presentation format (PowerPoint).	20
	Individual study	20
	Total	***100***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:* *Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc.* *Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	IV. Final written exam (60%) including: Multiple choice questions V. Oral exam which includes: Presentation of individual or group work in PowerPoint (30%) VI. Written evaluation of videos concerning nutritional issues (10%)	

5. SUGGESTED BIBLIOGRAPHY

-Suggested bibliography:

Mihailidis, G. I. & Vezou-Magkouti, N. (2005). English-Greek & Greek-English Dictionary of Medical terms. Athens: Medical Editions Konstantaras (ISBN: 960-88361-2-3)

Course Outline: "2108 - Physical Activity, Mental Health and Quality of Life"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**2108**	**SEMESTER**	**2nd**
COURSE TITLE	**Physical Activity, Mental Health and Quality of Life**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	2	
Tutoring	1	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**3**	**5**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	General Knowledge
PREREQUISITE COURSES	No
LANGUAGE OF INSTRUCTION	GREEK
LANGUAGE OF EXAMINATION/ASSESSMENT	GREEK
THE COURSE IS OFFERED TO ERASMUS STUDENTS	YES (in English)
COURSE WEBSITE (URL)	

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and* ***APPENDIX B***
- *Guidelines for writing Learning Outcomes*

This course provides the opportunity to the student to develop and implement the promotion of effective physical activity programmes aiming at improving mental health, quality of life and eating behavior in different populations (i.e. healthy population and patients with non-communicable diseases). The student will also develop the skills on how to apply behavioural modification techniques to improve mental health, quality of life and eating behaviors in different populations.

On completion of this module, students are expected to be able to:

- Understand mental health and quality of life and eating behavior
- Understand the beneficial effects of behavioural and physical activity interventions on mental health quality of life and behavior
- Development of effective and individualized programmes for different populations.

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies, Adapting to new situations Decision-making Individual/Independent work Group/Team work Working in an international environment Working in an interdisciplinary environment Introduction of innovative research

Project planning and management Respect for diversity and multiculturalism Environmental awareness Social, professional and ethical responsibility and sensitivity to gender issues Critical thinking Development of free, creative and inductive thinking …… (Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….

- Search for, analysis and synthesis of data and information
- Working in an interdisciplinary environment
- Development of free, creative and inductive thinking
- Introduction of innovative research
- Decision-making
- Group work
- Team work
- Respect for diversity and multiculturalism

3. COURSE CONTENT

Indicative content:

1. Mental health: conditions and prevalence
2. Effects of physical activity on depression
3. Effects of physical activity on anxiety disorders
4. Behavioral interventions for mental health
5. Cognitive interventions for mental health
6. Quality of life: definition and methods of assessment
7. Physical activity and quality of life
8. Development of physical activity programs for improving mental health
9. Development of physical activity programs for improving mental health

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	Synchronous lectures	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	eClass	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	26
	Tutorials	13
	Essay writing	14
	Study	72
	Total	***125***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:* *Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc.*	Written final exam that includes: -Multiple choice questions - Short-answer questions	

Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.	

5. SUGGESTED BIBLIOGRAPHY

-Suggested bibliography:

Selected papers (Pubmed, Sport Discus, and PsyInfo) of contemporary interest in diverse scientific areas.

Course Outline: "3101 - Food Chemistry And Analysis"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**3101**	**SEMESTER**	**3rd**
COURSE TITLE	**Food Chemistry And Analysis**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	2	
Laboratory Exercises	2	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**4**	**5**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	Scientific expertise
PREREQUISITE COURSES	No
LANGUAGE OF INSTRUCTION	GREEK
LANGUAGE OF EXAMINATION/ASSESSMENT	GREEK
THE COURSE IS OFFERED TO ERASMUS STUDENTS	YES (in English)
COURSE WEBSITE (URL)	

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and* ***APPENDIX B***
- *Guidelines for writing Learning Outcomes*

The course aims to enable students to:

• Understand the chemical reactions that take place during the processing, storage and cooking of food.

• Choose means and / or conditions to avoid unwanted or development of desired changes occurring in food.

• Apply appropriate food analysis methods to verify their identity (fraud) or quality.

• The chemical composition of food

• The legislative limits

• Food labeling requirements

• The choice of analytical methods of determination

• The processing of results

Upon successful completion of the course students will be able to:

1. Students to acquire the necessary knowledge to apply the analysis.

2. To know the principles and the application of the methods of determination of the main ingredients of the food.

3. To know the composition of food and their particularities during the application of analytical techniques.

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies, Adapting to new situations Decision-making Individual/Independent work Group/Team work Working in an international environment Working in an interdisciplinary environment Introduction of innovative research

Project planning and management Respect for diversity and multiculturalism Environmental awareness Social, professional and ethical responsibility and sensitivity to gender issues Critical thinking Development of free, creative and inductive thinking …… (Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….

- Individual/Independent work
- Group/Team work

3. COURSE CONTENT

• Chemical Structure and physicochemical properties of carbohydrates, their detection and discrimination, caramelization, food tarnishing reactions, important carbohydrate food.

• Structure and chemical properties of lipids, stable fats, receipt and analysis of lipids from plant and animal tissues, their role in nutrition

• Structure of amino acids, peptides, proteins, functional and chemical properties of proteins, Maillard reaction (individual reactions, control and inhibition), role of proteins in human nutrition.

• Vitamins. Chemical structure, nomenclature and sources, effect of processing.

• Food additives. Food micronutrients. New food and food substitutes.

• Chemical changes that occur during processing, storage and cooking of food.

• Unwanted food substances, dioxins, enzymatic tarnish, enzyme tarnish control.

• Odor-taste, types of taste, aftertaste, taste modification, odor and chemical structure, determination of odor taste.

1. Sampling and preparation of laboratory samples for analysis. Macroscopic examination. Natural food constants.

2. Statistical processing and presentation of results of analytical methods.

3. Principles of analytical methods of determination:

• humidity,

• protein,

• carbohydrates,

• fats - fatty acids,

• vitamins,

• enzymes,

• sulfur dioxide,

• Salt

• Ash • inorganic components of food, • natural antioxidants and additives in different foods. Applications of the above analysis methods in basic food categories. 4. Isolation and analysis of aromatic components of food. 5. Modern methods of detecting adulteration in food. 6. Monitoring of analytical methods as proposed by existing Community legislation.

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	In class lecturing	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	E class	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	50
	Laboratory Classes	50
	Personal Study	25
	Total	***125***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:* *Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc.* *Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	Written final exam (100%) which includes: ➢ Multiple choice questions ➢ short- answer questions, ➢ open-ended questions, ➢ problem solving, ➢ written work, essay/report, ➢ laboratory work,	

5. SUGGESTED BIBLIOGRAPHY

-Suggested bibliography:

9. ΧΗΜΕΙΑ ΤΡΟΦΙΜΩΝ, Σφλώμος Κωνσταντίνος, Έκδοση: 2η/2019, ISBN: 978-618-5309-66-4, Εκδότης: ΤΣΟΤΡΑΣ ΑΝ ΑΘΑΝΑΣΙΟΣ
10. Λειτουργικές Ιδιότητες Νερού, Πρωτεινών, Σακχάρων, Λιπιδίων και Φυσικών Χρωστικών, Κυρανάς Ευστράτιος 1η Έκδοση/2011, ISBN: 978-960-418-369-2, Εκδότης: ΕΚΔΟΣΕΙΣ Α. ΤΖΙΟΛΑ & ΥΙΟΙ Α.Ε.

11. Χημεία Τροφίμων, Μπόσκου Δημήτριος, Έκδοση: 5/2004, ISBN: 960-7013-22-0, Εκδότης: ΓΑΡΤΑΓΑΝΗΣ ΑΓΙΣ-ΣΑΒΒΑΣ
12. Ανάλυση Τροφίμων (Β' Έκδοση), Ανδρικόπουλος Νικόλαος
13. Εργαστηριακές αναλύσεις και ποιοτικός έλεγχος στις βιομηχανίες τροφίμων, Καραουλάνης Γεώργιος Δ.
14. Ενόργανη Ανάλυση, Granger II M. Robert, Yochum M. Hank, Granger N. Jill, Sienerth D. Karl
15. Εργαστηριακές μέθοδοι ποσοτικής χημικής ανάλυσης, Στράτης Ιωάννης Α., Ζαχαριάδης Γεώργιος Α., Βουλγαρόπουλος Α. Ν.

-Συναφή επιστημονικά περιοδικά:

- Food Chemistry
- Food Research International
- Food Analytical Methods
- Food and Bioproducts Processing
- Food Quality and Preference

Course Outline: "3102 - Biochemistry"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**3102**	**SEMESTER**	**3rd**
COURSE TITLE	**Biochemistry**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	3	
Laboratory Exercises	2	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**5**	**5**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	General Knowledge
PREREQUISITE COURSES	No
LANGUAGE OF INSTRUCTION	Greek
LANGUAGE OF EXAMINATION/ASSESSMENT	Greek
THE COURSE IS OFFERED TO ERASMUS STUDENTS	Yes
COURSE WEBSITE (URL)	https://eclass.uth.gr/cour3es/DND_U_157/

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and* ***APPENDIX B***
- *Guidelines for writing Learning Outcomes*

Biochemistry is the scientific area that studies the chemical reactions which occur in the living organisms including humans, animals, plants and microorganisms at the molecular level. Upon completion of the lectures, the students will have acquired the necessary knowledge regarding the basic principles of Biochemistry. In particular, the structure and function of biomolecules (i.e., proteins, carbohydrates, lipids and nucleic acids) and cell membranes will have been analyzed. Furthermore, the course will delve into the basic principles of signal transduction and Food Biochemistry.

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies, Adapting to new situations Decision-making Individual/Independent work Group/Team work Working in an international environment Working in an interdisciplinary environment Introduction of innovative research

Project planning and management Respect for diversity and multiculturalism Environmental awareness Social, professional and ethical responsibility and sensitivity to gender issues Critical thinking Development of free, creative and inductive thinking …… (Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….

- Individual/Independent work
- Group/Team work
- Working in an interdisciplinary environment
- Introduction of innovative research
- Development of free, creative and inductive thinking

3. COURSE CONTENT

- Introduction to Biochemistry
- Water
- Buffer solutions
- Amino acids, peptides, proteins
- The structure of proteins
- Non-catalytic functions of proteins
- Enzymology
- Carbohydrates - Glycobiology
- Nucleotides and nucleic acids
- Lipids
- Biological membranes
- Signal transduction
- Basic principles of Food Biochmeistry

Laboratory exercises

- Introduction - Safety and function rules of the Biochemistry Lab
- Laboratory mathematics
- Preparation of solutions
- Introduction in enzymology and enzyme kinetics
- Catalytic action of alkaline phosphatase
- Effect of substrate concentration on the catalytic action of alkaline phosphatase
- Effect of an inhibitor on the catalytic action of alkaline phosphatase
- Evaluation of the concentration of alkaline phosphatase
- Microscopic observation of cancer cells
- Staining and destaining of protein electrophoresis gel and observation of the protein bands
- Measurement of catalase activity in red blood cell lysate
- Measurement of protein concentration using the Bradford reagent
- Review

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	Face to face	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	1. Lectures in power point documents 2. Research or review papers in pdf documents 3. Laptops for the projection of relevant videos 4. The lectures in pdf documents that are announced to the students through the eclass platform The students get in touch with the instructor either directly (through face to face contact or email) or indirectly (through notes posted on the poster boards and the website of the Department).	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	3 × 13 = 39
	Laboratory exercises	2 x 13 = 26
	Literature analysis	15
	Preparation for the exams	45
	Total	***125***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:* *Language of evaluation, assessment methods, formative or summative (conclusive), multiple*	For both the Theory and the Lab, the performance of the students is assessed through written exams (100%).	

choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc. *Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	

5. SUGGESTED BIBLIOGRAPHY

- Suggested bibliography:

- Nelson David L., Cox Michael M. Lehninger Principles of Biochemistry. W.H. Freeman, 8th Edition, 2021.
- Gregory Gatto, Jeremy M. Berg, John L. Tymoczko, Lubert Stryer. Biochemistry. MACMILLAN, 2019.

- Scientific journals:

- Biochemistry
- Biochemical journal
- Journal of Biological Chemistry
- PNAS
- EMBO Journal

Course Outline: "3103 - Research Methods"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**3103**	**SEMESTER**	**3rd**
COURSE TITLE	**Research Methods**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	3	
Tutoring	1	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**4**	**5**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	General Knowledge
PREREQUISITE COURSES	No
LANGUAGE OF INSTRUCTION	GREEK
LANGUAGE OF EXAMINATION/ASSESSMENT	GREEK
THE COURSE IS OFFERED TO ERASMUS STUDENTS	YES
COURSE WEBSITE (URL)	

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and* ***APPENDIX B***
- *Guidelines for writing Learning Outcomes*

This module investigates the different methodological designs in research and these can be utilized in practice. This module has been developed in order to help the student understand research methods in nutrition and dietetics, and so, upon completion of this module, the student will be able to:

- Understand research designs
- Choose different research designs depending on different research hypotheses
- Critically evaluate research findings

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies, Adapting to new situations Decision-making Individual/Independent work Group/Team work Working in an international environment Working in an interdisciplinary environment Introduction of innovative research

Project planning and management Respect for diversity and multiculturalism Environmental awareness Social, professional and ethical responsibility and sensitivity to gender issues Critical thinking Development of free, creative and inductive thinking …… (Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….

- Search for, analysis and synthesis of data and information
- Critical thinking
- Adapting to new situations
- Working in an interdisciplinary environment
- Acquisition of the appropriate theoretical cognitive background so that further education is possible.

3. COURSE CONTENT

Theory

14. Introduction to research methods
15. Types of research
16. Qualitative and quantitative research
17. Cross sectional studies
18. Epidemiological studies
19. Interventional studies
20. Clinical studies
21. Sample size and eligibility criteria
22. Systematic review of the literature
23. Meta-analysis
24. Errors in conducting research
25. Examples in research
26. Revision

Workshop
All workshops will be based on examples from the theory above

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	Face to face or online synchronous teaching	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	eClass	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	80
	Laboratory Classes	10
	Personal Study	35
	Total	***125***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:* *Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc.* *Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	Written final exam (100%) which includes: - Multiple choice questions	

5. SUGGESTED BIBLIOGRAPHY

-Suggested bibliography:

Δημοσθένης Β. Παναγιωτάκος, Μεθοδολογία της έρευνας & της ανάλυσης των δεδομένων για τις επιστήμες υγείας, Εκδόσεις Διόνικος Β΄έκδοση, 2011

Course Outline: "3104 - Nutrition Through the Life Cycle"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**3104**	**SEMESTER**	**3rd**
COURSE TITLE	**Nutrition Through the Life Cycle**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	3	
Tutoring	2	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**5**	**5**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	Scientific expertise
PREREQUISITE COURSES	Non
LANGUAGE OF INSTRUCTION	Greek
LANGUAGE OF EXAMINATION/ASSESSMENT	Greek
THE COURSE IS OFFERED TO ERASMUS STUDENTS	No
COURSE WEBSITE (URL)	

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and*

APPENDIX B

- *Guidelines for writing Learning Outcomes*

The purpose of this course is to introduce the student to the nutritional needs and requirements of humans in the stages of the human life cycle. The life stages covered are pregnancy, lactation, infancy, early childhood (preschool age), childhood, adolescence, adulthood and elderly. In addition, the purpose of the course is to teach the principles of diet planning for physiological conditions. Upon successful completion of the course the student will be able to:

- Know the changes that take place in humans in every stage of the life cycle
- Know the different nutrient intake needs
- Know the factors that influence food choice
- list the appropriate nutritional recommendations for proper growth in these stages
- Know the process of diet planning based on food equivalents

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies, Adapting to new situations Decision-making Individual/Independent work Group/Team work Working in an international environment Working in an interdisciplinary environment Introduction of innovative research

Project planning and management Respect for diversity and multiculturalism Environmental awareness Social, professional and ethical responsibility and sensitivity to gender issues Critical thinking Development of free, creative and inductive thinking …… (Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….

- Individual/Independent work Group
- Team work
- Decision making

3. COURSE CONTENT

Indicative:

1. The role of nutrition through the stages of the life cycle
2. Anatomical & functional changes during pregnancy, Nutrition during pregnancy
3. Breast milk composition and breastfeeding
4. Nutrition in breastfed women - problems during breastfeeding
5. Physiological and anatomical changes in the infant's body, Infant nutrition, Special milk formulas
6. Nutrition in preschool-age
7. Physiological and anatomical changes during childhood, nutrition in childhood
8. Physiological and anatomical changes during adolescence, Adolescent's nutrition
9. Nutrition in adulthood
10. Physiological changes in old age, Role of diet for a healthy lifestyle in the elderly
11. Diet planning for physiological conditions in all life stages

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	In-class lecturing, distance guidance	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	Communication with students via e-class	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	60
	Individual and team Exercises	10
	Literature search	10
	Menu planning using the software DietSpeak	5
	Self-directed study	40
	Total	***125***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures: Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc. Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	1. Written examination (90%) which includes: A. Theory (70%) - Multiple choice- questions (MCQ) - Short- answer questions B. Diet planning (30%) - Problem solving -short- answer questions -problem solving 2. In class active participation and in class presentation of individual projects (Power point) (10%)	

5. SUGGESTED BIBLIOGRAPHY

-Suggested bibliography:

Antonis Zampelas , Nutrition through the life cycle, eds Pashalidis, 2017

Brown J.E. Nutrition through the life cycle, 6th edition, SBN-13: 978-1305628007

Nutrition: A Lifespan Approach, Langley-Evans S., Wiley-Blackwell, 312 pages, 2009, (ISBN: 978-1-4051-7878-5)

Course Outline: "3105 - Metabolism I"

1. General information

FACULTY/SCHOOL	**School of Physical Education, Sport Science & Dietetics**		
DEPARTMENT	**Department of Nutrition and Dietetics**		
LEVEL OF STUDY	**Undergraduate**		
COURSE UNIT CODE	**3105**	**SEMESTER**	3rd
COURSE TITLE	**Metabolism I**		
INDEPENDENT TEACHING ACTIVITIES		**WEEKLY TEACHNG HOURS**	**CREDITS**
	Theory	2	
	Tutorials	1	
		3	**5**
COURSE TYPE	Background Knowledge Scientific Expertise		
PREREQUISITE COURSES	No		
LANGUAGE OF INSTRUCTION	GREEK		
LANGUAGE OF EXAMINATION/ASSESSMENT	GREEK		
THE COURSE IS OFFERED TO ERASMUS STUDENTS	Yes		
COURSE WEBSITE (URL)	https://eclass.uth.gr/courses/DND_U_233/		

2. LEARNING OUTCOMES

Learning Outcomes

The course describes how the body metabolizes the macronutrients of food.

Upon successful completion of the course, the student will have the knowledge to understand:

- the metabolism of macronutrients at the molecular, cellular and body level, ie biochemical processes that lead to the conversion, storage of macronutrients or their breakdown for energy production
- the connection of nutrition and metabolism of macronutrients with the functioning of body
- the correlation of macronutrient metabolism with the development of diseases

General Competences

- Acquisition of the appropriate theoretical cognitive background so that further education is possible
- Search for, analysis and synthesis of data and information
- Promotion of free, creative and deductive thinking
- Working in an interdisciplinary environment
- Individual/Independent work

3. COURSE CONTENT

- Introduction to macronutrient metabolism
- Energy systems
- Carbohydrate metabolism
- Fat metabolism
- Protein metabolism
- Macronutrient metabolism in the postprandial stage
- Macronutrient metabolism in the post-absorption stage
- Macronutrient metabolism in the fasting stage and in the starvation stage
- Adjustments of metabolism in special situations

• Energy balance and weight regulation

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY	Face-to-face	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY	-Use of PowerPoint presentation program during the educational process -Support of the Learning Process through the e-class platform -Communication with the students via email	
COURSE DESIGN	***Activity/Method***	***Semester workload***
	Lectures	40
	Study and analysis of bibliography	20
	Self-directed Study	65
	Total	**125**
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS	Written final exam (100%) which includes: - Multiple choice questions - Short-answer questions	

5. SUGGESTED BIBLIOGRAPHY

- Διατροφή και Μεταβολισμός. Σκενδέρη Κ., Συντώσης Λ. Broken Hill Publishers Ltd, 2016
- Διατροφή και Μεταβολισμός. Gropper S., Smith J., Groff J. Broken Hill Publishers Ltd, 2008
- Βιοχημεία στην ιατρική 2 Μεταβολικά Διαγράμματα. Διονυσίου-Αστερίου Αλεξάνδρα, Τρούγκος Κωνσταντίνος. Broken Hill Publishers Ltd, 2003

Course Outline: "3106 - Nutrition Education"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**3106**	**SEMESTER**	**3rd**
COURSE TITLE	**Nutrition Education**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	2	
Tutoring	1	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**3**	**5**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	General Knowledge Scientific expertise Skills Development
PREREQUISITE COURSES	No
LANGUAGE OF INSTRUCTION	GREEK
LANGUAGE OF EXAMINATION/ASSESSMENT	GREEK
THE COURSE IS OFFERED TO ERASMUS STUDENTS	No
COURSE WEBSITE (URL)	

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and* ***APPENDIX B***
- *Guidelines for writing Learning Outcomes*

Through this course students will be trained to develop the appropriate skills on nutrition education targeting individuals or population groups of all age groups by delivering appropriately designed nutrition interventions.

Upon the completion of the course students are expected to be able to:

3) Design nutrition education programs and nutrition interventions, based on behavioral models, tools and strategies that are appropriate for each age group.
4) Evaluate the effectiveness of these programs and nutrition interventions.

General Competences *Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?*	
Search for, analysis and synthesis of data and information by the use of appropriate technologies, Adapting to new situations Decision-making Individual/Independent work Group/Team work Working in an international environment Working in an interdisciplinary environment Introduction of innovative research	*Project planning and management Respect for diversity and multiculturalism Environmental awareness Social, professional and ethical responsibility and sensitivity to gender issues Critical thinking Development of free, creative and inductive thinking …… (Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….*

- Search for, analysis and synthesis of data and information
- Adapting to new situations
- Decision-making
- Individual/Independent work Group/Team work
- Working in an interdisciplinary environment
- Introduction of innovative research
- Respect for diversity and multiculturalism
- Environmental awareness
- Social, professional and ethical responsibility and sensitivity to gender issues

3. COURSE CONTENT

Indicative topics to be covered:

8. Determinants of food choice and of energy-balance related behaviours
9. Behavioral models used in interventions focusing on nutrition education and nutrition/health promotion
10. Factors influencing the effectiveness of nutrition education
11. The role of nutrition education in the prevention of obesity and obesity related diseases
12. Practical examples of behavioral interventions aiming to improve individual's or population groups' dietary behavior

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	Face-to-face	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	eClass	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	26
	Lectures/practice	13
	Projects	26
	Personal Study	60
	Total	***125***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:*	Written final exam that includes: • Multiple choice questions • Short- answer questions	

Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc. *Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	

5. SUGGESTED BIBLIOGRAPHY

- Suggested bibliography:

Σχεδιασμός Προγραμμάτων Αγωγής Υγείας, ΘΕΟΔΩΡΑΚΗΣ ΙΩΑΝΝΗΣ, ΧΑΣΑΝΔΡΑ ΜΑΙΡΗ 2018. ΑΦΟΙ ΚΥΡΙΑΚΙΔΗ ΕΚΔΟΣΕΙΣ Α.Ε

Course Outline: "4101 - Food Toxicology"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**4101**	**SEMESTER**	**4th**
COURSE TITLE	**Food Toxicology**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	3	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**3**	**4**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	General Knowledge
PREREQUISITE COURSES	No
LANGUAGE OF INSTRUCTION	Greek
LANGUAGE OF EXAMINATION/ASSESSMENT	Greek
THE COURSE IS OFFERED TO ERASMUS STUDENTS	No
COURSE WEBSITE (URL)	https://eclass.uth.gr/courses/DND_U_198/

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and* ***APPENDIX B***
- *Guidelines for writing Learning Outcomes*

Toxicology is the scientific area that studies the impact of xenobiotics on living organisms. Xenobiotics are chemical substances that are not expected to be present in the organisms but they are ingested by them through their interaction with the environment or through diet. The main objective of the course is to offer to the students the required knowledge regarding the basic principles of Toxicology and the trajectory of xenobiotics in the organism from ingestion to metabolism and excretion. Furthermore, the biochemical and molecular mechanisms of the toxic action of xenobiotics present in foods are also examined.

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies, Adapting to new situations Decision-making Individual/Independent work Group/Team work Working in an international environment Working in an interdisciplinary environment Introduction of innovative research

Project planning and management Respect for diversity and multiculturalism Environmental awareness Social, professional and ethical responsibility and sensitivity to gender issues Critical thinking Development of free, creative and inductive thinking …… (Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….

- Individual/Independent work
- Group/Team work
- Working in an interdisciplinary environment
- Introduction of innovative research
- Development of free, creative and inductive thinking

3. COURSE CONTENT

- Introduction to Toxicology - History of Toxicology
- Basic principles of Toxicology
- Dose-response
- Risk assessment of toxic substances
- Absorption, distribution and excretion of toxic substances
- Bioconversion of toxic substances
- Detection of toxic substances in foods
- Intrinsic food toxins
- Toxic phytochemicals
- Food additives
- Toxic substances generated due to food processing
- Biochemical pollutants and heavy metals
- Pesticides
- Psychoactive substances – Toxicology and association with nutrition

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	Face to face	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	1. Lectures in power point documents 2. Research or review papers in pdf documents 3. Laptops for the projection of relevant videos 4. The lectures in pdf documents that are announced to the students through the eclass platform The students get in touch with the instructor either directly (through face to face contact or email) or indirectly (through notes posted on the poster boards and the website of the Department).	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	3 × 13 = 39
	Literature analysis	21
	Preparation for the exams	40
	Total	***100***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:* *Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc.* *Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	The assessment language is Greek. The performance of the students is assessed through written exams.	

5. SUGGESTED BIBLIOGRAPHY

- Suggested bibliography:

- Takayuki Shibamoto, Steve Taylor, Leonard F. Bjeldanes. Introduction to Food Toxicology. Academic Press, 2016.
- Curtis Klaassen, John B. Watkins. Βασική Τοξικολογία. Casarett & Doull's Essentials of Toxicology. McGraw Hill/Medical, 4th edition, 2021.

- Scientific journals:

- Toxicology Reports
- Food and Chemical Toxicology
- Current Opinion in Toxicology
- Toxicology Letters
- Human and Experimental Toxicology

Course Outline: "4102 - Introduction to Clinical Nutrition - Dietetics"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**4102**	**SEMESTER**	**4th**
COURSE TITLE	**Introduction to Clinical Nutrition - Dietetics**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	2	
Laboratory Exercises	1	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**3**	**4**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	Scientific expertise Skills Development
PREREQUISITE COURSES	No
LANGUAGE OF INSTRUCTION	GREEK
LANGUAGE OF EXAMINATION/ASSESSMENT	GREEK
THE COURSE IS OFFERED TO ERASMUS STUDENTS	No
COURSE WEBSITE (URL)	

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and* ***APPENDIX B***
- *Guidelines for writing Learning Outcomes*

Through this course students will be trained on the basic principles of clinical nutrition and dietetics. The course combines theoretical and practical information/case studies which are needed for the dietitian-nutritionist.

Upon the completion of the course students are expected to be able to:

1) Understand and implement the nutrition care process.
2) Identify patients at high nutritional risk, conduct nutritional assessment and use this information to design diet plans.
3) Design personalized diet plans and nutrition interventions for adults with malnutrition or obesity.

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies, Adapting to new situations Decision-making Individual/Independent work Group/Team work Working in an international environment Working in an interdisciplinary environment Introduction of innovative research

Project planning and management Respect for diversity and multiculturalism Environmental awareness Social, professional and ethical responsibility and sensitivity to gender issues Critical thinking Development of free, creative and inductive thinking …… (Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….

- Search for, analysis and synthesis of data and information
- Adapting to new situations
- Decision-making
- Individual/Independent work Group/Team work
- Working in an interdisciplinary environment
- Introduction of innovative research
- Respect for diversity and multiculturalism
- Social, professional and ethical responsibility and sensitivity to gender issues

3. COURSE CONTENT

Indicative topics to be covered:

13. Nutrition care process
14. Nutritional assessment and nutritional risk assessment in patients
15. Nutrition intervention: design of diet plans
16. Adaptation of diet
17. Nutrition in hospital or other medical centers
18. Malnutrition
19. Obesity

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	Face-to-face	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	• Software to assess nutritional intake • eClass	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	**Semester workload**
	Lectures	30
	Lectures/practice	30
	Personal Study	40
	Total	***100***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:*	Written final exam (70%) which includes: • Multiple choice questions • Short- answer questions	

Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc. *Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	Laboratory work (projects): 30%

5. SUGGESTED BIBLIOGRAPHY

-Suggested bibliography:

1. Zampelas A. Clinical Nutrition and Dietetics. Paschalides Medical Publisher. 2007.
2. Mahan LK, Escott-Stump S, Krause's Food, Nutrition and Diet Therapy, 13th Edition. Philadeplhia: Saunders, 2011
3. 4. Kontogianni M et al. Handbook of Clinical Nutrition, 2015 (www.kallipos.gr).
5. Fischbach F. Manual of laboratory and diagnostic tests. Paschalides Medical Publisher., 1999

Course Outline: "4103 - Exercise Physiology"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**4103**	**SEMESTER**	**4th**
MODULE TITLE	**Exercise Physiology**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	3	
Laboratory Exercises	1	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**4**	**4**

COURSE TYPE	General Knowledge
PREREQUISITE COURSES	NO
LANGUAGE OF INSTRUCTION	Greek
LANGUAGE OF EXAMINATION/ASSESSMENT	Greek
THE COURSE IS OFFERED TO ERASMUS STUDENTS	Yes
COURSE WEBSITE (URL)	

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and* ***APPENDIX B***

Guidelines for writing Learning Outcomes

The course is the main introductory course on the concepts of applied exercise physiology.
Upon successful completion of the course, the student will be able to have the required background to understand the content of relevant courses in the following semesters.
Specifically he/she will:

- Understand the physiology related to cardiorespiratory fitness (aerobic, anaerobic), metabolism and body composition
- Understand methods and measurement of human applied exercise physiology

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies, Adapting to new situations Decision-making Individual/Independent work Group/Team work Working in an international environment Working in an interdisciplinary environment Introduction of innovative research

Project planning and management Respect for diversity and multiculturalism Environmental awareness Social, professional and ethical responsibility and sensitivity to gender issues Critical thinking Development of free, creative and inductive thinking …… (Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….

- Search for, analysis and synthesis of data and information
- Critical thinking
- Adapting to new situations
- Working in an interdisciplinary environment

- Acquisition of the appropriate theoretical cognitive background so that further education is possible
- Decision making
- Group work

3. COURSE CONTENT

1. Introduction
2. Energy metabolism during exercise
3. Aerobic capacity
4. Anaerobic capacity
5. Metabolic adaptations to exercise
6. Cardiorespiratory adaptations to exercise
7. Muscle performance and adaptations to exercise
8. Exercise and health
9. Pretest screening
10. Evaluation of aerobic capacity
11. Evaluation of anaerobic capacity
12. Muscle strength assessment
13. Flexibility and functional ability
14. Summary

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	Face to face or online synchronous teaching	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	Lectures in Power Point that are made available to students through the online e-class platform	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	50
	Laboratory Exercises	10
	Independent Study	40
	Total	***100***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:* *Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc.* *Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	I. Written final examination (80%) that includes: - Multiple choice questions II. Laboratory Exercises (20%) - Multiple choice questions	

5. SUGGESTED BIBLIOGRAPHY

-Suggested bibliography:

Haff G & Dumke C (2020). Εργαστήρια Εργοφυσιολογίας. Ιωάννης Κωνσταντάρας.
Κλεισούρας Β (2011). Εργοφυσιολογία. Broken Hill Publishers.
Κλεισούρας Β (2015). Εργομετρία. Broken Hill Publishers.

Course Outline: “4104 - Metabolism II”

1. General information

FACULTY/SCHOOL	**School of Physical Education, Sport Science & Dietetics**		
DEPARTMENT	**Department of Nutrition and Dietetics**		
LEVEL OF STUDY	**Undergraduate**		
COURSE UNIT CODE	**4104**	**SEMESTER**	**4th**
COURSE TITLE	**Metabolism II**		

INDEPENDENT TEACHING ACTIVITIES	**WEEKLY TEACHNG HOURS**	**CREDITS**
Theory	2	
Tutorials	1	
	3	**5**

COURSE TYPE	Background Knowledge Scientific Expertise
PREREQUISITE COURSES	No
LANGUAGE OF INSTRUCTION	GREEK
LANGUAGE OF EXAMINATION/ASSESSMENT	GREEK
THE COURSE IS OFFERED TO ERASMUS STUDENTS	Yes
COURSE WEBSITE (URL)	https://eclass.uth.gr/courses/DND_U_236/

2. LEARNING OUTCOMES

Learning Outcomes

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

- the functions of digestion, absorption, bioavailability and metabolism of micronutrients
- the connection of nutrition and metabolism of micronutrients with the functioning of body
- the correlation of micronutrient metabolism with the development of diseases

General Competences

- Acquisition of the appropriate theoretical cognitive background so that further education is possible
- Search for, analysis and synthesis of data and information
- Promotion of free, creative and deductive thinking
- Working in an interdisciplinary environment
- Individual/Independent work

3. COURSE CONTENT

- Body fluids and eletrolytes balance
- Acid-Base balance
- Water-soluble vitamins
- Fat-soluble vitamins
- Trace elements

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY	Face-to-face	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY	-Use of PowerPoint presentation program during the educational process -Support of the Learning Process through the e-class platform -Communication with the students via email	
COURSE DESIGN	***Activity/Method***	***Semester workload***
	Lectures	40
	Study and analysis of bibliography	20
	Self-directed Study	65
	Total	**125**
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS	Written final exam (100%) which includes: - Multiple choice questions - Short-answer questions	

5. SUGGESTED BIBLIOGRAPHY

- Διατροφή και Μεταβολισμός. Gropper S., Smith J., Groff J. Broken Hill Publishers Ltd, 2008

- Βιοχημεία στην ιατρική 2 Μεταβολικά Διαγράμματα. Διονυσίου-Αστερίου Αλεξάνδρα, Τρούγκος Κωνσταντίνος. Broken Hill Publishers Ltd, 2003

- Διατροφή και Μεταβολισμός. Σκενδέρη Κ., Συντώσης Λ. Broken Hill Publishers Ltd, 2016

Course Outline: "4105 - Nutritional Epidemiology"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**4105**	**SEMESTER**	**4th**
COURSE TITLE	**Nutritional Epidemiology**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	3	
Tutoring	1	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**4**	**5**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	Scientific expertise
PREREQUISITE COURSES	non
LANGUAGE OF INSTRUCTION	Greek
LANGUAGE OF EXAMINATION/ASSESSMENT	Greek
THE COURSE IS OFFERED TO ERASMUS STUDENTS	Yes
COURSE WEBSITE (URL)	

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το

APPENDIX A

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and*

APPENDIX B

- *Guidelines for writing Learning Outcomes*

The section examines the different research designs used in nutritional research and how nutritional assessment methods can be applied in a research environment with an emphasis on nutritional epidemiology. The course also includes a review of recent dietary knowledge and other risk factors as causative agents of disease. The course is designed to enable the student to conduct epidemiological research in the field of nutrition and/or student to be able to interpret research findings (review of the scientific literature) related to diet.

Upon successful completion of the course the student will be able to:

- know and interpret risk assessment measures and disease frequency measures
- select the most appropriate epidemiological study design to be able to investigate the relationship between diet and health status
- identify the strengths and weaknesses of any research study design
- understand the impact of study limitations on the results of research investigating all nutrition-related research hypotheses
- evaluate the scientific findings of the international literature

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies,
Adapting to new situations
Project planning and management
Respect for diversity and multiculturalism

Decision-making *Individual/Independent work Group/Team work* *Working in an international environment* *Working in an interdisciplinary environment* *Introduction of innovative research*	*Environmental awareness Social, professional and ethical responsibility and sensitivity to gender issues* *Critical thinking* *Development of free, creative and inductive thinking ……* *(Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….*

- Individual/Independent work Group
- Team work
- Decision making
- Production of new research ideas
- Search for, analysis and synthesis of data and information by the use of appropriate technologies

3. COURSE CONTENT

Indicative:

1. Principles & history of epidemiology
2. Introduction to Nutrition Epidemiology
3. Basic concepts in Epidemiology
4. Nutritional assessment tools/validity/reliability/errors
5. Causal criteria in nutritional epidemiology (concept of mediator and confounding factor)
6. Cross-sectional studies
7. Prospective studies
8. Retrospective studies
9. Nutrition and Epidemiology of cardiovascular diseases
10. Nutrition and Epidemiology of cancer
11. Nutrition and Epidemiology of neurological and psychiatric diseases
12. Exercises - examples

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	in-class lecturing, distance guidance	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	Communication with students via e-class	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	36
	Exercises –case studies	14
	Self-directed study	75
	Total	***125***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:* *Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc.*	*1*. Written examination (90%) which includes : - multiple choice- questions (MCQ) -short- answer questions Problem solving –case studies *2. In class active participation (10%)*	

Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.	

5. SUGGESTED BIBLIOGRAPHY

-Suggested bibliography:

Panagiotakos D.B., General and Specific per case Epidemiology, eds: M. Tsakouridou & Co O.E., 1st edition 2021, ISBN: 978-960-6619-99-1

Panagiotakos D.B. Research methodology and data analysis for health sciences., eds, Dionikos, 2011

Ann Aschengrau & George Seage III. Epidemiology. By Aggelos Hatzakis, eds, Broken Hill, 2012

Margets, B, Nelson. Design concepts in Nutritional Epidemiology. Ed Oxford University press 1997. • Willett W. Nutritional Epidemiology. Oxford University press 1998.

Course Outline: "4106 - Nutrition Counseling and Interpersonal Skills"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**4106**	**SEMESTER**	**4th**
COURSE TITLE	**Nutrition Counseling and Interpersonal Skills**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	2	
Tutoring	1	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**3**	**3**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	Scientific expertise
PREREQUISITE COURSES	NO
LANGUAGE OF INSTRUCTION	Greek
LANGUAGE OF EXAMINATION/ASSESSMENT	Greek
THE COURSE IS OFFERED TO ERASMUS STUDENTS	NO
COURSE WEBSITE (URL)	https://eclass.uth.gr/courses/DND_U_238/

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and* ***APPENDIX B***
- *Guidelines for writing Learning Outcomes*

The aim of the course is to provide the basic principles, but also up-to-date scientific data on the factors that influence dietary behavior and dietary choices, as well as interpersonal relationships. The Behavior Modification Theories most commonly used in Nutrition Science are listed, as well as effective techniques for improving dietary habits and behaviors in the context of therapeutic and preventive intervention. The role of the dietitian-nutritionist as a competent assistant or as a "coach" in the effort of the individual to change the eating habits and parameters of his/her lifestyle for the prevention and treatment of diseases is emphasized.

Upon completion of the course students are expected to acquire the ability:

- to understand the methods of changing dietary behavior
- to understand the characteristics that the dietitian-nutritionist should have as a nutrition consultant and the interpersonal relationships that he/she should develop
- to apply nutritional counseling techniques and strategies for both the prevention and treatment of diseases

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?
Search for, analysis and synthesis of data and information by the use of appropriate technologies, Adapting to new situations Decision-making Individual/Independent work Group/Team work Working in an international environment Working in an interdisciplinary environment Introduction of innovative research Project planning and management Respect for diversity and

multiculturalism Environmental awareness Social, professional and ethical responsibility and sensitivity to gender issues Critical thinking Development of free, creative and inductive thinking …… (Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….
• Adapting to new situations • Decision-making • Independent work • Working in an interdisciplinary environment

3. COURSE CONTENT

Indicative content:

1. Definition of nutritional counseling, communication skills, methods of behavior change, meta-theoretical model for behavior change, change processes
2. The role of the dietitian-nutritionist in modifying dietary habits and behaviors
3. Characteristics of a good counselor, structure of counseling sessions, first counseling session, advising people at the stage of preliminary design, at the stage of study, preparation, action, maintenance, when maintenance fails
4. Nutritional counseling for the prevention and treatment of various diseases

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	In class lecturing	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	- Lectures in Power Point - Learning support through the online eClass platform	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	26
	Tutoring	13
	Individual work	11
	Independent Study	25
	Total	***75***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS	Written final examination that includes: - Multiple choice tests - Short answer questions	

5. SUGGESTED BIBLIOGRAPHY

-*Suggested bibliography:* Δεξιότητες Συμβουλευτικής για Διαιτολόγους (1998). Τσίτσας, Γ. Εκδόσεις Παρισιανού.

Course Outline: "4107- Pathophysiology"

1. General information

FACULTY/SCHOOL	**School of Physical Education, Sport Science & Dietetics**		
DEPARTMENT	**Department of Nutrition and Dietetics**		
LEVEL OF STUDY	**Undergraduate**		
COURSE UNIT CODE	**4107**	**SEMESTER**	4th
COURSE TITLE	**Pathophysiology**		

INDEPENDENT TEACHING ACTIVITIES	**WEEKLY TEACHNG HOURS**	**CREDITS**
Theory	**3**	**5**

COURSE TYPE	Background knowledge Scientific Expertise
PREREQUISITE COURSES	No
LANGUAGE OF INSTRUCTION	GREEK
LANGUAGE OF EXAMINATION/ASSESSMENT	GREEK
THE COURSE IS OFFERED TO ERASMUS STUDENTS	YES
COURSE WEBSITE (URL)	https://eclass.uth.gr/courses/DND_U_239/

2. LEARNING OUTCOMES

Learning Outcomes

Pathophysiology is an important course for understanding the clinical presentation of various diseases. Knowledge of the underlying mechanisms of diseases and their clinical manifestations contributes to the optimal treatment of the patients. The main goal of the course is for the student to understand the dysfunction of various systems of the human body and how does this leads to the appearance of symptoms and clinical signs of specific diseases.

Upon successful completion of the course students:

- Will be able to understand basic concepts and terms of pathophysiology
- Be able to explain and describe the normal functions of the human body and relate their disorders to diseases
- Will be able to understand the pathogenetic mechanism of the disease
- They will have developed significant knowledge about the pathophysiology of diseases that need special diet regarding their prevention and/or treatment

General Competences

- Search for, analysis and synthesis of data and information
- Adapting to new situations
- Working in an interdisciplinary environment
- Acquisition of the appropriate theoretical cognitive background so that further education is possible
- Making a decision
- Production of new research ideas

3. COURSE CONTENT

- Basic principles of cell physiology-Tissue damage
- Pathophysiology of the immune system dysfunction

- Pathophysiology of the respiratory system dysfunction
- Pathophysiology of the circulatory system dysfunction
- Pathophysiology of the hematopoietic system dysfunction
- Pathophysiology of renal diseases
- Pathophysiology of fluid-electrolytes-acid-base balance disorders
- Pathophysiology of the gastrointestinal system dysfunction
- Pathophysiology of endocrine diseases
- Metabolic diseases

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY	Face-to-face	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY	-Use of PowerPoint presentation program during the educational process -Support of the Learning Process through the e-class platform -Communication with the students via email	
COURSE DESIGN	***Activity/Method***	***Semester workload***
	Lectures	40
	Study and analysis of bibliography	20
	Self-directed Study	65
	Total	***125***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS	Written final exam (100%) which includes: - Multiple choice questions - Short-answer questions	

5. SUGGESTED BIBLIOGRAPHY

1. Μουτσόπουλου Αρχές Παθοφυσιολογίας. Βλαχογιαννόπουλος Π, Τζιούφας Α. ISBN: 9789925563340. BROKEN HILL PUBLISHERS LTD. 2018

2. ΠΑΘΟΛΟΓΙΚΗ ΦΥΣΙΟΛΟΓΙΑ (Β΄ έκδοση). Αριστοτέλειο Πανεπιστήμιο Θεσσαλονίκης. Συλλογικό έργο. ISBN: 9789601221830. UNIVERSITY STUDIO PRESS. 2014

3. Παθοφυσιολογία Νόσων. Hart N.M., Loeffler G.A. **ISBN:** 9789963716326. BROKEN HILL PUBLISHERS LTD. 2013

Course Outline: "5101 - Clinical Nutrition I"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**5101**	**SEMESTER**	**5th**
COURSE TITLE	**Clinical Nutrition I**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	3	
Laboratory Exercises	2	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**5**	**6**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	Scientific expertise Skills Development
PREREQUISITE COURSES	No
LANGUAGE OF INSTRUCTION	GREEK (available in English for incoming ERASMUS students)
LANGUAGE OF EXAMINATION/ASSESSMENT	GREEK (available in English for incoming ERASMUS students)
THE COURSE IS OFFERED TO ERASMUS STUDENTS	Yes
COURSE WEBSITE (URL)	

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and* ***APPENDIX B***
- *Guidelines for writing Learning Outcomes*

Through this course students will be trained to develop the appropriate skills in the dietetic management of adult patients, which is based on a human-centered approach, interdisciplinarity and design of diet plans and interventions for the diseases that are included in the course outline. A connection with knowledge obtained in previous courses (e.g. human anatomy, physiology, pathophysiology, biochemistry, metabolism, introduction to clinical nutrition-dietetics, nutrition education and nutritional assessment) will be aimed.

M Upon the completion of the course students are expected to be able to:

4) Design diet plans based on the nutrition care process and up-to-date recommendations for each disease.
5) Use motivational tools and strategies for the optimal dietetic management of each disease.
6) Implement nutrition education techniques and strategies in disease.

General Competences *Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?*	
Search for, analysis and synthesis of data and information by the use of appropriate technologies, Adapting to new situations Decision-making Individual/Independent work Group/Team work Working in an international environment Working in an interdisciplinary environment Introduction of innovative research	*Project planning and management Respect for diversity and multiculturalism Environmental awareness Social, professional and ethical responsibility and sensitivity to gender issues Critical thinking Development of free, creative and inductive thinking …… (Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….*

- Search for, analysis and synthesis of data and information
- Adapting to new situations
- Decision-making
- Individual/Independent work Group/Team work
- Working in an interdisciplinary environment
- Introduction of innovative research
- Respect for diversity and multiculturalism
- Social, professional and ethical responsibility and sensitivity to gender issues

3. COURSE CONTENT

Indicative topics to be covered:

20. Cancer
21. Dyslipidemia
22. Hypertension
23. Diabetes mellitus
24. Cardiovascular disease
25. Osteoporosis
26. Nervous system disorders
27. Hypermetabolism
28. HIV

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	Face-to-face	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	• Software to assess nutritional intake • eClass	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	40
	Laboratory practice	30
	Projects	20
	Personal Study	60
	Total	***150***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS	Written final exam (70%) which includes: • Multiple choice questions • Short- answer questions	

Detailed description of the evaluation procedures: *Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc.* *Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	Laboratory work (projects): 30%

5. SUGGESTED BIBLIOGRAPHY

-Suggested bibliography:

1. Zampelas A. Clinical Nutrition and Dietetics. Paschalides Medical Publisher. 2007.
2. Mahan LK, Escott-Stump S, Krause's Food, Nutrition and Diet Therapy, 13th Edition. Philadeplhia: Saunders, 2011
3. Marinos Elia, Olle Ljungqvist, Rebecca J Stratton, Susan A. Lanham-New 2016
4. Kontogianni M et al. Handbook of Clinical Nutrition, 2015 (www.kallipos.gr).
5. Fischbach F. Manual of laboratory and diagnostic tests. Paschalides Medical Publisher., 1999.

Course Outline: "5102 - Molecular Biology"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**5102**	**SEMESTER**	**5th**
COURSE TITLE	**Molecular Biology"**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	2	
Laboratory Exercises	2	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**4**	**5**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	Scientific expertise General Knowledge
PREREQUISITE COURSES	No
LANGUAGE OF INSTRUCTION	GREEK
LANGUAGE OF EXAMINATION/ASSESSMENT	GREEK
THE COURSE IS OFFERED TO ERASMUS STUDENTS	No
COURSE WEBSITE (URL)	https://eclass.uth.gr/courses/DND_U_210/

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and* ***APPENDIX B***
- *Guidelines for writing Learning Outcomes*

Molecular biology course aims to bring the students in touch with the genome structure and role. The students will be taught the structure and function of DNA, RNA and proteins. Furthermore, the genetic variability, as well as the diseases that are caused by it will be assessed. Finally, the students will become familiar with the concept of personalized genetic medicine and the diagnostic value of molecular biology. After the course the students will be able to identify and know the basic principles of molecular biology and more specifically the use of omic technologies. Furthermore, they will be able to understand the connection between genes and diseases, the importance of genetic variation and the place of molecular biology in the modern science era.

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies, Adapting to new situations Decision-making Individual/Independent work Group/Team work Working in an international environment Working in an interdisciplinary environment Introduction of innovative research

Project planning and management Respect for diversity and multiculturalism Environmental awareness Social, professional and ethical responsibility and sensitivity to gender issues Critical thinking Development of free, creative and inductive thinking …… (Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….

- Search for, analysis and synthesis of data and information by the use of appropriate technologies
- Individual/Independent work
- Group/Team work
- Introduction of innovative research
- Development of free, creative and inductive thinking

3. COURSE CONTENT

Theoretical content

1.Basic principles of molecular biology: Definitions and fields of molecular biology

2. The genetic information flow. The role of macromolecules in the genetic information flow.

3. Inheritance and basic genetic principles: Inheritance. Genes, alleles, chromosome, genetic position, genotype, phenotype, polymorphisms, genetic variations.

4. Mendelian inheritance principles. Mendelian genetics in humans and populations. Genealogical trees' analysis.

5. The chromosomic theory. Characteristics inheritance and mitosis-meiosis. Sex chromosomes and their genes.

6. Allelic gene relationships. Multiple alleles, death inducing genes, genetic variability.

7. Induction of genetic variability and genetic diseases: Genetic mutations. Somatic and genetic cell mutations. Natural and technical mutations. The molecular base of mutations and their effects. Mutational randomness and population polymorphisms. Induced mutations in vitro.

8. Genetic recombination. Mechanisms and variability effect. DNA repair mechanisms.

9. Chromosomal mutations. Structural and arithmetic chromosomal mutations. Mechanisms inducing mutations. X chromosome deactivation. Factors that affect the genetic material and can cause mutations.

10. Genomics and omic technologies: Definitions and categories. Basic principles of omic technologies. Their role in genetic diseases diagnosis.

11. Foodomics. Their relation with the microbiome and the induction of diseases.

12. Genetic diagnosis and genetic diseases: Karyotype, DNA analysis, Molecular analysis. Prenatal testing- assisted reproduction.

13. Clinical applications- DNA, RNA and protein analysis in diseases diagnosis. Clinical incidence of inherited diseases: cause analysis, diagnostic methods, ways of treatment. Molecular diagnosis and gene therapy in cancer.

Laboratory exercises

- Mitosis phase recognition
- DNA isolation
- RNA isolation
- Allele identification, gene testing
- Omic technics: protein identification

- Omic technics: carbohydrates, lipids identification
- Karyotype. Chromosomal diseases diagnosis.
- Inheritance pattern identification.
- Review research paper methodology
- 4x Debate/ journal club

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	Face-to-face, in -class lecturing, distance teaching	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	For the teaching the following tools will be used: a) power point documents during lectures b) pdf files with the lectures, that will be assessable via the eclass platforms c) simulation programs, that are used during the lectures and are assessable via the eclass platform. d) video files regarding the subject of the lecture e) electronic databases for relative information search. f) clinical scenarios (Problem Based Learning). The students can get in touch with the instructor either directly (through face to face contact or email) or indirectly (through notes posted on the poster boards, the website of the Department and the eclass platform).	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	10 × 2 = 20
	Presentations	3 × 2 = 6
	Laboratory exercises	3 × 2 = 6
	Laboratory report	20
	Preparation of public presentation	33
	Preparation for the exams	40
	Total	***125***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:* *Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc.* *Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	Evaluation of the theoretical part of the course (60%): Students will be evaluated based on their performance in a multiple-choice exam at the end of the semester Evaluation in the lab section of the course (40%): Students will be evaluated through a bibliographic review paper. The lab paper will contain an oral presentation (40%) and a written manuscript (60%). The students will make a presentation of their work and a discussion will follow, with questions by the instructor and their co-students, in order to be evaluated of the theoretic knowledge they have obtained. While, the written manuscript will be evaluated based on the content and the presentation of the selected subject.	

5. SUGGESTED BIBLIOGRAPHY

-Suggested bibliography:

- Basic molecular biology principles, Burton E. Tropp
- Human molecular genetics, G. Dedousis.
- Lewin's Genes XII, Jocelyn E. Krebs, Elliott S. Goldstein, Stephen T. Kilpatrick

Relevant Scientific Journals:

-Nature
-Science
-Nature Genetics
-Human Molecular Genetics
-Nature Structural and Molecular Biology
-Molecular cell

Course Outline: "5103 - Sports Nutrition"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**5103**	**SEMESTER**	**5th**
COURSE TITLE	**Sports Nutrition**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	3	
Laboratory Exercises	2	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**5**	**6**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	Scientific expertise
PREREQUISITE COURSES	NO
LANGUAGE OF INSTRUCTION	Greek
LANGUAGE OF EXAMINATION/ASSESSMENT	Greek
THE COURSE IS OFFERED TO ERASMUS STUDENTS	YES
COURSE WEBSITE (URL)	https://eclass.uth.gr/courses/DND_U_215/ (Lectures) https://eclass.uth.gr/courses/DND_U_216/ (Laboratory Exercises)

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and*

APPENDIX B

Guidelines for writing Learning Outcomes

The course deals with the nutrition of individuals involved in sports and exercise. It deals with the special nutritional needs of athletes that may differ depending on the type of sport, but also the training period (pre-competition, competition, rehabilitation).
The course material aims to understand the special nutritional requirements during sports, as well as the design of specialized diets to support and improve athletic performance in various sports.

Upon successful completion of the course the student will be able to:

- understands the importance of diet for athletic performance
- understands the special energy and nutritional requirements of athletes depending on the type of exercise
- plans diets specialized for different types of sports in order to support and improve athletic performance
- is aware of possible nutritional deficiencies and disorders that may occur in athletes and trainees
- knows the usefulness of nutritional supplements in sports
- manages with appropriate nutritional intervention the body weight of athletes and trainees.

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the

Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies, Adapting to new situations Decision-making Individual/Independent work Group/Team work Working in an international environment Working in an interdisciplinary environment Introduction of innovative research

Project planning and management Respect for diversity and multiculturalism Environmental awareness Social, professional and ethical responsibility and sensitivity to gender issues Critical thinking Development of free, creative and inductive thinking …… (Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….

- Search for, analysis and synthesis of data and information by the use of appropriate technologies
- Adapting to new situations
- Decision-making
- Independent work
- Working in an interdisciplinary environment
- Introduction of innovative research

3. COURSE CONTENT

Indicative content:

- Energy balance and athlete requirements at rest and during exercise
- Physical composition and change in body weight in athletes
- Needs of athletes in fluids, macronutrients and micronutrients
- Nutritional supplements and ergogenic aids in sports
- Assessment of nutritional status and eating disorders in sports
- Nutrition and sport in extreme environments
- Nutrition of athletes with chronic disease and disabilities
- Planning athletes' diets
- Carbohydrate loading
- Pre-game meal, practices during the game, meal after the game

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	In class	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	- Diet analysis software - Lectures in Power Point - Learning support through the online eClass platform	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	50
	Individual work	30
	Independent Study	70
	Total	***150***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:*	Written final examination (100%) that includes: - Multiple choice tests - Short answer questions - Problem solving questions	

Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc. *Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	

5. SUGGESTED BIBLIOGRAPHY

-Suggested bibliography:

- Williams M.H. Διατροφή: Υγεία, Ευρωστία & Αθλητική Απόδοση. Εκδόσεις Π.Χ. Πασχαλίδης, Αθήνα, 2003.
- Jeukendrup A. and Gleeson M. Sport Nutrition (3rd Edition). Human Kinetics Publishers, 2018.

Course Outline: "5104 - Introduction to Systematic Reviews"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**5104**	**SEMESTER**	**5th**
COURSE TITLE	**Introduction to Systematic Reviews**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	3	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**3**	**3**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	General Knowledge
PREREQUISITE COURSES	No
LANGUAGE OF INSTRUCTION	GREEK
LANGUAGE OF EXAMINATION/ASSESSMENT	GREEK
THE COURSE IS OFFERED TO ERASMUS STUDENTS	YES
COURSE WEBSITE (URL)	

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and* ***APPENDIX B***
- *Guidelines for writing Learning Outcomes*

The course is the main introductory course on the concepts of Systematic Reviews of the literature so that students can appropriately evaluate scientific evidence and apply them in their practice.
Upon successful completion of the course, the student will be able to have the required background to understand the content of all relevant courses in the following semesters.
Specifically he/she will:

- Understand the basic principles of Systematic Reviews of the literature
- Be competent in conducting Systematic Reviews of the literature

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies, Adapting to new situations Decision-making Individual/Independent work Group/Team work Working in an international environment Working in an interdisciplinary environment Introduction of innovative research

Project planning and management Respect for diversity and multiculturalism Environmental awareness Social, professional and ethical responsibility and sensitivity to gender issues Critical thinking Development of free, creative and inductive thinking …… (Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….

- Search for, analysis and synthesis of data and information
- Critical thinking
- Adapting to new situations

- Working in an interdisciplinary environment
- Acquisition of the appropriate theoretical cognitive background so that further education is possible.

3. COURSE CONTENT

Theory

27. Introduction to the systematic reviews
28. Research hypothesis and searching relevant articles in scientific databases
29. Eligibility criteria and selection of the eligible studies
30. Data extraction
31. Risk of bias for observational studies
32. Risk of bias for randomized controlled trials
33. Data synthesis, tables and figures
34. Meta-analysis 1: Definition, principles, models and methods
35. Meta-analysis 2: Heterogeneity, subgroup analysis, statistical terminology
36. Meta-analysis 3: Practice with RevMan software
37. GRADE analysis
38. Writing systematic reviews
39. Revision

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	Face to face or online synchronous teaching	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	eClass	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	50
	Homework	15
	Personal Study	10
	Total	***75***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:* *Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc.* *Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	-Written final exam (60%) which includes multiple choice questions - Homework 1: Searching procedure in PubMed (10%) - Homework 2: Data extraction (15%) - Homework 3: Risk of bias (15%) As a requirement, to count the homework performance in the final grade, the written final exam should be graded with at least 49%.	

5. SUGGESTED BIBLIOGRAPHY

-Suggested bibliography:

The module will be supported by research paper in this field which will be uploaded on eClass

Course Outline: "5105 - Pediatric Nutrition"

1. General information

FACULTY/SCHOOL	**School of Physical Education, Sport Science & Dietetics**		
DEPARTMENT	**Department of Nutrition and Dietetics**		
LEVEL OF STUDY	**Undergraduate**		
COURSE UNIT CODE	**5105**	**SEMESTER**	**5th**
COURSE TITLE	**Pediatric Nutrition**		

INDEPENDENT TEACHING ACTIVITIES	**WEEKLY TEACHNG HOURS**	**CREDITS**
Theory	3	3
	3	**3**

COURSE TYPE	General Knowledge Scientific expertise Skills Development
PREREQUISITE COURSES	No
LANGUAGE OF INSTRUCTION	GREEK (available in English for incoming ERASMUS students)
LANGUAGE OF EXAMINATION/ASSESSMENT	GREEK (available in English for incoming ERASMUS students)
THE COURSE IS OFFERED TO ERASMUS STUDENTS	Yes
COURSE WEBSITE (URL)	https://eclass.uth.gr/courses/DND_U_272/

2. LEARNING OUTCOMES

Learning Outcomes

Through this course students will be trained to develop skills on nutritional assessment and dietetic management of pediatric patients.

Upon the completion of the course students are expected to be able to:

- Assess pediatric patients and identify nutritional risks
- Prescribe diets and implement nutrition interventions for pediatric patients

General Competences

- Search for, analysis and synthesis of data and information
- Adapting to new situations
- Working in an interdisciplinary environment
- Introduction of innovative research

3. COURSE CONTENT

Indicative topics to be covered:

- Nutritional assessment and evaluation of nutritional status of children and adolescents in clinical practice and in vulnerable population groups
- Assessment of growth and puberty development of children and adolescents
- Management of overweight/obesity and cardiovascular risk factors in children and adolescents
- Dietetic management of preterm and/or intrauterine growth retardation newborn
- Dietetic management of children and adolescents with nutritional deficiencies, growth retardation or undernutrition

- Dietetic management of young patients with feeding disorders.
- Dietetic management of children and adolescents with type 1 diabetes mellitus
- Dietetic management of children and adolescents with cystic fibrosis
- Dietetic management of children and adolescents with food allergies
- Dietetic management of children and adolescents with alimentary system disorders

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY	Face-to-face	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY	- Use of Power Point presentations - Use of eClass platform - Communication with students via email	
COURSE DESIGN	***Activity/Method***	***Semester workload***
	Lectures	30
	Study and analysis of bibliography	20
	Self-directed Study	25
	Total	***75***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS	Written final exam (100%) which includes: - Multiple choice questions - Short-answer questions	

5. SUGGESTED BIBLIOGRAPHY

1. Manual of Pediatric Nutrition (Εγχειρίδιο παιδικής διατροφής), K. Sonneville, N.C. Duggan. ISBN 9789605830922 Επιστημονικές Εκδόσεις Παρισιάνου Α.Ε., 2015

2. Clinical pediatric dietetics (5th Edition), Shaw V. ISBN: 978-1-119-46729-8. Oxford: Wiley-Blackwell, 2020

3. Guidelines for Screening, Prevention, Diagnosis and Treatment of Dyslipidemia in Children and Adolescents**,** Stephen R. Daniels**.** Endotext [Internet]. South Dartmouth (MA): MDText.com, Inc.; 2000–2020 Jan 18. https://pubmed.ncbi.nlm.nih.gov/27809440/

4. Pediatrics at a glance (Η παιδιατρική με μια ματιά), Miall Lawrence, Rudolf Mary, Levene Malcolm. ISBN 978-960-394-935-0. Εκδόσεις Παρισιάνου Α.Ε., 2013

5. Obesity in Childhood and Adolescence (Η Παχυσαρκία στην Παιδική και Εφηβική ηλικία), Kiess W., Marcus C., Wabitsch M. ISBN 9789603997139. Εκδόσεις Πασχαλίδη, 2011

Course Outline: "5106 - Introduction to Evidence-based Practice in Health Sciences"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**5106**	**SEMESTER**	**5th**
COURSE TITLE	**Introduction to Evidence-based Practice in Health Sciences**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	3	
Tutoring	1	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**4**	**4**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	General Knowledge
PREREQUISITE COURSES	No
LANGUAGE OF INSTRUCTION	GREEK
LANGUAGE OF EXAMINATION/ASSESSMENT	GREEK
THE COURSE IS OFFERED TO ERASMUS STUDENTS	YES
COURSE WEBSITE (URL)	

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and*

APPENDIX B

- *Guidelines for writing Learning Outcomes*

The course is the main introductory course on the concepts of Evidence Based Practice so that students can apply scientific evidence in their practice.

Upon successful completion of the course, the student will be able to have the required background to understand the content of Evidence Based Practice.

Specifically he/she will:

- Understand the basic principles of Evidence Based Practice.
- Be competent in applying scientific data in practice

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies, Adapting to new situations Decision-making Individual/Independent work Group/Team work Working in an international environment Working in an interdisciplinary environment Introduction of innovative research

Project planning and management Respect for diversity and multiculturalism Environmental awareness Social, professional and ethical responsibility and sensitivity to gender issues Critical thinking Development of free, creative and inductive thinking …… (Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….

- Search for, analysis and synthesis of data and information
- Critical thinking

- Adapting to new situations
- Working in an interdisciplinary environment
- Acquisition of the appropriate theoretical cognitive background so that further education is possible.

3. COURSE CONTENT

Theory

40. Introduction to evidence based practice
41. Evaluation of research methods 1
42. Evaluation of research methods 1
43. Methodological issues in contemporary research
44. Principles of evidence based practice
45. Forming research hypotheses in practice
46. Acquisition of research evidence
47. Appraisal of evidence
48. Application of evidence in practice
49. Evaluation of practice performance
50. Practical scenarios 1
51. Practical scenarios 2
52. Revision

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	Face to face or online synchronous teaching	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	**eClass**	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	50
	Laboratory Classes	25
	Personal Study	25
	Total	***100***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:* *Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc.* *Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	Written final exam (100%) which includes: - Multiple choice questions	

5. SUGGESTED BIBLIOGRAPHY

-Suggested bibliography:

The module will be supported by research paper in this field which will be uploaded on eClass

Course Outline: "5107 - Pharmacology"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**5107**	**SEMESTER**	**5th**
COURSE TITLE	**Pharmacology**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	3	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**3**	**3**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	Scientific expertise
PREREQUISITE COURSES	No
LANGUAGE OF INSTRUCTION	Greek
LANGUAGE OF EXAMINATION/ASSESSMENT	Greek
THE COURSE IS OFFERED TO ERASMUS STUDENTS	No
COURSE WEBSITE (URL)	https://eclass.uth.gr/courses/DND_U_242/

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and*

APPENDIX B

- *Guidelines for writing Learning Outcomes*

Pharmacology examines the course and way of action of drugs inside the organism. Upon completion of the course, the students will have acquired the necessary knowledge concerning the basic principles of Pharmacology and the biochemical and molecular mechanisms of drug action. In particular, they will have gained insight into how drugs interact with cellular targets and act. During the course, the mechanisms of actions of drugs in various systems, such as nervous, respiratory and digestive are examined, whereas topics of specialized knowledge namely the chemotherapeutic action of drugs against microorganisms and cancer cells, pharmacogenomics and food-drug interactions are also analyzed.

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies, Adapting to new situations Decision-making Individual/Independent work Group/Team work Working in an international environment Working in an interdisciplinary environment Introduction of innovative research

Project planning and management Respect for diversity and multiculturalism Environmental awareness Social, professional and ethical responsibility and sensitivity to gender issues Critical thinking Development of free, creative and inductive thinking …… (Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….

- Individual/Independent work
- Group/Team work
- Working in an interdisciplinary environment
- Introduction of innovative research
- Development of free, creative and inductive thinking

3. COURSE CONTENT

- Introduction to Pharmacology - History of Pharmacology
- Stages of drug development – Preclinic and clinical trials
- Pharmacokinetics: Absorption, distribution, metabolism, excretion of drugs
- Molecular targets of drugs
- Drugs of the autonomous nervous system
- Drugs of the central nervous system
- Drugs of the cardiovascular system
- Drugs of the digestive system
- Drugs of the respiratory system
- Pharmaceutical Toxicology (Poisoning)
- Pharamcogenomics
- Chemotherapy - Anticancer drugs Pharmacogenomics
- Antibiotics
- Food-drug interactions

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	Face to face	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	1. Lectures in power point documents 2. Research or review papers in pdf documents 3. Laptops for the projection of relevant videos 4. The lectures in pdf documents that are announced to the students through the eclass platform The students get in touch with the instructor either directly (through face to face contact or email) or indirectly (through notes posted on the poster boards and the website of the Department).	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	2 × 13 = 26
	Literature analysis	15
	Preparation for the exams	34
	Total	***75***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:* *Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc.* *Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	The assessment language is Greek. The performance of the students is assessed through written exams.	

5. SUGGESTED BIBLIOGRAPHY

- Suggested bibliography:

- Katzung BG, Vanderah TW. Basic & Clinical Pharmacology, 15e. McGraw Hill, 2021.
- Color Atlas of Pharmacology, Lüllmann H, Mohr K, Hein L, Bieger D, Thieme, 3rd edition, 2005.

- Scientific journals:

- Nature Reviews Drug Discovery
- Biochemical Pharmacology

- Trends in Pharmacological Sciences
- Current Opinion in Pharmacology
- British Journal of Pharmacology
- European Journal of Pharmacology
- Molecular Pharmacology

Course Outline: "5108 - Developmental Psychology I"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**5108**	**SEMESTER**	**5th**
COURSE TITLE	**Developmental Psychology I**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	2	
Tutoring	1	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**3**	**3**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	General knowledge
PREREQUISITE COURSES	
LANGUAGE OF INSTRUCTION	Greek
LANGUAGE OF EXAMINATION/ASSESSMENT	Greek
THE COURSE IS OFFERED TO ERASMUS STUDENTS	Yes (in English)
COURSE WEBSITE (URL)	https://eclass.uth.gr/courses/DND_U_218/

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and* ***APPENDIX B***
- *Guidelines for writing Learning Outcomes*

The course is an introduction to Developmental Psychology. In particular, the course presents the basic principles and the main theories of human development, as well as research methods in Developmental Psychology. Sensory-motor, cognitive and social aspects of human development from birth to middle childhood are also described. The course aims at enabling students to understand the multidimensional nature of human development, as well the complex web of intervening factors.

Learning outcomes

Upon successful completion of the course, students are expected to:

- know basic concepts and debates in Developmental Psychology
- be able to critically evaluate theories of human development
- have an understanding of the basic developmental changes in cognitive, social and emotional domain from birth through middle childhood.
- be able to connect theory with practice through examples from everyday life
- have become familiar with research methods applied in Developmental Psychology
- be able to recognize and evaluate empirical studies in Developmental Psychology

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies, Adapting to new situations Decision-making Individual/Independent work Group/Team work Working in an international environment Working in an interdisciplinary environment Introduction of innovative research	*Project planning and management Respect for diversity and multiculturalism Environmental awareness Social, professional and ethical responsibility and sensitivity to gender issues Critical thinking Development of free, creative and inductive thinking …… (Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….*
Search for information by the use of appropriate technologies Independent work Critical thinking Respect for diversity and multiculturalism Social, professional and ethical responsibility and sensitivity to gender issues	

3. COURSE CONTENT

i. Introduction to Lifespan Development. Key Issues and Questions
ii. Theories of Human Development.
iii. Research Methods in Developmental Psychology. Ethical issues.
iv. Prenatal development.
v. Birth and the Newborn Infant
vi. Physical Development in Infancy.
vii. Cognitive Development in Infancy.
viii. Social and personality development in Infancy.
ix. Physical and Cognitive Development in the Preschool Years.
x. Social and Personality Development in the Preschool Years.
xi. Physical and Cognitive Development in Middle Childhood.
xii. Social and Personality Development in Middle Childhood.

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	Face to face	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	Use of ICT in teaching and communication with students. E--class platform supports learning processes Utilization of the HEAL -- LINK system	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	25
	Exercises	10
	Study and analysis of bibliography	40
	Total	***75***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:* *Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-*	Written exams at the end of the semester involving (a) multiple choice questions (70%) and (b) open-ended questions (30%). In addition, during semester students are encouraged to engage in five (optional) exercises. Participants who have successfully completed the examination receive extra credit for these exercises.	

ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc. *Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	Evaluation criteria (for open-ended questions and written exercises): Relevance to the topic, critical comprehension of the topic, correct use of terminology.

5. SUGGESTED BIBLIOGRAPHY

-Suggested bibliography:

Dunn, W. L., & Craig, G. J. (2021). *Understanding human development* (4th ed.) Pearson Education.
Harris, M., & Butterworth, G. (2012). *Developmental psychology: A student's handbook*. Psychology Press.
Feldman, R. S. (2006). *Development across the life span*. Pearson Education New Zealand.

Relative Scientific Journals

Hellenic Journal of Psychology
Infant and Child Development
British Journal of Developmental Psychology
Developmental Psychology
Child Development
Merill Palmer Quarterly
The Journal of Genetic Psychology
European Journal of Developmental Psychology

Course Outline: "5109 - Ethics and Deontology"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**5109**	**SEMESTER**	**5th**
COURSE TITLE	**Ethics and Deontology**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	3	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**3**	**3**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	Scientific expertise
PREREQUISITE COURSES	
LANGUAGE OF INSTRUCTION	Greek
LANGUAGE OF EXAMINATION/ASSESSMENT	Greek
THE COURSE IS OFFERED TO ERASMUS STUDENTS	No
COURSE WEBSITE (URL)	https://eclass.uth.gr/courses/DND_U_243/

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and*

APPENDIX B

- *Guidelines for writing Learning Outcomes*

The course deals with concepts, principles, applications of Ethics and Deontology.

The course aims to introduce students to the basic concepts and principles of Ethics and Deontology in relation to the professional context and to understand the general dimension including the requirements for efficient and proper professional activities.

The aim of the course is for students to understand the importance and application of ethical and ethical function at different stages and levels of professional activity. Upon successful completion of the course the student will be able to:

1. Understands basic and important characteristics, principles and concepts of Ethics and Deontology.
2. Knows the tools and dimensions of application of Ethics and Deontology to ensure the successful and unhindered execution of projects in real time and way.
3. Distinguishes the basic Ethical and Deontological roles.
4. Uses principles and concepts to self-identification within the context of professional practice.
5. Analyzes and calculates advantages and disadvantages during the professional activity.
6. Focuses and understands the process of obtaining scientific documentation for the application of relentless knowledge.
7. Collaborate with others in relation to a specific professional context and dimension and in accordance with the relevant requirements.
8. Understand Research Ethics in Health Sciences
9. Be familiar with Ethics in Bioethical Sciences.

General Competences *Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?*	
Search for, analysis and synthesis of data and information by the use of appropriate technologies, Adapting to new situations Decision-making Individual/Independent work Group/Team work Working in an international environment Working in an interdisciplinary environment Introduction of innovative research	*Project planning and management Respect for diversity and multiculturalism Environmental awareness Social, professional and ethical responsibility and sensitivity to gender issues Critical thinking Development of free, creative and inductive thinking …… (Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….*

1.Development of free, creative and inductive thinking.

2.Decision-making.

3.Individual work.

3. COURSE CONTENT

1. Basic principles and concepts.
2. Historical course.
3. Professional activity.
4. Social Responsibility.
5. Legal dimensions.
6. Extraction and application of knowledge.
7. Interculturalism.
8. Mental Health
9. Theories of Bioethics
10. Research and Ethics

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	In-class Lecturing	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	Use of ICT in teaching	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	25
	Essay writing	10
	Study and analysis of bibliography	40
	Total	***75***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:* *Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work,*	Final written examination that includes: 1. Multiple choice test. 2. Short answer questions.	

essay/report, oral exam, presentation, laboratory work, other……etc. *Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	

5. SUGGESTED BIBLIOGRAPHY

-Suggested bibliography: *Βιοηθική Δεοντολογία και Νομοθεσία στις Επιστήμες Υγείας. Πουλής Ι., Βλάχου, Ε. 2016. Ιατρικές Εκδόσεις Κωνσταντάρας.*

Journals: AMA journal of Ethics, Research Ethics, Bioethics.

Course outline: "5110 - Applied Anatomy"

1. GENERAL INFORMATION

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENR	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**5110**	**SEMESTER**	**5th**
COURSE TITLE	**Applied Anatomy**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHING HOURS**	**CREDITS**
Lectures	3	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**3**	**5**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	Scientific Expertise General Knowledge
PREREQUISITE COURSES	No
LANGUAGE OF INSTRUCTION AND EXAMINATION/ASSESEMENT	Greek
THE COURSE IS OFFERED TO ERASMUS STUDENTS	No
COURSE WEBSITE (URL)	

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and* ***APPENDIX B***
- *Guidelines for writing Learning Outcomes*

The aim of the course is students to understand the basic anatomical elements of the human body and more specific anatomic material, that can be useful in everyday practice during the course of their career.

Upon completion of the course the student will be able to:

- Understand basic anatomical concepts and terms.
- Be familiar with human's anatomy and applications.
- To know ways to deal with problems related to the subject of anatomy
- To be able to manage scientific research methods in the field of anatomy.

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies,
Adapting to new situations
Decision-making
Individual/Independent work group/Team work
Working in an international environment
Working in an interdisciplinary environment
Introduction of innovative research
Project planning and management
Respect for diversity and multiculturalism
Environmental awareness
Social, professional and ethical responsibility and sensitivity to gender issues
Critical thinking Development of free, creative and inductive thinking …… (Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….

- Search for, analysis and synthesis of data and information
- Adapting to new situations
- Working in an interdisciplinary environment
- Acquisition of the appropriate theoretical cognitive background so that further education is possible
- Making a decision
- Production of new research ideas

3. COURSE CONTENT

1. Introduction to Systems and terminology
2. Back
3. Thorax
    a. Brief description
    b. Mediastinum
    c. Pulmonary cavities
4. Abdomen
    a. Abdominal wall and groin area
    b. Peritoneal cavity, vessels and nerves
    c. Abdominal viscera
5. Pelvis and perineum
    a. Brief description of pelvis and perineum
    b. Pelvic viscera
    c. Perineum

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	Face-to-face	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	eClass	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	75
	Paper writing	25
	Personal Study	25
	Total	***125***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:* *Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work,*	Lectures and Support through eclass, online courses. Assessment: Final Exam 70%, Assignment 20%, Midterm Exam 10%	

essay/report, oral exam, presentation, laboratory work, other……etc. *Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	

5. SUGGESTED BIBLIOGRAPHY

-Suggested bibliography:

Snell R., Κλινική ανατομική, Επιμέλεια: Βαράκης Γ., Παπαδόπουλος Ν., Παπαδάκη-Πέτρου Ε., Μετάφραση: Βαράκης Γ., Παπαδόπουλος Ν., Παπαδάκη-Πέτρου Ε., Λίτσας 2009.

Richard L. Drake, Wayne Vogl, Adam W. M. Mitchell, Gray's Ανατομία, 2η Έκδοση (Τόμοι 1&2, Επίτομο), Broker Hill,2006

Moore K., Κλινική Ανατομία, Ιατρικές Εκδόσεις Π. Χ. Πασχαλίδης, 2004.

Gilroy A., Ανατομία του ανθρώπου, Ιατρικές Εκδόσεις Κωνσταντάρας, 2019

Lippert, Herbert, Ανατομική - κείμενο και άτλαντας: ελληνικοί και λατινικοί όροι. -Αθήνα : Παρισιάνος.

Frick, Hans, Γενική ανατομία, ειδική ανατομία I - Allgemeine Anatomie, spezielle Anatomie I : Παρισιάνος.

Ellis, Harold, Κλινική ανατομική - Μία αναθεωρημένη και εφαρμοσμένη ανατομική για φοιτητές της Ιατρικής Μαρία Γρ. Παρισιάνου, 1995

Course outline (INTERFACULTY): "5121 - Introduction to Entrepreneurship"

1. GENERAL

SCHOOL	School of Economics and Business		
DEPARTMENT	Department of Economics (Volos)		
LEVEL	*Undergraduate*		
CODE	**5121**	**STUDENT SEMESTER**	**5th**
COURSE TITLE	Introduction to Entrepreneurship		

ACTIVITIES	**WEEKLY HRS**	**ECTS**
Lectures and Workshops	3	6
	3	**6**

TYPE OF COURSE	Generic knowledge and Skills Development
PREREQUISITES:	none
LANGUAGE TEACHING AND EXAMINATION:	Greek or English
THE COURSE OFFERED TO STUDENTS ERASMUS	Yes
WEBPAGES COURSE (URL)	https://eclass.uth.gr/courses/ECON_U_137/

2. LEARNING OUTCOMES

Learning Outcomes

The aim of the course is to familiarize students with the modern social and economic reality of entrepreneurship and develop relevant creativity, communication and leadership skills. It is the basis for building the ability to identify business opportunities in everyday life, to focus on social needs and to create value based on their knowledge and their creative and critical ability.

Emphasis is given to the dynamic concepts of entrepreneurship, creativity and innovation, to the analysis of problematic situations and the synthesis of solutions rather on the narrow scope of business management. Critical element of the approach adopted is the comprehension of entrepreneurship and innovation as collective, interactive socio-economic processes. Starting from the analysis of modern reality, the capability to search for and construct radical, realistic solutions to problems is developed.

General Skills

Upon successful completion of the course, the students will be able to develop and cultivate basic professional and social skills:

- Search, analysis and synthesis of data and information, using the necessary technologies
- Adaptation to new situations
- Decision making
- Autonomous work
- Teamwork
- Work in an international environment
- Work in an interdisciplinary environment
- Ability to recognize and evaluate business and innovative "opportunities",
- Production of new ideas
- Respect for diversity and multiculturalism
- Respect for the natural environment
- Demonstration of social, professional and moral responsibility and sensitivity to gender issues
- Exercise criticism and self-criticism
- Promoting free, creative and inductive thinking

- Understanding economic and technological developments and their implications,
- Development of business perception and professional mentality.

3. COURSE CONTENT

The course focuses on issues related to:

- entrepreneurship and business,
- analysis of social needs and trends,
- exploration of business opportunities: the need, the problem, the solution, the creation of value
- methods of creative thinking
- the role of innovation in the creation of the business venture
- Intangible industrial property
- resource collection
- development of business ideas,
- development of business partnerships
- business models.

Students learn-by-doing, applying the methods in the process from business conceptualization to evaluation, pivot and pitching to potential partners or/and investors.

During the course, in addition to lectures:

- case studies are used which are the subject of presentation and discussion during the lectures
- students visit companies related to their subjects and interests,
- lectures are given by entrepreneurs,
- meetings are organized with mentors from the local business community

Students develop business plans in groups of 4-7 members, with the advisory guidance and support of the support team or members of the business community.

Course lectures and other activities are supported by workshops, where each team is discussing their work and seeking solutions to any problems it faces or specialized knowledge about specific aspects of its work.

4. TEACHING AND LEARNING METHODS - EVALUATION

DELIVERY METHOD	Face to face The course is organized in two parallel streams: 1. Lectures, which analyze the concepts and methodologies that form the core of the course material 2. Workshops (studios), where students: get acquainted with methods and tools of creative thinking and analysis, consultation, synthesis of ideas and plans are organized in groups - with emphasis on interdisciplinarity
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Use of a course website on the e-class platform for posting (a) notes, (b) internet links, (c) announcements, search tools and social networks
MANAGEMENT OF TEACHING	

Activity	***Semester Workload***
Lectures	36
Seminars	4
Studio workshops	84
Individual and work study for term assignment	40

	Term assignment presentation	16
	Course Total	***180***
STUDENT EVALUATION	Essay and Public Presentation of a complete business idea. Student assessment is largely based on the group work done by students, while the final grade takes into account: • the written text of the thesis • the presentation of the work at the end of the semester • participation in laboratory courses • participation in course activities (lectures, visits, etc.) Focus, problem analysis, solution composition, collaboration and sharing are evaluated	

5. RECOMMENDED-BIBLIOGRAPHY

1. Entrepreneurship,
Έκδοση 2020
Κωδικός Βιβλίου στον Εύδοξο: *94645251*
Συγγραφείς: Neck Heidi, Neck Christopher, Murray Emma

2. Entrepreneurship and Small Business
Έκδοση *2η, 2017*
Κωδικός Βιβλίου στον Εύδοξο: *59397350*
Συγγραφείς: David Deakins, Mark Freel

3. Business Model Development
Έκδοση 2017
Κωδικός Βιβλίου στον Εύδοξο: *68373077*
Συγγραφείς: Osterwalder Alexander, Pigneur Yves

Course Outline: "6101 - Artificial Nutrition"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**6101**	**SEMESTER**	**6th**
COURSE TITLE	**Artificial Nutrition**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	3	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**3**	**3**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	Scientific expertise
PREREQUISITE COURSES	No
LANGUAGE OF INSTRUCTION	GREEK
LANGUAGE OF EXAMINATION/ASSESSMENT	GREEK
THE COURSE IS OFFERED TO ERASMUS STUDENTS	No
COURSE WEBSITE (URL)	

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and* ***APPENDIX B***
- *Guidelines for writing Learning Outcomes*

The course delves into the principles of artificial nutrition both through enteral and parenteral routes in children and adults. The benefits and the selection criteria of artificial nutrition are analyzed. Upon the completion of the course, the students will have acquired the required background on this interesting field. They will also be able to seek research studies from the international literature by using the most established search engines (e.g., Pubmed).

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies, Adapting to new situations Decision-making Individual/Independent work Group/Team work Working in an international environment Working in an interdisciplinary environment Introduction of innovative research

Project planning and management Respect for diversity and multiculturalism Environmental awareness Social, professional and ethical responsibility and sensitivity to gender issues Critical thinking Development of free, creative and inductive thinking …… (Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….

- Individual/Independent work
- Group/Team work
- Working in an interdisciplinary environment
- Introduction of innovative research
- Development of free, creative and inductive thinking

3. COURSE CONTENT

- Introduction to biology of nourishment
- Macro- and micro nutrients

- Water and electrolytes
- The role of artificial nutrition on nutritional support of patients
- Malnourishment and metabolism
- Assessment of nutritional status and organization of nutritional support
- Traits, pros and cons of enteral nutrition
- Traits, pros and cons of parenteral nutrition
- Artificial nutrition and cancer
- Artificial nutrition and gastrointestinal pathologies
- Artificial nutrition in liver and kidney diseases
- Artificial nutrition in diabetes and metabolic disorders
- Artificial nutrition during pregnancy

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	Face to face, distance teaching	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	1. Lectures in power point documents 2. Research or review papers in pdf documents 3. Laptops for the projection of relevant videos 4. The lectures in pdf documents that are announced to the students through the eclass platform The students get in touch with the instructor either directly (through face to face contact or email) or indirectly (through notes posted on the poster boards and the website of the Department).	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	2 × 13 = 26
	Study and analysis of bibliography	15
	Personal study (Preparation for the exams)	34
	Total	***75***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:* *Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc.* *Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	The assessment language is Greek. The performance of the students is assessed through written exams.	

5. SUGGESTED BIBLIOGRAPHY

-Suggested bibliography:

- Μαρία Σκουρολιάκου, Εντερική και Παρεντερική Διατροφή. Θεωρία και βασικές αρχές. ΑΕΣΠΙ ΕΚΔΟΤΙΚΗ Ε.Π.Ε., 2016.
- Φ. ΚΑΛΦΑΡΕΤΖΟΣ, Αρχές τεχνητής διατροφής. Επιστημονικές Εκδόσεις ΠΑΡΙΣΙΑΝΟΥ Α.Ε., 2005.
- Χ. Παντελιάδης, Διατροφή Εντερική Παρεντερική. Εκδόσεις Γιαχούδη, ΙΚΕ, 2008

Course Outline: "6102 - Public Health Nutrition"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**6102**	**SEMESTER**	**6th**
COURSE TITLE	**Public Health Nutrition**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	2	
Tutoring	1	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**3**	**5**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	Scientific expertise
PREREQUISITE COURSES	non
LANGUAGE OF INSTRUCTION	Greek
LANGUAGE OF EXAMINATION/ASSESSMENT	Greek
THE COURSE IS OFFERED TO ERASMUS STUDENTS	No
COURSE WEBSITE (URL)	

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτετο

APPENDIX A

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and*

APPENDIX B

- *Guidelines for writing Learning Outcomes*

Course Aim:

The purpose of this course is to introduce students to the knowledge that nutrition for public health is a science that helps to promote the state of health of the country by changing the food and nutrition system. It focuses on the dietary needs of the population. Students will realize that nutrition for public health is the science and art of preventing disease, prolonging life, and promoting health through proper nutritional guidelines. Public health intervention strategies and programs will be discussed.

Upon successful completion of the course the student will be able to know:

- The role of Nutrition and other environmental factors in the etiology of modern chronic diseases
- The importance of reviewing Public Health and Nutrition Strategies in developed countries
- Nutritional Surveillance systems
- Sustainable dietary standards
- Scientifically based nutritional guidelines and recommendations for vulnerable populations
- Effectiveness, evaluation of Intervention and Health Promotion Programs - National Nutrition Surveys
- Nutrition, health systems and Public health priorities at the international level
- Dealing with food crises

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies,

Project planning and management

Respect for diversity and multiculturalism

Adapting to new situations *Decision-making* *Individual/Independent work Group/Team work* *Working in an international environment* *Working in an interdisciplinary environment* *Introduction of innovative research*	*Environmental awareness Social, professional and ethical responsibility and sensitivity to gender issues* *Critical thinking* *Development of free, creative and inductive thinking ……* *(Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….*

- Individual/Independent work Group
- Team work
- Working in an international environment
- Working in an interdisciplinary environment
- Development of free, creative and inductive thinking
- Decision making

3. COURSE CONTENT

Indicative:

1. Introduction to Nutrition and Public Health
2. Health Promotion
3. Ecological intervention strategies
4. Nutrition and food policy
5. Nutritional Surveillance
6. Nutritional guidelines
7. Food based dietary patterns and chronic disease prevention
8. Selected topics on:
    1. "Intervention Studies/Programs : Chronic Diseases and Public Health" (national and International)
    2. Food Loss and Waste - European programs

4. TEACHING METHODS-ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	in-class lecturing, distance guidance	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	Communication with students via e-class	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semesterworkload***
	Lectures	24
	In class presentations	15
	Literature search	20
	Self-directed study	66
	Total	***125***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:* *Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc.*	1. Written examination (50%) which includes : - multiple choice- questions (MCQ) -short- answer questions 2. Team Powerpoint presentations (50%)	

Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.	

5. SUGGESTED BIBLIOGRAPHY

-Suggested bibliography:

EvagellosPolychnonopoulos, John Manios, VassilikiKostareli. Nutrition and Public Health, edsParisianou, 2009

Antonios Zampelas, Emmanuela Magriplis, Suzana Papadopoulou. Nutrition in Public Health: Principles, Policies and Practices, ISBN: 9789925563272

www.ethnikoidiatrofikoiodigoi.gr

https://www.unscn.org/files/Publications/Briefs_on_Nutrition/Brief9_EN.pdf

Course Outline: "6103 - Clinical Exercise Physiology"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**6103**	**SEMESTER**	**6th**
COURSE TITLE	**Clinical Exercise Physiology**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	2	
Laboratory Exercises	2	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**4**	**5**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	General Knowledge
PREREQUISITE COURSES	No
LANGUAGE OF INSTRUCTION	GREEK
LANGUAGE OF EXAMINATION/ASSESSMENT	GREEK
THE COURSE IS OFFERED TO ERASMUS STUDENTS	YES
COURSE WEBSITE (URL)	

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and*

APPENDIX B

- *Guidelines for writing Learning Outcomes*

The course is the main introductory course on the concepts of Clinical Exercise Physiology i.e. the effects of physical activity on people with non-communicable diseases).

Upon successful completion of the course, the student will be able to have the required background to understand the content of relevant courses in the following semesters.

Specifically he/she will:

- Understand the physiological adaptations of physical activity on multiple physiological systems in healthy people and those with non-communicable diseases
- Be competent in developing effective exercise programmes for people with different non-communicable diseases.

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies, Adapting to new situations Decision-making Individual/Independent work Group/Team work Working in an international environment Working in an interdisciplinary environment Introduction of innovative research

Project planning and management Respect for diversity and multiculturalism Environmental awareness Social, professional and ethical responsibility and sensitivity to gender issues Critical thinking Development of free, creative and inductive thinking …… (Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….

- Search for, analysis and synthesis of data and information
- Critical thinking
- Adapting to new situations
- Working in an interdisciplinary environment
- Acquisition of the appropriate theoretical cognitive background so that further education is possible.

3. COURSE CONTENT

Theory

53. Evidenced based practice in Clinical Exercise Physiology
54. Physical activity and health 1
55. Physical activity and health 2
56. Physical activity and cardiovascular disease
57. Physical activity and cancer
58. Physical activity and autoimmune disease
59. Cardiorespiratory fitness 1
60. Cardiorespiratory fitness 2
61. Exercise prescription

Laboratory

1. Evidenced based practice in Clinical Exercise Physiology 1
2. Evidenced based practice in Clinical Exercise Physiology 2
3. Cardiorespiratory fitness 1
4. Cardiorespiratory fitness 2
5. Exercise prescription 1
6. Exercise prescription 2
7. Exercise prescription 3
8. Exercise prescription 4

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	Face to face or online synchronous teaching	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	eClass	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	50
	Laboratory Classes	40
	Personal Study	35
	Total	***125***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:*	Written final exam (100%) which includes: - Multiple choice questions	

Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc. *Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	

5. SUGGESTED BIBLIOGRAPHY

-*Suggested bibliography:*

Book, ACSM's Guidelines for exercise testing and prescription

Course Outline: "6104 - Technology, Safety and Quality Control of Food"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**6104**	**SEMESTER**	**6th**
COURSE TITLE	**Technology, Safety and Quality Control of Food**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	2	
Laboratory Exercises	2	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**4**	**5**

COURSE TYPE Background knowledge, Scientific expertise, General Knowledge, Skills Development	Scientific expertise
PREREQUISITE COURSES	No
LANGUAGE OF INSTRUCTION	GREEK
LANGUAGE OF EXAMINATION/ASSESSMENT	GREEK
THE COURSE IS OFFERED TO ERASMUS STUDENTS	YES (in English)
COURSE WEBSITE (URL)	

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and* ***APPENDIX B***
- *Guidelines for writing Learning Outcomes*

The aim of the course is to provide students with the special knowledge to be able to (i) apply the principles of quality control and especially the organoleptic assessment of food groups included in the procurement program of mass catering units (catering of health units, tourism, education, etc.), (ii) apply organoleptic techniques in quality assessment, research and acceptance of food by consumers and (iii) correlate organoleptic and objective measurements in quality assessment. Understanding the importance of food quality control is a prerequisite for working in places where they directly or indirectly come into contact with food intended for eating.

The laboratory exercises aim to connect the theory with the practical application of knowledge to familiarize students with the methods of organoleptic evaluation and food quality parameters and to acquire the ability to correlate subjective and objective measurements in the assessment of organoleptic quality.

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies, Adapting to new situations Decision-making

Project planning and management Respect for diversity and multiculturalism Environmental awareness Social, professional and ethical responsibility and sensitivity to gender issues Critical

Individual/Independent work Group/Team work Working in an international environment Working in an interdisciplinary environment Introduction of innovative research	*thinking Development of free, creative and inductive thinking …… (Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….*

- Search for, analysis and synthesis of data and information by the use of appropriate technologies,
- Individual/Independent work
- Group/Team work

3. COURSE CONTENT

Definitions, objectives and stages of quality control. Quality control of raw materials, production process and final product. Quality control methods. Organization chart of food production units. Duties of the quality control department.
Sampling. Quality characteristics of food. Organoleptic characteristics: Appearance, texture, smell and aroma, taste.
Introduction to the HACCP system and simulation of HACCP design development for the production of hot and cold kitchen products.
Milk & Dairy Products: Milk production & ingredients. Microbiology of milk, pasteurized and sterilized milk.
Acidic dairy products. Yogurt, Cheeses. Quality control of milk & dairy products.
Meat & meat products: Description & classification of meat and meat products. Smoking, salting and nitration. Dehydrated, pasteurized and boiled sausages. Preservation of meat and meat products by refrigeration. Quality control of meat & meat products.
Catch: Catch classification. Chemical composition and biological value. Refrigeration and freezing. Canning, salting, smoking and drying catches. Catch quality control.
Fats and oils: Oil picking technology - Olive oil. Olive making technology. Quality control of fats & oils.
Fruits & Vegetables: Generally for the preservation of fruits and vegetables. Canning fruit. Canning vegetables. Fruit drying. Plums, sultanas, figs. Quality control of fruits & vegetables.
Winemaking technology. Quality control of wine.
Brewing technology. Quality control of beer.
Cereals: Cereal technology. Flour qualities, baking. Cereal products. Quality control of cereals and their products.
Coffee and tea making technology. Quality control.
Laboratory Exercises
General: Sensory control methods. Basic senses. Organization and design of organoleptic tests. Errors. Analytical and descriptive tests. Sampling and preparation of food samples. Errors during sampling. Control reliability.
1. Couple comparison test. Taste recognition. Application in aqueous solutions.
2. Triangular test. Application in juices and tea.
3. Duo-trio test. Application in cold and / or hot drinks, and / or milk, and / or juices.
4. Classification test. Application in beer.
5. Taste test. Application in beverages, and spread products (honey or praline) on bread.
6. Organoleptic control of bread and bakery products.
7. Organoleptic quality control of olive oil.
8. Organoleptic quality control of wines.
9. Organoleptic quality control of "feta" cheese and other traditional cheese products.
10. Organoleptic control of cold cuts.
11. Organoleptic control of fruits and vegetables
12. Macroscopic quality control of cans.
13. Check the labeling on the packaging of standard foods.

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	In class lecturing

USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	E class	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	50
	Laboratory Classes	50
	Personal Study	25
	Total	***125***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:* *Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc.* *Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	Written final exam (100%) which includes: ➢ Multiple choice questions ➢ short- answer questions, ➢ open-ended questions, ➢ problem solving, ➢ written work, essay/report, ➢ laboratory work,	

5. SUGGESTED BIBLIOGRAPHY

-Suggested bibliography:

16. Τρόφιμα: Έλεγχος ποιότητας, ασφάλεια και μικροβιολογία. Προεστός Χαράλαμπος, Μαρκάκη Παναγιώτα, (2017), Εκδόσεις Da Vinci.
17. Οργανοληπτικός Έλεγχος Τροφίμων, Γρηγοράκης Κρίτων, Τσάκνης Ιωάννης, (2017), Εκδόσεις Παπασωτηρίου
18. Οδηγός καταναλωτή για ασφαλή μεταχείριση τροφίμων, Αρβανιτογιάννης Ιωάννης, Τζούρος Νικόλαος, (2004), εκδόσεις Σταμούλη.
19. Έλεγχος ποιότητας τροφίμων, Εργαστηριακός οδηγός, Αρβανιτογιάννης Ιωάννης, Βαρζάκας Θεόδωρος, Τζίφα Κωνσταντίνα, (2008), Εκδόσεις Σταμούλη.
20. Carpenter, R. P., Lyon, D. H., & Hasdell, T. A. (2012). Guidelines for sensory analysis in food product development and quality control. Springer Science & Business Media.
21. Λειτουργικές Ιδιότητες Νερού, Πρωτεινών, Σακχάρων, Λιπιδίων και Φυσικών Χρωστικών, Κυρανάς Ευστράτιος 1η Έκδοση/2011, ISBN: 978-960-418-369-2, Εκδότης: ΕΚΔΟΣΕΙΣ Α. ΤΖΙΟΛΑ & ΥΙΟΙ Α.Ε.
22. Διατροφή και Χημεία Τροφίμων στη Δημόσια Υγεία, Κοτροκόης Κώστας, Έκδοση: 2η έκδ./2016, ISBN: 9789963274116, Εκδότη): BROKEN HILL PUBLISHERS LTD

Course Outline: "6105 - Clinical Nutrition II"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**6105**	**SEMESTER**	**6th**
COURSE TITLE	**Clinical Nutrition II**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	3	
Laboratory Exercises	2	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**5**	**6**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	Scientific expertise
PREREQUISITE COURSES	NO
LANGUAGE OF INSTRUCTION	Greek
LANGUAGE OF EXAMINATION/ASSESSMENT	Greek
THE COURSE IS OFFERED TO ERASMUS STUDENTS	YES
COURSE WEBSITE (URL)	https://eclass.uth.gr/courses/DND_U_247/

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and*

APPENDIX B

Guidelines for writing Learning Outcomes

The aim of the course is to educate and develop students' skills in the dietary management of adult patients, emphasizing the anthropocentric approach of the patient, interdisciplinary collaboration and the design of diets and nutritional interventions for pathological conditions in which the course will focus. In addition, the course material aims to link knowledge gained in previous years to courses such as anatomy, physiology, pathophysiology, biochemistry, metabolism, diet planning and nutritional assessment.

Upon successful completion of the course the students will be able to:

- understand the special nutritional needs that arise depending on the pathological condition.
- plan diets based on the nutritional evaluation of the patients and the dietary recommendations for the respective disease.
- apply nutrition education techniques and strategies to patients.

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies, Adapting to new situations Decision-making Individual/Independent work Group/Team work Working in an international environment Working in an

Project planning and management Respect for diversity and multiculturalism Environmental awareness Social, professional and ethical responsibility and sensitivity to gender issues Critical thinking Development of free, creative and inductive thinking ……

interdisciplinary environment Introduction of innovative research	*(Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….*

- Search for, analysis and synthesis of data and information by the use of appropriate technologies
- Adapting to new situations
- Decision-making
- Independent work
- Working in an interdisciplinary environment
- Introduction of innovative research

3. COURSE CONTENT

Indicative content:

1. Diseases of the upper and lower gastrointestinal tract
2. Kidney diseases
3. Anemia
4. Diseases of the liver, bile ducts and pancreas
5. Respiratory disorders (non-cystic)
6. Autoimmune diseases
7. Disorders of electrolytes and redox balance
8. Addictive disorders

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	In class lecturing, case studies	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	- Diet analysis software - Lectures in Power Point - Learning support through the online eClass platform	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	40
	Laboratory practice	20
	Individual work	30
	Independent Study	60
	Total	***150***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:* *Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc.* *Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	Written final examination (100%) that includes: - Multiple choice tests - Short answer questions - Problem solving questions	

5. SUGGESTED BIBLIOGRAPHY

-*Suggested bibliography:*

- Ζαμπέλας Α (2007). Κλινική Διαιτολογία και Διατροφή με Στοιχεία Παθολογίας. Ιατρικές εκδόσεις Π.Χ. Πασχαλίδης».
- Mahan LK, Escott-Stump S, Krause's Food, Nutrition and Diet Therapy, 13th Edition. Philadeplhia:
- Saunders, 2011.
- Marinos Elia, Olle Ljungqvist, Rebecca J Stratton, Susan A. Lanham-New (επιμ. Μανιός Ι και Κοντογιάννη Μ) (2016). Κλινική Διατροφή. Εκδόσεις ΠΑΡΙΣΙΑΝΟΥ.
- Κοντογιάννη Μ, Γιαννακούλια Μ, Καράτζη Κ, Φάππα Ε (2015). Εγχειρίδιο Κλινική Διατροφής. Ελληνικά Ακαδημαϊκά Ηλεκτρονικά Συγγράμματα και Βοηθήματα, ΣΕΑΒ (www.kallipos.gr).

Course Outline: "6106 - Developmental Psychology II"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**6106**	**SEMESTER**	**6th**
COURSE TITLE	**Developmental Psychology II**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	2	
Tutoring	1	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**3**	**3**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	General Knowledge
PREREQUISITE COURSES	
LANGUAGE OF INSTRUCTION	Greek
LANGUAGE OF EXAMINATION/ASSESSMENT	Greek
THE COURSE IS OFFERED TO ERASMUS STUDENTS	Yes (in English)
COURSE WEBSITE (URL)	https://eclass.uth.gr/courses/DND_U_248/

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and* ***APPENDIX B***
- *Guidelines for writing Learning Outcomes*

The course can be considered as a continuation of the course Developmental Psychology I. In particular, the course presents the basic characteristics of physical, motor, cognitive and social development from adolescence to late adulthood. It aims at enabling students to understand the basic issues that have been studied in lifespan developmental research, as well as to become familiar with the research methods applied.

Upon successful completion of the course, students are expected to:

• Be able to compare and critically evaluate theories of human development.

• Have an understanding of the basic characteristics of physical, cognitive, social and emotional development from adolescence to late adulthood

• Have an understanding of issues related to death and dying.

• Be able to connect theory with practice through examples from everyday life.

• Have become familiar with research methods applied in Developmental Psychology

• Have acquired basic skills in identifying and evaluating empirical studies in the field of Developmental Psychology

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies, Adapting to new situations Decision-making Individual/Independent work Group/Team work Working in an international environment Working in an interdisciplinary environment Introduction of innovative research	*Project planning and management Respect for diversity and multiculturalism Environmental awareness Social, professional and ethical responsibility and sensitivity to gender issues Critical thinking Development of free, creative and inductive thinking …… (Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….*

Search for, analysis and synthesis of data and information by the use of appropriate technologies

Individual work

Respect for diversity and multiculturalism

Social, professional and ethical responsibility and sensitivity to gender issues

Critical thinking

3. COURSE CONTENT

i. Physical Development in Adolescence
ii. Cognitive Development in Adolescence
iii. Social and Personality Development in Adolescence
iv. Physical and Cognitive Development in Early Adulthood
v. Social and Personality Development in Early Adulthood
vi. Physical and Cognitive Development in Middle Adulthood
vii. Social and Personality Development in Middle Adulthood
viii. Physical and Cognitive Development in Late Adulthood
ix. Social and Personality Development Development in Late Adulthood
x. Death and Dying

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	Face to face	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	Use of ICT in teaching and communication with students Use of the e-class platform to support learning processes Utilization of the HEAL -- LINK system	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	25
	Exercises	10
	Study & Analysis of bibliography	40
	Total	***75***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:* *Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc.*	Written exams at the end of the semester involving (a) multiple choice questions (70%) and (b) open-ended questions (30%). In addition, during semester students are encouraged to engage in five (optional) exercises. Participants who have successfully completed the examination receive extra credit for these exercises.	

Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.	Evaluation criteria (for open-ended questions and written exercises): Relevance to the topic, critical comprehension of the topic, correct use of terminology.

5. SUGGESTED BIBLIOGRAPHY

-Suggested bibliography:

Dunn, W. L., & Craig, G. J. (2021). *Understanding human development* (4th ed.) Pearson Education.
Harris, M., & Butterworth, G. (2012). *Developmental psychology: A student's handbook*. Psychology Press.
Feldman, R. S. (2006). *Development across the life span*. Pearson Education New Zealand.

-Relative Scientific Journals

Hellenic Journal of Psychology
British Journal of Developmental Psychology
Death Studies
Developmental Psychology
Emerging Adulthood
Journal of Adolescence
Human Development
The Journal of Genetic Psychology
European Journal of Developmental Psychology
Psychology and Aging
Social development

Course Outline: "6107 - Functional Foods"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**6107**	**SEMESTER**	**6th**
COURSE TITLE	**Functional Foods**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	3	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**3**	**3**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	Scientific expertise
PREREQUISITE COURSES	No
LANGUAGE OF INSTRUCTION	Greek
LANGUAGE OF EXAMINATION/ASSESSMENT	Greek
THE COURSE IS OFFERED TO ERASMUS STUDENTS	YES (in English)
COURSE WEBSITE (URL)	https://eclass.uth.gr/courses/DND_U_249/

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and*

APPENDIX B

- *Guidelines for writing Learning Outcomes*

The course delves into the manifold biological characteristics of functional foods. Firstly, the course aims to help the students comprehend the principles of Redox Biology since the free radical theory applies to the research field of Nutrition and partially describes the biology of functional foods, whose antioxidant properties are of utmost importance. Furthermore, the European legislation concerning the characterization of foods as functional is analyzed through the detailed study of the 1924/2006 regulation. To that end, the basic principles for the actions of the European Food and Safety Authority (EFSA), whose role on the characterization of specific foods or food components as functional is decisive, are also thoroughly investigated. Finally, via the presentation of the fundamental knowledge regarding the Biotechnology and Genetic Engineering technologies the course will inform the students about the genetically modified organisms and foods that possess notable biological activity and, concomitantly, raise worth mentioning bioethics issues. Moreover, the students will also obtain the necessary knowledge and skills to continue their studies in postgraduate and PhD levels in relevant fields. They will also be able to seek research studies from the international literature by using the most established search engines (e.g., Pubmed).

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies, Adapting to new situations Decision-making Individual/Independent work Group/Team work Working in an international environment Working in an interdisciplinary environment Introduction of innovative research

Project planning and management Respect for diversity and multiculturalism Environmental awareness Social, professional and ethical responsibility and sensitivity to gender issues Critical thinking Development of free, creative and inductive thinking …… (Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….

- Individual/Independent work
- Group/Team work
- Working in an interdisciplinary environment
- Introduction of innovative research
- Development of free, creative and inductive thinking

3. COURSE CONTENT

- Research in the fields of Biology and Nutrition
- Approaching the field of Nutrition through the theory of free radicals
- Antioxidants and Nutrition
- Redox biomarkers in Nutrition
- Functional foods - Concepts and principles
- The European regulation 1924/2006
- The European Food Safety Authority (EFSA)
- Scientific assessment of functional food folders by EFSA
- Genetically modified organisms
- Genetically modified foods
- Bioactivity - Bioavailability of foods
- Probiotics and prebiotics
- Minerals and trace minerals
- Biophenols
- Sulphur compounds
- Examples of functional foods found in the market

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	Face to face	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	1. Lectures in power point documents 2. Research or review papers in pdf documents 3. Laptops for the projection of relevant videos 4. The lectures in pdf documents that are announced to the students through the eclass platform The students get in touch with the instructor either directly (through face to face contact or email) or indirectly (through notes posted on the poster boards and the website of the Department).	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	2 × 13 = 26
	Literature analysis	14
	Preparation for the exams	35
	Total	***75***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:* *Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc.* *Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	The assessment language is Greek. The performance of the students is assessed through written exams (100%).	

5. SUGGESTED BIBLIOGRAPHY

-Suggested bibliography:

- Functional Foods: The Connection Between Nutrition, Health, and Food Science. Edited by Leah Coles. Apple Academic Press, 1st Edition, 2013.
- Handbook of Nutraceuticals and Functional Foods (Modern Nutrition). Edited by Robert E.C. Wildman and Richard S. Bruno (Editor). NRC Press, 3rd Edition, 2019.

-Scientific Journals:

- Journal of Functional Foods
- Journal of Agricultural and Food Chemistry
- European Journal of Nutrition
- Foods
- Nutrients
- Food and Chemical Toxicology
- American Journal of Clinical Nutrition
- Applied Physiology Nutrition and Metabolism
- Journal of Nutrition
- British Journal 0f Nutrition

Course Outline: "6108 - Marketing of Products and Services"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**6108**	**SEMESTER**	**6th**
COURSE TITLE	**Marketing of Products and Services"**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	3	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**3**	**3**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	Scientific expertise
PREREQUISITE COURSES	
LANGUAGE OF INSTRUCTION	GREEK
LANGUAGE OF EXAMINATION/ASSESSMENT	GREEK
THE COURSE IS OFFERED TO ERASMUS STUDENTS	Yes, English
COURSE WEBSITE (URL)	NA

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το

APPENDIX A

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and*

APPENDIX B

- *Guidelines for writing Learning Outcomes*

Course Aim:

The main purpose of the course is to get students acquainted with the basic concepts and contemporary practices of Marketing products and services. Through the lectures of the course, the goal is for students, as future health professionals, to be able to analyze the market and ultimately successfully meet the needs of the consumer, having as a criterion his behavior.

Learning Objectives:

At the end of the lectures, students should be able to:

•Understand the basic concepts of modern Marketing, both products and services.

•Understand modern communication techniques and their application.

•To be able to analyze the market, both in terms of preparation and marketing mix.

•To understand the role and value of consumer behavior and the need to orient the provision of services and products to it.

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies, Adapting to new situations Decision-making Individual/Independent work Group/Team work Working in an international environment Working in an interdisciplinary environment Introduction of innovative research

Project planning and management Respect for diversity and multiculturalism Environmental awareness Social, professional and ethical responsibility and sensitivity to gender issues Critical thinking Development of free, creative and inductive thinking …… (Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….

- Group/Team work Working
- Independent work
- Decision-making Individual
- Critical thinking
- Development of free, creative and inductive thinking

3. COURSE CONTENT

- Introduction to Marketing: Basic Concepts and Development of Marketing Thinking
- Products and services: similarities and differences.
- Market research process, SWOT analysis, target markets
- Segmentation, targeting and positioning
- Introduction to the Marketing mix
- Channels of distribution
- Consumer-oriented Marketing Strategy
- Marketing Communications and methods of promoting products and services, internet Marketing
- Consumer behavior: Values, preferences, needs, culture, emotions, perception. Information processing. Consumer decision-making processes and theories.

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	Face-to-face	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	1. Lectures in powerpoint documents 2. Research or review papers in pdf documents 3. Laptops for the projection of relevant videos 4. The lectures in pdf documents that are announced to the students through the eclass platform The students get in touch with the instructor either directly (through face to face contact or email) or indirectly (through notes posted on the poster boards and the website of the Department).	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	36
	Presentations	2
	Preparation of public presentation	15
	Preparation for the exam	22
	Total	***75***

STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:* *Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc.* *Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	The performance of the students is assessed through written exams (60%) and a group presentation relevant to the scope of the course (case study) (40%).

5. SUGGESTED BIBLIOGRAPHY

-Suggested bibliography:

Kotler P., Εισαγωγή στο Μάρκετινγκ-Μάνατζμεντ Γκιούρδας Β., 2001.
Γούναρης, Σ. & Καραντίνου Κ., Μάρκετινγκ υπηρεσιών, 3η έκδ, Rosili , 2014.
Σιώμκος, Γ.Ι., Συμπεριφορά καταναλωτή & στρατηγική μάρκετινγκ, Σταμούλης, 2011
Scott M. Smith, Gerald S. Albaum, Fundamentals of marketing research, SAGE, 2005
Szmigin I. & Piacentini M., Consumer Behaviour, 2nd ed., Oxford: Oxford University Press, c2018

- Scientific journals:
- Journal of Food Product Marketing [online] Available at: https:// www.tandfonline.com/toc/wfpm20/current

Course Outline: "6109 - Health Education"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**6109**	**SEMESTER**	**6th**
COURSE TITLE	**Health Education**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	2	
Tutoring	1	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**3**	**3**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	Scientific expertise General Knowledge
PREREQUISITE COURSES	
LANGUAGE OF INSTRUCTION	Greek
LANGUAGE OF EXAMINATION/ASSESSMENT	Greek
THE COURSE IS OFFERED TO ERASMUS STUDENTS	NO
COURSE WEBSITE (URL)	https://eclass.uth.gr/courses/DND_U_251/

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and* ***APPENDIX B***
- *Guidelines for writing Learning Outcomes*

The health education course aims to:
1. give knowledge and educate students regarding the design of programs aimed at educating people in relation to healthy and unhealthy behaviors.
2. provide knowledge and education to students in relation to the design and development of programs to support people who need and/or want to change unhealthy behaviors.

Upon successful completion of the course students will possess the necessary theoretical evidence/ knowledge/education and basic skills to design/develop health education programs and health behavior modification programs at various levels, such as hospitals, rehabilitation centers, schools, work environment or personalized situation.
In this case, upon successful completion of the course, the student will:
• Be familiar with the basic scientific terms in health education and health behavior modification.
• Possess concepts from behavior modification theories.
• Distinguish and present the dominant factors of healthy and unhealthy behaviors in a specific environment as well as for specific individuals and/or populations.
• Apply the cyclical behavior modification method to design / develop programs to promote health behavior modification.
• Selects at its disposal tools for behavior modification depending on the needs and preferences of individuals and populations who wish and / or need relevant support.
• Will combine eating and other behaviors such as physical activity and exercise in a training and intervention program according to the needs of the target population.

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies, Adapting to new situations Decision-making Individual/Independent work Group/Team work Working in an international environment Working in an interdisciplinary environment Introduction of innovative research

Project planning and management Respect for diversity and multiculturalism Environmental awareness Social, professional and ethical responsibility and sensitivity to gender issues Critical thinking Development of free, creative and inductive thinking …… (Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….

The health education course aims to support and educate students to acquire the following general skills:

1. Search, analysis and synthesis of data and information, using the necessary technologies.
2. Adaptation to new situations.
3. Decision making.
4. Autonomous work.
5. Teamwork.
6. Exercise criticism and self-criticism.

3. COURSE CONTENT

Lectures:

1 Introduction. Definitions. Environments in which health education and health behavior modification can and must be developed.
2. Socio-cognitive theory, belief model of health, models of ecological health behavior.
3. Determinants of health behavior.
4. Designing health behavior change programs. Circular behavior modification.
5. Designing health behavior change programs. Behavior modification techniques.
6. Designing health behavior change programs.
7. Promoting health behavior modification.
8. Nutrition and health education: Behavioral regression

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	In-class Lecturing	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	eclass	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	26
	Tutorials	13
	Group study and analysis of bibliography	22
	Essay writing	14
	Total	***75***

STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:* *Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc.* *Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	Final exams based on: 1. Short answer questions 2. Multiple choice tests

5. SUGGESTED BIBLIOGRAPHY

-Suggested bibliography:

- Σχεδιασμός προγραμμάτων αγωγής υγείας (2018). ΘΕΟΔΩΡΑΚΗΣ ΙΩΑΝΝΗΣ, ΧΑΣΑΝΔΡΑ ΜΑΙΡΗ. ΑΦΟΙ ΚΥΡΙΑΚΙΔΗ ΕΚΔΟΣΕΙΣ Α.Ε

Course Outline: "6111 - Pathophysiology of Metabolic and Cardiovascular Diseases and Gastrointestinal System"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**6111**	**SEMESTER**	**6th**
COURSE TITLE	**Pathophysiology of Metabolic and Cardiovascular Diseases and Gastrointestinal System**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	3	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**3**	**5**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	General Knowledge
PREREQUISITE COURSES	No
LANGUAGE OF INSTRUCTION	GREEK
LANGUAGE OF EXAMINATION/ASSESSMENT	GREEK
THE COURSE IS OFFERED TO ERASMUS STUDENTS	YES (in English)
COURSE WEBSITE (URL)	https://eclass.uth.gr/courses/DND_U_143/

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and*

APPENDIX B

- *Guidelines for writing Learning Outcomes*

This course describes disorders of the normal functions of the human body, which lead to the appearance of the clinical picture of the disease.

It aims to contribute to the understanding of the mechanisms of various metabolic, cardiovascular and gastrointestinal diseases, combining basic knowledge with clinical medicine, for proper diagnosis and appropriate treatment. The course offers basic knowledge regarding the cellular mechanisms that contribute to the genesis and progression of the disease.

The student at the end of the course will be able to explain and describe the normal functions of the human body and to understand the pathogenetic mechanism of the disease. He will develop important knowledge that will enable him to prevent and treat diseases.

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies, Adapting to new situations Decision-making

Project planning and management Respect for diversity and multiculturalism Environmental awareness Social, professional and ethical responsibility and sensitivity to gender issues Critical

Individual/Independent work Group/Team work Working in an international environment Working in an interdisciplinary environment Introduction of innovative research	*thinking Development of free, creative and inductive thinking …… (Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….*

- Search for, analysis and synthesis of data and information
- Adapting to new situations
- Working in an interdisciplinary environment
- Acquisition of the appropriate theoretical cognitive background so that further education is possible.
- Making a decision
- Production of new research ideas

3. COURSE CONTENT

1. Basic principles of cell physiology
2. Metabolic diseases (diabetes mellitus, hypoglycemia, hyperuricemia, weight changes)
3. Chronic complications of diabetes
4. Disorders of lipid metabolism
5. Rhythm disorders
6. Pathophysiology of the coronary circulation
7. Pathophysiology of cardiovascular diseases (valvular diseases, cardiomyopathies, pericardial diseases)
8. Pathophysiology of heart failure
9. Pathophysiology of hypertension
10. Pathophysiological disorders of the stomach and esophagus - diseases
11. Pathophysiological disorders of the intestine - diseases
12. Pathophysiological disorders in diseases of the pancreas and bile ducts
13. Pathophysiological disorders in liver diseases

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	Distance teaching	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	eClass	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	50
	Laboratory Classes	50
	Personal Study	25
	Total	***125***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:*	Written final exam (100%) which includes: - Multiple choice questions - Developmental questions	

Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc. *Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	

5. SUGGESTED BIBLIOGRAPHY

- *Suggested bibliography:*

1. BOOK [77107054]: Μουτσόπουλου Αρχές Παθοφυσιολογίας. Τζιούφας Αθανάσιος. BROKEN HILL PUBLISHERS LTD. 2018

2. BOOK [41956310]: ΠΑΘΟΛΟΓΙΚΗ ΦΥΣΙΟΛΟΓΙΑ (Β΄ έκδοση). Συλλογικό έργο. UNIVERSITY STUDIO PRESS. 2014

3.BOOK [32997801]: Παθοφυσιολογία Νόσων. Hart N.M., Loeffler G.A. BROKEN HILL PUBLISHERS LTD . 2013

Course Outline: "6112 - Nutritional Anthropology"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**6112**	**SEMESTER**	**6th**
COURSE TITLE	**Nutritional Anthropology**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	3	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**3**	**3**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	Scientific expertise
PREREQUISITE COURSES	non
LANGUAGE OF INSTRUCTION	Greek
LANGUAGE OF EXAMINATION/ASSESSMENT	Greek
THE COURSE IS OFFERED TO ERASMUS STUDENTS	No
COURSE WEBSITE (URL)	https://eclass.uth.gr/courses/DND_U_254/

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:

APPENDIX A

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and*

APPENDIX B

- *Guidelines for writing Learning Outcomes*

Food is a deeply human activity. Language, and the human species itself, may have evolved from our desire to cook and share food. This module examines foods and diets from the late Paleolithic era to the present day. Nutritional Anthropology refers to the study of food and nutrition from evolutionary, behavioural, cultural and social perspectives, and how these interact to influence human nutrition. Food and eating are fundamental to human life and health and play profound roles in the construction of social bodies, from families and kinship groups to religious groups and states. Further, food mediates our relationships with non-human beings and surroundings. In this module, we emphasise that our reliance on food for nutritional sustenance is inseparable from food's social, cultural and ecological dimensions. As such, the transformation of food habits and food systems are a central part of human experiences and world histories. We explore cultural diversities and historical change in food production and distribution, eating, cooking and sharing, celebrating and prohibiting of food and drink. The goal of this course is to challenge you to think critically about food, and nutrition. In other words, to explore these topics from an anthropologic (biological and cultural) and scientific (method and hypothesis testing) approach. This course will focus on the evolution of the hominin diet, and the ecological and cultural factors shaping modern diets.

Upon successful completion of the course the student will be able to:
1. Understands the basic methods, concepts and theories in anthropological and related approaches to the study of food
2. Critique and understand the role of food and nutrition in human adaptation.

3. Understand the relationships between cultural pressures, cultural environments, natural environments and nutrition.
4. Critically evaluate the social and environmental consequences of the evolution of nutrition over time

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies,	*Project planning and management*
Adapting to new situations	*Respect for diversity and multiculturalism*
Decision-making	*Environmental awareness*
Individual/Independent work Group/Team work	*Social, professional and ethical responsibility and sensitivity to gender issues*
Working in an international environment	*Critical thinking*
Working in an interdisciplinary environment	*Development of free, creative and inductive thinking ……*
Introduction of innovative research	*(Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….*

- Team work
- Working in an international environment
- Development of free, creative and inductive thinking
- Social, professional and ethical responsibility and sensitivity to gender issues
- Critical thinking
- Working in an interdisciplinary environment
- Respect for diversity and multiculturalism

3. COURSE CONTENT

Indicative:

1. Food choice
2. Theoretical approaches to the interpretation of food selection
3. History of world Agriculture
4. Food as a social event
5. Animal domestication and animal husbandry
6. Food in Antiquity
7. Cultural influences - Dietary rules and prohibitions
8. Industrial food
9. Food and sustainabiblity
10. Genetically Modified Foods
11. Laboratory meat products "Lab-grown meat"

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	in-class lecturing, distance guidance	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	Communication with students via e-class	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as*	***Activity/Method***	***Semester workload***
	Lectures	24
	Individual and team Exercises	12

well as the hours of self-directed study are given following the principles of the ECTS.	Self-directed study	39
	Total	***75***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:* *Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc.* *Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	*1.* Written examination (90%) which includes : - multiple choice- questions (MCQ) -short- answer questions 2. In class active participation and in class presentation of projects (Power point) (10%)	

5. SUGGESTED BIBLIOGRAPHY

-Suggested bibliography:

1) Matala A. Anthropology of Nutrition. Papazisi Publications, Athens, 2008.
2) Matala A. Nutrition and Culture. Biocultural Approaches to Food Choice, e-book/e-pub, Greek Academic and Electronic Books and Resources, 2015.
3) Antonia-Lida Matala & Asterios Chouliaras. Nutrition in the 21st Century: Geographies of Abundance and Deprivation. Papazisi Publications, Athens 2005.

Course outline (INTERFACULTY): "6121 - Development of Business Plans"

1. GENERAL

SCHOOL	School of Economics and Business		
DEPARTMENT	Department of Economics (Volos)		
LEVEL	*Undergraduate*		
CODE	**6121**	**STUDENT SEMESTER**	**6th**
COURSE TITLE	Development of Business Plans		

	WEEKLY HRS	**ECTS**
Lectures and Workshops	3	6
	3	**6**

TYPE OF COURSE	Generic knowledge and Skills Development
PREREQUISITES:	None
LANGUAGE TEACHING AND EXAMINATION:	Greek or English
THE COURSE OFFERED TO STUDENTS ERASMUS	Yes
WEBPAGES COURSE (URL)	https://eclass.uth.gr/courses/ECON_U_107/

2. LEARNING OUTCOMES

Learning Outcomes
The main goal of the course is to help students acquire the basic knowledge and skills for the effective composition and evaluation of a business plan, for the realization of a business idea. The aim is for students to be able to use the knowledge they will gain from the first course (Introduction to Entrepreneurship or related title) and to supplement it by focusing on specific areas - such as marketing, financial planning, etc. - in order to be able to develop a complete business plan and present it to stakeholders.
General Skills
Students will develop and cultivate basic professional and social skills:

- Search, analysis and synthesis of data and information, using the necessary technologies
- Adaptation to new situations
- Decision making
- Autonomous work
- Teamwork
- Work in an international environment
- Work in an interdisciplinary environment
- Ability to recognize and evaluate business and innovative "opportunities",
- Production of new ideas
- Project design and management,
- Respect for diversity and multiculturalism
- Respect for the natural environment
- Demonstration of social, professional and moral responsibility and sensitivity to gender issues
- Exercise criticism and self-criticism
- Promoting free, creative and inductive thinking
- Understanding economic and technological developments and their implications,
- Development of business perception and professional mentality.

3. COURSE CONTENT

The course focuses on issues related to:

- Business plan: what it is and why I need it
- The concretization and presentation of the business idea
- Technology, Expertise
- Market analysis and research - Marketing planning, Distribution - Sales - Pricing and credit, Brand management (trademarks)
- Business models
- The art of trading.
- Decision making
- Financing and Financial Management: financing, working capital, capital increases, share allotment, performance monitoring, Investment evaluation and planning - budget, Financing for start-ups
- Types of companies, basic corporate legislation
- Potential pitfalls and implementation: business plan success factors
- Human resource management
- Business collaboration

Lectures are combined with workshops.

Students form teams with the aim to develop, submit and present comprehensive business plans, with the support of the course teacher, coaches and mentors. Teams develop and discuss their ventures, plan solutions, surveys and field research.

Students learn-by-doing, applying the methods in the process from business conceptualization to evaluation, pivot and pitching to potential partners or/and investors.

Students discuss case-studies, visit enterprises, entrepreneurs are invited as guest speakers.

TEACHING AND LEARNING METHODS - EVALUATION

<table>
<tr><td>DELIVERY METHOD</td><td>The course is organized along two parallel workstreams:

1. Lectures, where concepts, tools and methodologies are presented and analyzed
2. Studio workshops where students develop their projects collaboratively, using the tools and methods taught and interacting with mentors and perceived stakeholders</td></tr>
<tr><td>USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES</td><td>Use of a course website on the e-class platform for posting (a) notes, (b) online links, (c) announcements, search tools and social networks</td></tr>
<tr><td>MANAGEMENT OF TEACHING</td><td><table><tr><th>Activity</th><th>Semester Workload</th></tr><tr><td>Lectures</td><td>36</td></tr><tr><td>Seminars</td><td>4</td></tr><tr><td>Studio workshops</td><td>84</td></tr><tr><td>Individual and work study for term assignment</td><td>40</td></tr><tr><td>Term assignment presentation</td><td>16</td></tr><tr><td>Course Total</td><td>180</td></tr></table></td></tr>
<tr><td>STUDENT EVALUATION</td><td>Essay and Public Presentation

Student assessment is largely based on the group work done by students, while the final grade takes into account:

• the written text of the essay

• the presentation of the work at the end of the semester

• participation in workshops

• participation in course activities (lectures, visits, etc.)

The focus, the analysis of the problem, the composition of the solution, the collaboration and the division of work in the team, the completeness of the presentation and the documentation of the arguments are evaluated.</td></tr>
</table>

4. RECOMMENDED - BIBLIOGRAPHY

1. Επιχειρηματικότητα με Αρχές
Έκδοση 1η ελληνική/2021
Κωδικός Βιβλίου στον Εύδοξο: 102124093
Συγγραφείς: Bill Aulet

2. Δημιουργία Νεοφυών Επιχειρήσεων

Έκδοση *1η Ελληνική-9η Αμερικανική Έκδοση/2015*
Κωδικός Βιβλίου στον Εύδοξο: *41955510*
Συγγραφείς: Spinelli Stephen, Adams Rob, Παπαδάκης Βασίλειος

Course Outline: "6122 - Health Economics"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**6122**	**SEMESTER**	**6th**
COURSE TITLE	**Health Economics**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	2	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**2**	**3**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	Scientific Expertise, General Knowledge
PREREQUISITE COURSES	No
LANGUAGE OF INSTRUCTION	Greek
LANGUAGE OF EXAMINATION/ASSESSMENT	Greek
THE COURSE IS OFFERED TO ERASMUS STUDENTS	No
COURSE WEBSITE (URL)	

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and* ***APPENDIX B***
- *Guidelines for writing Learning Outcomes*

Upon successful completion of the course the student would be able to:

- introduce students to the concepts of economy and economics,
- understand the basic concepts, theoretical approaches and analytical tools from the fields of micro and macroeconomics and public finance,
- be able to analyze the financial problems that occur in the markets.

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies,
Adapting to new situations
Decision-making
Individual/Independent work
Group/Team work
Working in an international environment
Working in an interdisciplinary environment
Introduction of innovative research
Project planning and management
Respect for diversity and multiculturalism
Environmental awareness
Social, professional and ethical responsibility and sensitivity to gender issues
Critical thinking
Development of free, creative and inductive thinking ……
(Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….

- Decision making
- Individual work
- Working in an interdisciplinary environment

3. COURSE CONTENT

- Approach to Health Economics. Health Systems. Europe and Health Policy. Greece and Health Policy.
- Health as a Private and Social Good.
- Consumer Theory and Demand for Health Services.
- Provoked Health Demand.
- Health Services and Production Theory.
- The Hospital as an Economic Unit.
- Financial Objectives and Operations of the Hospital Units.
- Health Staff and Labor Market. Greece and Health Potential.

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	In-class lecturing	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	• Use of PowerPoint presentation program during the educational process • Learning process support through the electronic platform e-class	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	50
	Independent study	25
	Total	***75***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:* *Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc.* *Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	Final written exam (100%) including: • Multiple choice questions • Development issues based on various theories • Critical analysis in case studies	

5. SUGGESTED BIBLIOGRAPHY

-Suggested bibliography:

- Α. Κώττη & Γ. Κώττης (2008), *Σύγχρονη Μικροοικονομική*, Εκδ. Ε. Μπένου, Αθήνα.
- Α. Κώττη & Γ. Κώττης (2008), *Σύγχρονη Μακροοικονομική*, Εκδ. Ε. Μπένου, Αθήνα.

Course Outline: "6123 - Food History and Health"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**6123**	**SEMESTER**	**6th**
COURSE TITLE	**Food History and Health**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	2	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**2**	**3**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	Scientific expertise
PREREQUISITE COURSES	non
LANGUAGE OF INSTRUCTION	Greek
LANGUAGE OF EXAMINATION/ASSESSMENT	Greek
THE COURSE IS OFFERED TO ERASMUS STUDENTS	No
COURSE WEBSITE (URL)	

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and* ***APPENDIX B***
- *Guidelines for writing Learning Outcomes*

It will explore the ways that food has shaped our society and health, and will examine issues like gender, famine, obesity and foodie fashions, as well as history of modern nutrition science. Students will be challenged to explore their own thoughts and philosophies around food. Topics such as vegetarianism, orthorexia, nutrition transition, Paleolithic diet and their relation with health will be also discussed.

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies,
Adapting to new situations
Decision-making
Individual/Independent work Group/Team work
Working in an international environment
Working in an interdisciplinary environment
Introduction of innovative research
Project planning and management
Respect for diversity and multiculturalism
Environmental awareness
Social, professional and ethical responsibility and sensitivity to gender issues
Critical thinking
Development of free, creative and inductive thinking ……
(Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….

- Team work
- Working in an international environment
- Development of free, creative and inductive thinking
- Social, professional and ethical responsibility and sensitivity to gender issues
- Critical thinking
- Working in an interdisciplinary environment

- Respect for diversity and multiculturalism

3. COURSE CONTENT

Indicative:
History of selected foods in the Mediterranean basin
History of modern nutrition science
The changing notion of food
History, evolution, and current understanding of dietary fat and health
Role of carbohydrate consumption in human development
Hunger and malnutrition in the 21st century
Making progress on the global crisis of obesity and weight management
Paleolithic diet
Orthorexia
Vegeterianism
Nutrition Transition

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	in-class lecturing, distance guidance	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	Communication with students via e-class	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	24
	Individual and team Exercises	12
	Self-directed study	39
	Total	***75***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures: Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc. Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	*1*. Written examination (90%) which include : essays in selected topics 2. In class active participation (10%)	

5. SUGGESTED BIBLIOGRAPHY

-Suggested bibliography:

Antonia Matalas & Asteris Houliaras. Nutrition in the 21st century: Geographies of abundance and deprivation. Eds Papazisis
Barry, Wendall, 'The Pleasures of Eating', *What Are People For? Essays* (Berkeley, 2010).
Nutritional Anthropology: Biocultural Perspectives on Food and Nutrition, by DL Dufour, AH Goodman & GH Pelto, Oxford University Press, Second Edition Nutrition in the 21st century: geographies of abundance and deprivation, by Lida-Antonia Matalas, eds Papazisis
Klein, Jakob A. and James L. Watson (eds) (2016) The Handbook of Food and Anthropology. *London: Bloomsbury.* ISBN-13: 978-0857855947
Barry, Wendall, 'The Pleasures of Eating', *What Are People For? Essays* (Berkeley, 2010).

Course Outline: "7101 - Nutrigenetics - Nutrigenomics"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**7101**	**SEMESTER**	**7th**
COURSE TITLE	**Nutrigenetics - Nutrigenomics**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	3	
αAdd rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**3**	**5**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	Scientific expertise General Knowledge
PREREQUISITE COURSES	No
LANGUAGE OF INSTRUCTION	Greek
LANGUAGE OF EXAMINATION/ASSESSMENT	Greek
THE COURSE IS OFFERED TO ERASMUS STUDENTS	No
COURSE WEBSITE (URL)	https://eclass.uth.gr/courses/DND_U_273/

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το APPENDIX A

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and APPENDIX B*
- *Guidelines for writing Learning Outcomes*

The aim of the course is for students to understand the interaction of genetic and nutritional factors in the manifestation of a multitude of phenotypes with the final aim of providing personalized nutritional recommendations for the treatment of complex, multifactorial cardiometabolic diseases. Students will come into contact with the latest data on the analysis of the human genome, the genetic predisposition of chronic complex diseases (such as obesity and type II diabetes) and finally the different response of individuals to nutritional intake depending on the genetic background (Nutrigenetics) as well as the different effect of dietary intake on gene expression (Nutrigenomics). The main goal is to familiarize students with the concepts of Nutrigenetics - Nutrigenomics as well as their scientific and practical application and importance. This course is a combination of all the knowledge that has been acquired in the context of the previous years of studies, with a special emphasis on the fields of clinical nutrition and human genetics.

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies, Adapting to new situations Decision-making Individual/Independent work Group/Team work Working in an international environment Working in an interdisciplinary environment Introduction of innovative research

Project planning and management Respect for diversity and multiculturalism Environmental awareness Social, professional and ethical responsibility and sensitivity to gender issues Critical thinking Development of free, creative and inductive thinking …… (Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….

- Working in an interdisciplinary environment
- Introduction of innovative research
- Development of free, creative and inductive thinking
- Critical thinking

3. COURSE CONTENT

- Basic principles of human genetics. Introduction to the Science of Gene-Nutrition Interactions (Nutrigenetics - Nutrigenomics)
- Genetic predisposition to macronutrient intake and alcohol consumption
- Interactions of genetic variants and dietary intake in obesity
- Interactions of genetic variants and dietary intake in non-alcoholic fatty liver disease
- Interactions of genetic variants and dietary intake on glycemic index levels and type II diabetes mellitus
- Interactions of genetic variants and dietary intake on lipid levels and cardiovascular disease
- Dietary zinc intake, inflammatory markers and aging
- Genetic variations in sleep regulation, chronotype and dietary intake
- Genetic predisposition to coffee intake and association with health markers
- Interactions of genetic variants and dietary intake and bone phenotypes
- Epigenetic changes and cardiometabolic diseases

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	face-to-face

<table>
<tr><td>USE OF INFORMATION AND COMMUNICATION TECHNOLOGY
Use of ICT in teaching, Laboratory Education, Communication with students</td><td colspan="2">1. Lectures in power point documents
2. Research or review papers in pdf documents
3. The lectures in pdf documents that are announced to the students through the eclass platform
The students get in touch with the instructor either directly (through face to face contact or email) or indirectly (through notes posted on the poster boards and the website of the Department).</td></tr>
<tr><td rowspan="4">COURSE DESIGN
Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.</td><td>Activity/Method</td><td>Semester workload</td></tr>
<tr><td>Lectures</td><td>50</td></tr>
<tr><td>Study and analysis of bibliography</td><td>30</td></tr>
<tr><td>Independent study</td><td>45</td></tr>
<tr><td></td><td>Total</td><td>125</td></tr>
<tr><td>STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS
Detailed description of the evaluation procedures:

Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc.
Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.</td><td colspan="2">The assessment language is Greek. Students are evaluated based on their performance in a written final exam (100% of the final grade).</td></tr>
</table>

5. SUGGESTED BIBLIOGRAPHY

-- Suggested bibliography:

1. Μοριακή Γενετική του Ανθρώπου, Γ. Δεδούσης, Utopia, 2022
2. Handbook of statistical genetics υπό Balding, D. J., Bishop, Martin J., Cannings, Christopher 1942- Chichester, UK ; Hoboken, NJ : J. Wiley & Sons c2007.

-- Scientific journals:

- Journal of Nutrigenetics and Nutrigenomics [online] Available at: https://www.karger.com/Journal/Home/275177
- Genes & Nutrition [online] Available at: https://genesandnutrition.biomedcentral.com/

Course Outline: "7102 - Nutrition and Aging"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**7102**	**SEMESTER**	**7th**
COURSE TITLE	**Nutrition and Aging**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	2	
Tutoring	1	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**3**	**5**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	Scientific expertise
PREREQUISITE COURSES	None
LANGUAGE OF INSTRUCTION	Greek
LANGUAGE OF EXAMINATION/ASSESSMENT	Greek
THE COURSE IS OFFERED TO ERASMUS STUDENTS	No
COURSE WEBSITE (URL)	https://eclass.uth.gr/courses/DND_U_269/

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:

APPENDIX A

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and*

APPENDIX B

- *Guidelines for writing Learning Outcomes*

Healthy aging is the result of a combination of increased life expectancy, reduced likelihood of disease and disability, high levels of physical and mental functioning, and active participation in life. The purpose of the course is to provide multi-level knowledge about the role of nutrition in healthy aging, the special nutritional requirements of the elderly, and the specialized requirements for nutritional support in the various diseases and conditions related to aging. Upon successful completion of the course, students should be able to: have a comprehensive understanding of the role of nutrition in the mechanisms of aging; assess the nutritional status of an elderly person; plan nutritional support programs or nutritional interventions at the community level or individually in elderly people with morbidities or for the prevention of aging-related conditions.

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies,
Adapting to new situations
Decision-making
Individual/Independent work Group/Team work
Working in an international environment
Working in an interdisciplinary environment
Introduction of innovative research
Project planning and management
Respect for diversity and multiculturalism
Environmental awareness
Social, professional and ethical responsibility and sensitivity to gender issues
Critical thinking
Development of free, creative and inductive thinking ……
(Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….

- Search for, analysis and synthesis of data and information by the use of appropriate

technologies
- Decision-making
- Individual/Independent work Group/Team work
- Respect for diversity and multiculturalism
- Project planning and management
- Development of free, creative and inductive thinking

3. COURSE CONTENT

Indicative:
• Understanding the global aging trend, healthy aging and the role of nutrition
• Physiology of aging
• Nutritional requirements of the elderly
• Nutritional assessment-geriatric assessment and interaction with nutrition
• Nutritional management of elderly people with type 2 diabetes
• Nutritional management of the elderly with sarcopenia
• Nutrition in the prevention and treatment of cognitive decline
• Nutritional management of elderly people with weight disorders
• Drug-nutrient interactions in the elderly
• Enteral and parenteral nutrition in the elderly
• Ethical food issues

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	in-class lecturing, distance guidance	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	Use of ICT in teaching Communication with students via e-class	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	39
	Individual and team Exercises	19,5
	Self-directed study	66,5
	Total	***125***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:* *Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc.* *Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	Group work (100%) or Written examination (100%)	

5. SUGGESTED BIBLIOGRAPHY

-Suggested bibliography:

1) Ζαμπέλας Α. (2018). Η Διατροφή στα Στάδια της Ζωής. 2η έκδοση, Εκδόσεις Πασχαλίδης
2) Bales CW, Locher J.L., Saltzman E. (Eds.). (2015). Handbook of Clinical Nutrition and Aging (3rd ed.), New York: Springer.

Course Outline: "7103 - Nutritional Management of Disease in Childhood and Adolescence"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**7103**	**SEMESTER**	**7th**
COURSE TITLE	**Nutritional Management of Disease in Childhood and Adolescence**		
INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits		**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures		2	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4		**2**	**5**
COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	General Knowledge Scientific expertise Skills Development		
PREREQUISITE COURSES	No		
LANGUAGE OF INSTRUCTION	GREEK (available in English for incoming ERASMUS students)		
LANGUAGE OF EXAMINATION/ASSESSMENT	GREEK (available in English for incoming ERASMUS students)		
THE COURSE IS OFFERED TO ERASMUS STUDENTS	Yes		
COURSE WEBSITE (URL)	https://eclass.uth.gr/courses/DND_U_150/		

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and*

APPENDIX B

Guidelines for writing Learning Outcomes

Through this course students will be trained to develop skills on nutritional assessment and dietetic management of pediatric patients.

Upon the completion of the course students are expected to be able to:

- Assess pediatric patients and identify nutritional risks
- Prescribe diets and implement nutrition interventions for pediatric patients

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies, Adapting to new situations Decision-making Individual/Independent work Group/Team work Working in an international environment Working in an interdisciplinary environment Introduction of innovative research

Project planning and management Respect for diversity and multiculturalism Environmental awareness Social, professional and ethical responsibility and sensitivity to gender issues Critical thinking Development of free, creative and inductive thinking …… (Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….

- Search for, analysis and synthesis of data and information
- Adapting to new situations
- Working in an interdisciplinary environment
- Introduction of innovative research

3. COURSE CONTENT

Indicative topics to be covered:

- Nutritional assessment and evaluation of nutritional status of children and adolescents in clinical practice and in vulnerable population groups
- Assessment of growth and puberty development of children and adolescents
- Management of overweight/obesity and cardiovascular risk factors in children and adolescents
- Dietetic management of preterm and/or intrauterine growth retardation newborn
- Dietetic management of children and adolescents with nutritional deficiencies, growth retardation or undernutrition
- Dietetic management of young patients with feeding disorders.
- Dietetic management of children and adolescents with type 1 diabetes mellitus
- Dietetic management of children and adolescents with cystic fibrosis
- Dietetic management of children and adolescents with food allergies
- Dietetic management of children and adolescents with renal disorders
- Dietetic management of children and adolescents with alimentary system disorders
- Management of young patients with nutritional disorders
- Management of children and adolescents with dyslipidemia

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	Face-to-face	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	- Use of Power Point presentations - Use of eClass platform - Communication with students via email	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	30
	Study and analysis of bibliography	20
	Self-directed Study	25
	Total	***75***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:* *Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc.* *Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	Written final exam (100%) which includes: - Multiple choice questions - Short-answer questions	

5. SUGGESTED BIBLIOGRAPHY

-Suggested bibliography:

1. Manual of Pediatric Nutrition (Εγχειρίδιο παιδικής διατροφής), K. Sonneville, N.C. Duggan. ISBN 9789605830922 Επιστημονικές Εκδόσεις Παρισιάνου Α.Ε., 2015

2. Clinical pediatric dietetics (5th Edition), Shaw V. ISBN: 978-1-119-46729-8. Oxford: Wiley-Blackwell, 2020

3. Guidelines for Screening, Prevention, Diagnosis and Treatment of Dyslipidemia in Children and Adolescents**,** Stephen R. Daniels**.** Endotext [Internet]. South Dartmouth (MA): MDText.com, Inc.; 2000–2020 Jan 18. https://pubmed.ncbi.nlm.nih.gov/27809440/

4. Pediatrics at a glance (Η παιδιατρική με μια ματιά), Miall Lawrence, Rudolf Mary, Levene Malcolm. ISBN 978-960-394-935-0. Εκδόσεις Παρισιάνου Α.Ε., 2013

5. Obesity in Childhood and Adolescence (Η Παχυσαρκία στην Παιδική και Εφηβική ηλικία), Kiess W., Marcus C., Wabitsch M. ISBN 9789603997139. Εκδόσεις Πασχαλίδη, 2011

Course Outline: "7104 - Psychology and Nutrition"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**7104**	**SEMESTER**	**7th**
COURSE TITLE	**Psychology and Nutrition**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	3	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**3**	**3**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	General knowledge
PREREQUISITE COURSES	
LANGUAGE OF INSTRUCTION	Greek
LANGUAGE OF EXAMINATION/ASSESSMENT	Greek
THE COURSE IS OFFERED TO ERASMUS STUDENTS	Yes (in English)
COURSE WEBSITE (URL)	

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and* ***APPENDIX B***
- *Guidelines for writing Learning Outcomes*

The course focuses on the psychological factors that have been associated with eating behavior across the life span, based on recent empirical evidence. The main psychological theories that have been used to interpret eating behavior are presented. The role of individual, environmental and socio-cultural factors shaping eating behavior is highlighted. Moreover, it is attempted to connect theory and practice, so that knowledge of basic psychological principles can be used to guide daily practice.

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Learning outcomes

Upon successful completion of the course, students are expected to:

- To be able to use basic psychological theories for the interpretation of eating behavior
- To have an understanding of the factors (individual, social and cultural) that influence eating behavior
- To have become familiar with the main interpretative models and therapeutic approaches of eating disorders.
- To have acquired basic skills in locating and critically evaluating literature on a topic related to Psychology and Nutrition
- To be able to synthesize, document and present the contemporary views on this topic

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies, Adapting to new situations Decision-making Individual/Independent work Group/Team work Working in an international environment Working in an interdisciplinary environment Introduction of innovative research	*Project planning and management Respect for diversity and multiculturalism Environmental awareness Social, professional and ethical responsibility and sensitivity to gender issues Critical thinking Development of free, creative and inductive thinking …… (Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….*

Search for information by the use of appropriate technologies

Independent work – Team work

Critical thinking

Respect for diversity and multiculturalism

Social, professional and ethical responsibility and sensitivity to gender issues

3. COURSE CONTENT

- Psychological theories applied to eating behavior
- The role of learning in the development of food preferences
- Emotions and Nutrition
- The impact of media on nutrition
- Food intake and personality development in infancy and childhood
- The role of the family in shaping eating habits.
- Obesity (causes/consequences)
- Factors influencing dietary choices in adolescence
- Body Image
- Eating Disorders (Epidemiology, description, etiology, consequences, treatment)
- The consequences of the COVID-19 pandemic on eating behavior

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	Face to face	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	Use of ICT in teaching and communication with students. E--class platform supports learning processes Utilization of the HEAL -- LINK system	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	25
	Essay writing	25
	Study and analysis of bibliography	25
	Total	***75***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:* *Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work,*	Individual presentation of an empirical study (20%). Written essay of 3,000 words (50%), and presentation of this essay (30%). Evaluation Criteria: Selection of appropriate bibliography, synthetic presentation and critical evaluation of related information.	

essay/report, oral exam, presentation, laboratory work, other……etc. *Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	

5. SUGGESTED BIBLIOGRAPHY

-Suggested bibliography:

Odgen, J. (2010). *The Psychology of Eating (2nd ed)*. Wiley

Relative Scientific Journals

British Journal of Health Psychology
European Eating Disorders Review
Psychiatry Research
International Journal of Environmental Research and Public Health
International Journal of Eating Disorders
Body Image
Journal of Applied Developmental Psychology
Obesity
International Journal of Obesity
Journal of Pediatric Psychology

Course Outline: "7105 – Scientific/Academic Writing Using ICT"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**7105**	**SEMESTER**	**7th**
COURSE TITLE	**ScientificAcademic Writing Using ICT**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	3	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**3**	**3**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	Scientific expertise General knowledge
PREREQUISITE COURSES	None
LANGUAGE OF INSTRUCTION	Greek
LANGUAGE OF EXAMINATION/ASSESSMENT	Greek
THE COURSE IS OFFERED TO ERASMUS STUDENTS	Yes
COURSE WEBSITE (URL)	https://eclass.uth.gr/courses/DND_U_270/

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:

APPENDIX A

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and*

APPENDIX B

- *Guidelines for writing Learning Outcomes*

Upon successful completion of the course, students should be able to know how to organize and structure a scientific work, properly establish the theoretical framework of their work, provide methodologically correct projects, correctly choose the way to conduct a research, to interpret their results, to cite the bibliography and finally correctly complete a written scientific work where this is required. The fruitful combination of theory and practical examples is a basic pursuit of the course in order to follow the essential and creative ability of the students to write scientific papers.

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies,
Adapting to new situations
Decision-making
Individual/Independent work Group/Team work
Working in an international environment
Working in an interdisciplinary environment
Introduction of innovative research
Project planning and management
Respect for diversity and multiculturalism
Environmental awareness
Social, professional and ethical responsibility and sensitivity to gender issues
Critical thinking
Development of free, creative and inductive thinking ……
(Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….

- Search for, analysis and synthesis of data and information by the use of appropriate technologies
- Decision making
- Individual work

- Working in an interdisciplinary environment
- Development of free, creative and inductive thinking
- Critical thinking
- *Development of free, creative and inductive thinking*

3. COURSE CONTENT

Indicative:
• Organization and morphology of scientific works (types, distinct sections of scientific work)
• Literature search
• Organizing and structuring "Introduction" and "Aim"
• Organizing and structuring "Methodology"
• Organizing and structuring "Results".
• Organizing and structuring "Discussion" and "Conclusions"
• Organizing and structuring “Abstract”, “Limitations” and “Acknowledgments”
• Special points of attention (language, punctuation, paragraphs, units of measurement, plagiarism)
• Citations – Bibliography (various bibliographic and citation systems, techniques)
• Presentation of work (preparation and configuration, process and techniques)

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	in-class lecturing, distance guidance	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	Use of ICT in teaching, Communication with students via e-class, email	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	24
	Individual and team Exercises	12
	Self-directed study	39
	Total	***75***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:* *Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc.* *Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	<u>100% written project</u>: In a topic chosen by the students, Language: Greek	

5. SUGGESTED BIBLIOGRAPHY

-Suggested bibliography:

1. Λιαργκόβας Π, Δερμάτης Ζ, Κομνηνός Δ. (2022) *Μεθοδολογία της Έρευνας και Συγγραφή Επιστημονικών Εργασιών. 2η έκδοση,* Εκδόσεις Τζιόλα.
2. Παναγιωτάκος, Δ. Β. (2011). *Μεθοδολογία της Έρευνας και της ανάλυσης δεδομένων για τις επιστήμες της υγείας. Β’ έκδοση,* Εκδόσεις Διόνικος.

Course Outline: "7106 - Research and Development of New Products"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**7106**	**SEMESTER**	**7th**
COURSE TITLE	**Research and Development of New Products**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	3	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**3**	**3**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	Scientific expertise
PREREQUISITE COURSES	No
LANGUAGE OF INSTRUCTION	
LANGUAGE OF EXAMINATION/ASSESSMENT	Greek
THE COURSE IS OFFERED TO ERASMUS STUDENTS	
COURSE WEBSITE (URL)	

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and*

APPENDIX B

- *Guidelines for writing Learning Outcomes*

The course allows the students to comprehend the necessary processes around the conception, design and development of novel foods. The knowledge in the fields of Biology, Biochemistry and Nutrition that the students have obtained along with novel things they will learn during the lectures will contribute to their awareness concerning the regulations and the scientific background of the procedure followed in order to develop novel food products. After the completion of the course, the students are anticipated to have obtained generic and more specialized knowledge regarding the rules that govern science, market and legislation for the development of novel foods. In particular, the trajectory from the conception and assessment of an idea for the design of a novel food towards its fulfilment will be extensively studied. Moreover, the students will also obtain the necessary knowledge and skills in order to continue their studies in postgraduate and PhD levels in relevant fields. They will also be able to seek research studies from the international literature by using the most established search engines (e.g., Pubmed) and, finally, they will develop the ability to publically present a scientific article, which is relevant to the research field of the course.

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies, Adapting to new situations Decision-making Individual/Independent work Group/Team work Working in an international environment Working in an interdisciplinary environment Introduction of innovative

Project planning and management Respect for diversity and multiculturalism Environmental awareness Social, professional and ethical responsibility and sensitivity to gender issues Critical thinking Development of free, creative and inductive thinking …… (Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….

research
• Individual/Independent work • Group/Team work • Working in an interdisciplinary environment • Introduction of innovative research • Development of free, creative and inductive thinking

3. COURSE CONTENT

- Necessity for the development of novel products
- Basic principles for the development of novel food products
- Patents
- Strategies for product development
- Development of ideas for novel products
- Novel foods
- Biofunctional ingredients of foods
- Organic foods
- Technologies of food processing
- Food biotechnology
- Food nanotechnology
- Study of successful case studies

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	Face to face	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	1. Lectures in power point documents 2. Research or review papers in pdf documents 3. Laptops for the projection of relevant videos 4. The lectures in pdf documents that are announced to the students through the eclass platform The students get in touch with the instructor either directly (through face to face contact or email) or indirectly (through notes posted on the poster boards and the website of the Department).	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	25
	Product Preparation	40
	Literature analysis	10
	Total	***75***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:* *Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc.* *Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	The assessment of students is carried out in the Greek language. They are evaluated based on their performance in the written examination for the acquisition of basic knowledge (offered by the lectures) and their performance in the public presentation of a new innovative food that falls within the subject of the course. Performance in the presentation is evaluated based on the ability of students to make their classmates and the teacher share their questions and the results of their idea. The presentation is group and students are invited to present a new innovative food. The students' grade is based on the comfort during the presentation of the product assigned to them and on the in-depth understanding of the subject to which it refers. At the end of the presentation, students receive questions from the teacher and their classmates to be evaluated for the knowledge they have acquired. The two (2) best proposals	

	represent the department in the prestigious pan-Hellenic competition of innovative ecological food Ecotrophelia.

5. SUGGESTED BIBLIOGRAPHY

-Suggested bibliography:

- Σφλώμος Κωνσταντίνος, Βαρζάκας Θεόδωρος, Έρευνα και Ανάπτυξη Νέων Προϊόντων και Επιχειρηματικών Σχεδίων. Εκδόσεις Τσότρας, 2η Έκδοση, 2019.
- Functional food product development, Edited by Jim Smith and Edward Charter. Wiley-Blackwell, 2010.
- Fadi Aramouni, Kathryn Deschenes, Methods for Developing New Food Products: An Instructional Guide. DEStech Publications, Inc, 2014.

-Scientific Journals:

- Food Chemistry
- Food Research International
- Food Analytical Methods
- Food and Bioproducts Processing
- Food Quality and Preference

Course Outline: "7107 - Current Research Topics in Nutrition and Exercise"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**7107**	**SEMESTER**	**7th**
COURSE TITLE	**Current Research Topics in Nutrition and Exercise**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	3	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**3**	**3**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	General Knowledge
PREREQUISITE COURSES	No
LANGUAGE OF INSTRUCTION	GREEK
LANGUAGE OF EXAMINATION/ASSESSMENT	GREEK
THE COURSE IS OFFERED TO ERASMUS STUDENTS	YES
COURSE WEBSITE (URL)	

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and* ***APPENDIX B***
- *Guidelines for writing Learning Outcomes*

The course is in the form of a seminar so that the student can immerse himself/herself in selected topics of multiple cognitive subjects which he/she has been taught in the last years of his/her studies.

Upon successful completion of the course, the student will have up-to-date information on various scientific fields, in order to prepare for the job market or for the elaboration of postgraduate studies.

The aim of the module is to facilitate the students in evaluating, comprehending, concluding and applying information on specific nutritional issues.

On completion of this module, students are expected to be able to:

1 Evaluate critically research in currently advancing aspects of nutrition.

2 Discuss the importance of the research process to advancing nutritional science and its application.

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies, Adapting to new situations Decision-making Individual/Independent work Group/Team work Working in an international environment Working in an interdisciplinary environment Introduction of innovative research

Project planning and management Respect for diversity and multiculturalism Environmental awareness Social, professional and ethical responsibility and sensitivity to gender issues Critical thinking Development of free, creative and inductive thinking …… (Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….

- Search for, analysis and synthesis of data and information
- Adapting to new situations
- Working in an interdisciplinary environment
- Development of free, creative and inductive thinking
- Introduction of innovative research

3. COURSE CONTENT

The module is flexible and dependent on what areas have contemporary interest. **Indicative** topics of lectures:

1. Endocrine disruptors and puberty
2. Evidence-based practice
3. The effects of the pandemic on mental health and eating behavior
4. Nutrition and Oxidative Stress
5. Diet, exercise and Parkinson's disease - new data
6. Ketogenic diet and health
7. Vegan diet and health

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	Face to face	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	Learning support through the online eClass platform	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	50
	Personal Study	25
	Total	***75***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:* *Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc.* *Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	Written final exam (100%) which includes: -Multiple choice questions	

5. SUGGESTED BIBLIOGRAPHY

-Suggested bibliography:

- Selected papers (PUBMED, Scopus, Google Scholar etc) of contemporary interest in diverse scientific areas relevant to nutrition and dietetics
- Thompson, Manore, Vaughan: Η Επιστήμη της Διατροφής (4η έκδοση). Εκδόσεις Λαγός Δημήτριος, 2021.
- Σφλώμος Κ.: Διατροφή του Ανθρώπου (2η έκδοση). Εκδόσεις Τσότρας, 2019.

Course Outline: "7108 - Free Radicals and Antioxidants in Nutrition"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**7108**	**SEMESTER**	**7th**
COURSE TITLE	**Free Radicals and Antioxidants in Nutrition**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	3	
αAdd rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**3**	**3**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	Scientific expertise
PREREQUISITE COURSES	No
LANGUAGE OF INSTRUCTION	Greek
LANGUAGE OF EXAMINATION/ASSESSMENT	Greek
THE COURSE IS OFFERED TO ERASMUS STUDENTS	No
COURSE WEBSITE (URL)	https://eclass.uth.gr/courses/DND_U_258/

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and* ***APPENDIX B***
- *Guidelines for writing Learning Outcomes*

This course offers valuable knowledge around the modern field of Redox Biology. Upon completion of the lectures, the students will have learned about the generation mechanisms of free radicals and the action of antioxidants. The course delves into the ways that nutritional antioxidants function, whereas the manifold biological roles of free radicals and antioxidants on exercise and disease are analyzed. Finally, the students will be able to seek research studies from the international literature by using the most established search engines (e.g., Pubmed) and, finally, they will have developed the ability to publically present a scientific article, which is relevant to the research field of the course.

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies, Adapting to new situations Decision-making Individual/Independent work Group/Team work Working in an international environment Working in an interdisciplinary environment Introduction of innovative research

Project planning and management Respect for diversity and multiculturalism Environmental awareness Social, professional and ethical responsibility and sensitivity to gender issues Critical thinking Development of free, creative and inductive thinking …… (Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….

- Individual/Independent work
- Group/Team work
- Working in an interdisciplinary environment
- Introduction of innovative research
- Development of free, creative and inductive thinking

3. COURSE CONTENT

- Introduction in the theory of free radicals
- Basic principles of Redox Biology
- Historical overview
- Oxygen – Free radical formation
- In vitro Redox Biology
- Reactive species
- Mechanisms of reactive species generation
- Biological roles of reactive species
- Antioxidant mechanisms
- Redox biomarkers
- Nutritional antioxidants
- Redox biology of exercise
- Redox biology of diseases

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	Face to face	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	1. Lectures in power point documents 2. Research or review papers in pdf documents 3. Laptops for the projection of relevant videos 4. The lectures in pdf documents that are announced to the students through the eclass platform The students get in touch with the instructor either directly (through face to face contact or email) or indirectly (through notes posted on the poster boards and the website of the Department).	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	2 × 12 = 24
	Presentations	2 × 1 = 2
	Literature analysis	10
	Preparation of public presentation	14
	Preparation for the exams	25
	Total	***75***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:* *Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc.* *Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	The assessment language is Greek. The performance of the students is assessed through written exams (50%) and the presentation of an article relevant to the scope of the course (50%).	

5. SUGGESTED BIBLIOGRAPHY

--Suggested bibliography:

- Halliwell, B., Gutteridge, J.M.C., 2015. Free radicals in biology and medicine, 5th ed. Oxford University Press.

-Scientific Journals:

- Redox Biology

- Free Radical Biology and Medicine
- Free Radical Research
- Toxicology Reports
- Nutrients
- Food and Chemical Toxicology
- European Journal of Applied Physiology
- Redox Report
- Biomarkers

Course Outline: "7109 - Hygiene and Food Service Management"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**7109**	**SEMESTER**	**7th**
COURSE TITLE	**Hygiene and Food Service Management**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	3	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**3**	**3**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	Scientific Expertise, General Knowledge
PREREQUISITE COURSES	No
LANGUAGE OF INSTRUCTION	Greek
LANGUAGE OF EXAMINATION/ASSESSMENT	Greek
THE COURSE IS OFFERED TO ERASMUS STUDENTS	
COURSE WEBSITE (URL)	

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and* ***APPENDIX B***
- *Guidelines for writing Learning Outcomes*

The main target of the course is, to teach students the sources of food contamination, the types of food hazards and how to deal with them in food establishments. The training of dietitians in matters of hygiene, is a necessary prerequisite for working in places where they directly or indirectly come into contact with edible food. In addition, the course aims to provide students with the supplies they will need to work in catering establishments, food or mass catering, to teach them the concepts of systemic approach and total quality management, to present issues of organization and management as well as, planning and decision making and, to emphasize on the organization of the hospital's nutrition department.

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies,
Adapting to new situations
Decision-making
Individual/Independent work
Group/Team work
Working in an international environment
Working in an interdisciplinary environment
Introduction of innovative research
Project planning and management
Respect for diversity and multiculturalism
Environmental awareness
Social, professional and ethical responsibility and sensitivity to gender issues
Critical thinking
Development of free, creative and inductive thinking ……
(Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….

Abilities

- Identify foodborne hazards and preventive measures

- Understand food safety management systems
- Apply modern principles for total quality management
- Manage feeding functions in hospitals

Skills

- Draw production flow charts
- Identify critical checkpoints
- Manage HACCP projects
- Manage non-compliances and suggest corrective and preventive actions
- Draw up job descriptions for staff
- Do cost analysis on food and meals
- To make reliable nutritional analyses for food and meals of mass catering
- Identify the basic procedures and documentation for total quality management systems
- Manage non-compliances and suggest corrective and preventive actions

3. COURSE CONTENT

Food Safety Principles, Biological, Physical & Chemical Hazards, Allergens, Personnel Requirements, Good Hygiene Practices, Good Food Practices, Hygiene Legislation, Hygiene Inspection, Documentation Requirements, HACCP Design Principles, HACCP Design Exercises on food establishments. Principles of system theory, Total quality assurance, General for organization and management, Planning and decision making, Total quality assurance standards, Organization and operation of hospital unit nutrition department, Product costing, Procurement management

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	Face-to-face, asynchronous distance education	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	The following are used for teaching: a) files in power point format in the context of lectures, b) files in pdf format for the study of relevant scientific works from the international bibliography in the context of lectures, c) files in pdf format with the content of the lectures, which are communicated to the students through the electronic platform e-class. The contact of the students with the lecturer takes place either directly, through face-to-face meetings or via email, or indirectly through announcements that are posted on the bulletin board and the website of the Department. In these ways, students are informed about the program of lectures, possible modifications to it, as well as the program of presentations based on the scientific assignments assigned to them.	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	13
	Study and analysis of bibliography	22
	Independent study (preparation of a public presentation)	10
	Independent study (preparation for the exams in the whole taught material)	30
	Total	***75***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS	The assessment of students is carried out in the Greek language. Students are evaluated based on their performance in the public presentation of a scientific article	

Detailed description of the evaluation procedures: *Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc.* *Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	that falls within the subject of the course (50% of the final grade) and in a written assignment related to the scientific article they presented (50% of the final grade). The presentation is a group presentation and students are invited to present a scientific article (original or review), which is relevant to the subject of the course and has been published in a reputable relevant international scientific journal. Students' grades are based on comfort in presenting the article assigned to them and an in-depth understanding of the subject to which it refers. At the end of the presentation, students receive questions from the lecturer and their co-students to be evaluated for the theoretical knowledge they have acquired.

5. SUGGESTED BIBLIOGRAPHY

-Suggested bibliography:

Codex Alimentarius, Food Hygiene (BASIC Texts), 4th edition, ISBN 978-92-5-105913-5

Mortimore, S. & Wallace, C., HACCP, A Practical Approach, 2013, Springer US, 978-1-4899-8640-5

Sibel Roller, Βασική Μικροβιολογία και Υγιεινή για Επαγγελματίες των Τροφίμων, 2014, ΕκδόσειςΠαρισιάνου, ISBN 978-960-394-989-3

Τζιά Κ. και Παππά Φ., Ανάλυση επικινδυνότητας στα κρίσιμα σημεία ελέγχου (HACCP) σε χώρουςμαζικής εστίασης. Εκδόσεις Παπασωτηρίου 2005, ISBN 960-7530-59-4

Αρβανιτογιάννης Ι.Σ. και Τζούρος Ν.Η., Το νέο πρότυπο ποιότητας και ασφάλειας τροφίμων ISO22000. Εκδόσεις Σταμούλη 2006, ISBN: 960-351-651-1

Αρβανιτογιάννης Ιωάννης Σ., Κούρτης Λάζαρος, ISO 9000:2000, 1η έκδ./2002, Εκδόσεις ΣταμούληΑΕ, ISBN: 960-351-436-5

Cianfrani Charles A., Tsiakals Joseph G., West John E. (Jack), Κατανοώντας το ISO 9001:2000, 1ηέκδ./2003, Εκδόσεις Δίαυλος ΑΕ, ISBN: 978-960-531-156-8

Course Outline: "7110 - Genetic Predisposition and Lifestyle - Critical Review of the Literature using ICT"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**7110**	**SEMESTER**	**7th**
COURSE TITLE	**Genetic Predisposition and Lifestyle - Critical Review of the Literature using ICT**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	3	
αAdd rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**3**	**3**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	Scientific expertise General Knowledge Skills Development
PREREQUISITE COURSES	No
LANGUAGE OF INSTRUCTION	Greek
LANGUAGE OF EXAMINATION/ASSESSMENT	Greek
THE COURSE IS OFFERED TO ERASMUS STUDENTS	No
COURSE WEBSITE (URL)	https://eclass.uth.gr/courses/DND_U_274/

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το APPENDIX A

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and APPENDIX B*
- *Guidelines for writing Learning Outcomes*

This course aims at a multi-level combination of knowledge acquired throughout the 4 years. It aims to introduce and deepen the student in the field of personalized nutrition and personalized lifestyle in relation to health and disease. Emphasis is placed on the critical evaluation of the literature. The aim of the course is for students to come into contact with the decoding of the determinants of both health and complex and multifactorial diseases. Through critical evaluation of the most up-to-date literature, the aim is for students to cultivate a way of thinking, synthesizing their previous knowledge with new knowledge that will be acquired in the context of the course, about the genetic diversity of the genetic material, lifestyle factors and ultimately their interaction which forms the final phenotype. By the end of the course, the goal is for the student to be able to properly evaluate course-related literature and provide scientifically based personalized advice.

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies, Adapting to new situations Decision-making Individual/Independent work Group/Team work Working in an international environment Working in an interdisciplinary environment Introduction of innovative research	***Project planning and management Respect for diversity and multiculturalism Environmental awareness Social, professional and ethical responsibility and sensitivity to gender issues Critical thinking Development of free, creative and inductive thinking …… (Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….***

- Search for, analysis and synthesis of data and information by the use of appropriate technologies
- Individual/Independent work
- Working in an interdisciplinary environment
- Introduction of innovative research
- Development of free, creative and inductive thinking

3. COURSE CONTENT

- Basic principles of human genetics. Introduction to the Science of Gene-Lifestyle Interactions
- Physical activity as a modifying factor in health and disease
- Sleep and the circadian rhythm as modifying factors in health and disease
- Smoking as a modifying factor in health and disease
- Weight loss, lifestyle and genetic predisposition
- Cardiovascular diseases, lifestyle and genetic predisposition
- Type 2 diabetes mellitus, lifestyle and genetic predisposition
- Obesity prevention: the role of breastfeeding
- Bone density: the role of genes and lifestyle
- The role of genes and lifestyle in intelligence markers
- Non-alcoholic fatty liver disease: the role of genes and lifestyle
- Metabolic syndrome: the role of genes and lifestyle
- Personalized recommendations: are we there yet?

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY ***Face-to-face, in-class lecturing, distance teaching and distance learning etc..***	Face-to-face

<table>
<tr><td>USE OF INFORMATION AND COMMUNICATION TECHNOLOGY
Use of ICT in teaching, Laboratory Education, Communication with students</td><td colspan="2">1. Lectures in power point documents
2. Research or review papers in pdf documents
3. Lectures in pdf documents that are announced to the students through the eclass platform
The students get in touch with the instructor either directly (through face to face contact or email) or indirectly (through notes posted on the poster boards and the website of the Department).</td></tr>
<tr><td rowspan="5">COURSE DESIGN
Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.</td><td>Activity/Method</td><td>Semester workload</td></tr>
<tr><td>Lectures</td><td>30</td></tr>
<tr><td>Study and analysis of bibliography</td><td>15</td></tr>
<tr><td>Independent study</td><td>10</td></tr>
<tr><td>Essay writing</td><td>20</td></tr>
<tr><td>Total</td><td>75</td></tr>
<tr><td>STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS
Detailed description of the evaluation procedures:

Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc.
Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.</td><td colspan="2">Written individual assignment (100% of the final grade) in which the student is asked to critically analyze a scientific article in the field of genetic predisposition and lifestyle. The student will be evaluated based on the depth of the analysis he/she has carried out, the soundness of what he has recorded, as well as his final conclusions.</td></tr>
</table>

5. SUGGESTED BIBLIOGRAPHY

-- Suggested bibliography:

1. Μοριακή Γενετική του Ανθρώπου, Γ. Δεδούσης, Utopia, 2022
2. Handbook of statistical genetics υπό Balding, D. J., Bishop, Martin J., Cannings, Christopher 1942- Chichester, UK ; Hoboken, NJ : J. Wiley & Sons c2007.

-- Scientific journals:

- Journal of Nutrigenetics and Nutrigenomics [online] Available at: https://www.karger.com/Journal/Home/275177
- Genes & Nutrition [online] Available at: https://genesandnutrition.biomedcentral.com/

Course Outline: "7111 - Educational Psychology"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**7111**	**SEMESTER**	**7th**
COURSE TITLE	**Educational Psychology**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	2	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**2**	**3**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	Scientific Expertise, General Knowledge
PREREQUISITE COURSES	No
LANGUAGE OF INSTRUCTION	Greek
LANGUAGE OF EXAMINATION/ASSESSMENT	Greek
THE COURSE IS OFFERED TO ERASMUS STUDENTS	No
COURSE WEBSITE (URL)	

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and* ***APPENDIX B***
- *Guidelines for writing Learning Outcomes*

The course attempts to introduce students to the topics that are the subject of study in Educational Psychology. In particular, the psychological and psychosocial factors related to learning, teaching and students' adaptation are presented. In addition, the role of the modern school as a framework for promoting the development of all students is highlighted.

Expected learning outcomes

Upon successful completion of the course, students are expected to:

- Be able to compare and critically evaluate learning theories
- Have understood the basic psychological and psychosocial factors associated with learning
- Be able to apply the acquired knowledge to deal with students' hypothetical and real cases
- Be able to search for and evaluate relevant research data

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies,
Adapting to new situations
Decision-making
Individual/Independent work
Group/Team work
Working in an international environment
Working in an interdisciplinary environment
Introduction of innovative research
Project planning and management
Respect for diversity and multiculturalism
Environmental awareness
Social, professional and ethical responsibility and sensitivity to gender issues
Critical thinking
Development of free, creative and inductive thinking ……
(Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….

- Search for, analysis and synthesis of data and information by the use of appropriate technologies
- Critical thinking
- Respect for diversity and multiculturalism
- Social, professional and ethical responsibility and sensitivity to gender issues

3. COURSE CONTENT

- Subject of Educational Psychology. Basic concepts.
- Learning theories: Classical dependent learning – Factor learning.
- Learning theories: Bandura's theory of social learning.
- Cognitive psychology and information processing theory.
- Cognitive functions and school learning - constructivism.
- Piaget's theory of cognitive development. Applications
- Vygotsky's theory of cognitive development. Applications.
- Diversity in the classroom and students with special needs.
- Metacognitive functions and learning.
- Self-regulating learning.
- Motivation in education.
- The learning environment. Classroom management.
- Assessment of learning.

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	Face-to-face, Asynchronous distance education	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	Learning process support through the electronic platform e-class. Use of ICT in teaching and communication with students	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	50
	Independent study	25
	Total	***75***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:* *Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc.* *Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	Final written exam (100%) including: • Multiple choice questions	

5. SUGGESTED BIBLIOGRAPHY

-Suggested bibliography:

- O'Donnell A. M., Reeve J., & Smith, J. K. (2021). *Εκπαιδευτική Ψυχολογία. Αναστοχασμός για δράση*. Αθήνα: Gutenberg.

- Elliot, S. N., Kratochwill, T. R., Cook, J. L., & Travers, J. F. (2008). *Εκπαιδευτική Ψυχολογία: Αποτελεσματική διδασκαλία, αποτελεσματική μάθηση*. Αθήνα: Gutenberg.
- Slavin, R. E. (2007). *Εκπαιδευτική Ψυχολογία: Θεωρία και πράξη*. Αθήνα: Μεταίχμιο.
- Schunk, D. H. (2010). *Θεωρίες μάθησης. Μια εκπαιδευτική θεώρηση*. Αθήνα: Μεταίχμιο

-Related Scientific journals:

- British Journal of Educational Psychology
- Contemporary Educational Psychology
- Journal of Educational Psychology
- Learning and Instruction

Course Outline: "7112 - Teaching Life Skills in Education"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**7112**	**SEMESTER**	**7th**
COURSE TITLE	**Teaching Life Skills in Education**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	2	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**2**	**3**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	Scientific Expertise Skills Development General Knowledge
PREREQUISITE COURSES	No
LANGUAGE OF INSTRUCTION	Greek
LANGUAGE OF EXAMINATION/ASSESSMENT	Greek
THE COURSE IS OFFERED TO ERASMUS STUDENTS	No
COURSE WEBSITE (URL)	

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and* ***APPENDIX B***
- *Guidelines for writing Learning Outcomes*

The aim of this course is to present basic concepts of Teaching and in particular strategies for organizing and realizing a didactic design, through students' acquisition of knowledge and skills that will help them to promote the effectiveness of school learning.

Expected learning outcomes

Upon successful completion of the course, students are expected to:

- To recognize and define pedagogical and didactic concepts
- To clarify basic terms and principles regarding Teaching
- To analyze the learning content, teaching methods and forms in a critical way
- To set teaching goals
- To explain the learning process in the school classroom and its distinct phases
- To distinguish teachers' and students' roles

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies,
Adapting to new situations
Decision-making
Project planning and management
Respect for diversity and multiculturalism
Environmental awareness

Individual/Independent work *Group/Team work* *Working in an international environment* *Working in an interdisciplinary environment* *Introduction of innovative research*	*Social, professional and ethical responsibility and sensitivity to gender issues* *Critical thinking* *Development of free, creative and inductive thinking ……* *(Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….*

- Search for, analysis and synthesis of data and information by the use of appropriate technologies
- Individual/Independent work
- Group/Team work
- Critical thinking
- Respect for diversity and multiculturalism
- Social, professional and ethical responsibility and sensitivity to gender issues
- Development of free, creative and inductive thinking

3. COURSE CONTENT

1. The conceptual definition of Teaching
2. Teacher's roles and teaching skills
3. Teaching methods
4. Means of teaching
5. Curricula
6. Didactic design – teaching phases
7. Cognitive and metacognitive skills and strategies
8. Problem solving
9. Self-regulated learning
10. Learning motivation
11. Time management
12. The pedagogical climate
13. Classroom management and discipline

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	Face-to-face, asynchronous distance education	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	• Use of the electronic platform e-class • Use of ICT in teaching and communication with students	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	30
	Project (Didactic design)	20
	Independent learning	25
	Total	**75**
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:* *Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-*	Final written exams (80%) including: • Short- answer questions Written project (20%) including a didactic design	

ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc. *Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	

5. SUGGESTED BIBLIOGRAPHY

-Suggested bibliography (in Greek):

- Ματσαγγούρας, Η. (2000). *Στρατηγικές διδασκαλίας. Η κριτική σκέψη στη διδακτική πράξη.* Αθήνα: Gutenberg.

- Καψάλης, Α. & Νημά, Ε. (2008). *Σύγχρονη Διδακτική.* Θεσσαλονίκη: Εκδόσεις Κυριακίδη.

-Related Scientific Journals: -

Course Outline: "7113 - Modern Pedagogical Trends"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**7113**	**SEMESTER**	**7th**
COURSE TITLE	**Modern Pedagogical Trends**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	2	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**2**	**3**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	Scientific Expertise, General Knowledge
PREREQUISITE COURSES	No
LANGUAGE OF INSTRUCTION	Greek
LANGUAGE OF EXAMINATION/ASSESSMENT	Greek
THE COURSE IS OFFERED TO ERASMUS STUDENTS	No
COURSE WEBSITE (URL)	

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and* ***APPENDIX B***
- *Guidelines for writing Learning Outcomes*

The course "Modern Pedagogical Trends" aims to acquaint students with basic concepts of the Sciences of Education, as well as the profession of teacher. Its aim is to acquaint students with the theoretical directions of modern pedagogical approaches in order to understand the educational process as a creative process of interaction between teacher and students.

Upon successful completion of the course, students are expected to:

- Have understood basic concepts of the Sciences of Education
- To be able to compare and critically evaluate traditional and modern pedagogical approaches
- Have been concerned about the role of the modern teacher

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies,
Adapting to new situations
Decision-making
Individual/Independent work
Group/Team work
Working in an international environment
Working in an interdisciplinary environment
Introduction of innovative research
Project planning and management
Respect for diversity and multiculturalism
Environmental awareness
Social, professional and ethical responsibility and sensitivity to gender issues
Critical thinking
Development of free, creative and inductive thinking ……
(Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….

- Search for, analysis and synthesis of data and information by the use of appropriate technologies

- Individual work
- Group work
- Critical thinking
- Respect for diversity and multiculturalism
- Social, professional and ethical responsibility and sensitivity to gender issues

3. COURSE CONTENT

- Learning & Teaching as procedures, teaching principles, formal, non-formal, informal learning
- Curricula
- Learning theories and teaching practice, Creativity and critical thinking
- Traditional teaching VS modern pedagogical approaches, experiential, participatory, exploratory learning & problem-solving learning
- Didactic design: formulation of objectives
- Didactic design: teaching methods and techniques
- Didactic design: evaluation
- Alternative approaches and methods: Collaborative teaching and learning
- Alternative approaches and methos: The project method
- Alternative approaches and methods: Differentiated teaching
- ICT in education
- The role of the teacher in modern pedagogical approaches. Personal theories and beliefs of educators
- Metacognition, the “mistake” and its exploitation
- Co-education and vulnerable social groups

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	Face-to-face	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	Use of the electronic platform e-class. Learning process support through	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	50
	Independent study	25
	Total	***75***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:* *Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc.*	Final written exam (100%) including: • Multiple choice questions	

Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.	

5. SUGGESTED BIBLIOGRAPHY

-Suggested bibliography:

- Ανδρούσου, Α., & Τσάφος, Β. (επιμ.) (2021). *Επιστήμες της εκπαίδευσης*. Αθήνα: Gutenberg.
- Burtlett, S., & Burton, D. (2019). *Εισαγωγή στις επιστήμες της εκπαίδευσης*. Αθήνα: Gutenberg.

-Related Scientific Journals:

Educational Sciences
Pedagogical Inspection
Preschool and school education

Course Outline: "7114 - School Teaching Practice in Primary and Secondary Education Units"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**7114**	**SEMESTER**	**7th**
COURSE TITLE	**School Teaching Practice in Primary and Secondary Education Units**		
INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits		**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures		4	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4		**4**	**4**
COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	Scientific Expertise, General Knowledge		
PREREQUISITE COURSES	No		
LANGUAGE OF INSTRUCTION	Greek		
LANGUAGE OF EXAMINATION/ASSESSMENT	Greek		
THE COURSE IS OFFERED TO ERASMUS STUDENTS	No		
COURSE WEBSITE (URL)			

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and* ***APPENDIX B***
- *Guidelines for writing Learning Outcomes*

The Teaching Practice of the students in Primary and Secondary Education Schools is connected to the attendance of courses or educational activities related to the science of Nutrition, Dietetics, Food and Health Education in Kindergartens, Primary Schools, High Schools and/or and High School of the Municipality of Trikala, as well as by conducting lessons in these schools (on behalf of the students, a combination of theory and teaching practice), with the main goal of acquiring teaching and pedagogical skills in real conditions.

A part of the exercises takes place at the Department and includes the drafting of a lesson plan and/or educational activities, checklists, micro-teachings, observation, analysis, discussion of teaching objectives and results, utilization of ICT in the learning process, etc. Before the start of the internship, the students are systematically informed on a cognitive, methodological, didactic level, as well as on organizational issues of the Teaching Practice.

The goals for the students are:

- to develop essential abilities and skills that will allow them to respond to today's educational requirements and the data of school life and teaching reality
- to be able to apply in the teaching practice the knowledge they acquired during their studies, and which concern the subject of their specialty
- be able to apply the use of ICT in the learning process and educational activities

- promote team-collaborative teaching and learning (where appropriate) as well as interpersonal relationships and communication in the classroom
- to arouse and maintain the interest of the students
- prevent and treat behavioral problems
- to self-assess in order to improve themselves as teachers
- be able to write a lesson plan and learning outcomes checklist

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies,	*Project planning and management*
Adapting to new situations	*Respect for diversity and multiculturalism*
Decision-making	*Environmental awareness*
Individual/Independent work	*Social, professional and ethical responsibility and sensitivity to gender issues*
Group/Team work	*Critical thinking*
Working in an international environment	*Development of free, creative and inductive thinking ……*
Working in an interdisciplinary environment	*(Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….*
Introduction of innovative research	

• Search, analysis and synthesis of data and information, using the necessary technologies

• Adaptation to new situations

• Decision making

• Autonomous work

• Teamwork

• Work in an interdisciplinary environment

• Respect for diversity and multiculturalism

• Respect for the natural environment

• Demonstrate social, professional and ethical responsibility and sensitivity to gender issues

• Exercise criticism and self-criticism

• Promotion of free, creative and inductive thinking

3. COURSE CONTENT

- In the first stage, students attend lessons/activities in real classrooms (without participating in the process), analyze case studies and are invited to conduct virtual micro-teachings with each other in the Department's premises. In this stage the students draw up the lesson plan and try to cope in the virtual classroom with anything that may arise.
- In the second stage, the students take over the actual class on their own and each one of the group teaches a one-hour lesson or organizes a real school activity, under the supervision of the school teacher, who assesses the student /three by filling in a special form provided by the responsible teacher of the Department. Again, students prepare the plan of the course they will teach, which belongs to the Analytical Curriculum (or the Interdisciplinary Unified Curriculum Framework) and concerns courses or educational activities related to Nutrition Education, Dietetics, Food and Health Education.
- In the third stage, the students are divided into groups where they share the experiences they gained from the second stage, proceed with their self-evaluation by completing a corresponding questionnaire, analyze case studies and complete the requirements of the Teaching Practice, each of them being asked to answer individually in an educational scenario provided to them by the responsible professor of the Department.
- All the above stages are supervised by the responsible teacher of the Department who coordinates the Teaching Practice in Primary and Secondary Education School Units.

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	In person, at the University and in the premises of the cooperating school units	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	Use of ICT in teaching and communication with students (and support of the learning process through the e-class electronic platform)	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Attend lessons/activities in real classrooms (without participating in the process)	15
	Theory - Virtual micro-tutorials	25
	Teaching/organizing an activity in a real school classroom	20
	Analysis of case studies	10
	Self-assessment	10
	Educational scenario work	20
	Total	***100***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:* *Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc.* *Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	Students are assessed: • in the second stage by the teacher of the collaborating school unit, who fills in a special form provided by the responsible professor of the Department who coordinates the process. • in the first and third stages by the responsible professor of the Department who coordinates the process.	

5. SUGGESTED BIBLIOGRAPHY

-Suggested bibliography:

- Σχεδιάζοντας σενάρια διδασκαλίας για την πρακτική άσκηση των φοιτητών, Σοφός Αλιβίζος, ISBN: 9789603339083.
- Οι Υποψήφιοι Εκπαιδευτικοί Παρατηρούν, Παρεμβαίνουν και Αναστοχάζονται (Προτάσεις Υποστήριξης της Πρακτικής τους Άσκησης), Αυγητίδου Σοφία (επιμ.), Τζεκάκη Μαριάννα (επιμ.), Τσάφος Βασίλης (επιμ.), Ανδρούσου Αλεξάνδρα, Γουργιώτου Έφη, Γρηγοριάδης Αθανάσιος, Κακανά Δόμνα-Μίκα, Κορτέση-Δαφέρμου Χαρά, Καμπεζά Μαρία, Μιχαλοπούλου Κατερίνα, Μπιρμπίλη Μαρία, Μπότσογλου Φένια, Παπανδρέου Μαρία, Ρεκαλίδου Γαλήνη, Σφυρόερα Μαρία, ISBN: 9789600117967.
- Ο Αρχάριος Εκπαιδευτικός Ενώπιον της Διδασκαλίας, Goethals, M. Serra - Howard, Rose A. - Sanders, Marie M., ISBN: 9789609732031.

Course Outline: "7121 - Bioinformatics"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**7121**	**SEMESTER**	**7th**
COURSE TITLE	**Bioinformatics**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Lectures	2	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4	**2**	**3**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	Scientific Expertise
PREREQUISITE COURSES	No
LANGUAGE OF INSTRUCTION	Greek
LANGUAGE OF EXAMINATION/ASSESSMENT	Greek
THE COURSE IS OFFERED TO ERASMUS STUDENTS	No
COURSE WEBSITE (URL)	

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and* ***APPENDIX B***
- *Guidelines for writing Learning Outcomes*

The main aim of the course is the familiarization of the students with the field of Bioinformatics, which is referred to the use of informatics tools for the comprehension of the biological procedures at the cellular level. Upon completion of the lectures, the students will have acquired the necessary knowledge regarding the most important and widely used biological databases, the principles of sequence analysis, phylogenetics, genomics and functional genomics.

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies, Adapting to new situations Decision-making Individual/Independent work Group/Team work Working in an international environment Working in an interdisciplinary environment Introduction of innovative research

Project planning and management Respect for diversity and multiculturalism Environmental awareness Social, professional and ethical responsibility and sensitivity to gender issues Critical thinking Development of free, creative and inductive thinking …… (Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….

- Individual/Independent work
- Working in an interdisciplinary environment
- Introduction of innovative research
- Development of free, creative and inductive thinking

3. COURSE CONTENT

- Biological Databases
- Dotplots

- Pairwise alignment
- Homology Search – Blast/PSI-BLAST
- Multiple Sequence analysis/Motifs/Profiles/HMMs
- Principles of Phylogenetics
- Phylogenetic algorithms
- Phylogeny and implementations
- Genomics – Next Generation sequencing technologies, data analysis and implementations

Functional Genomics - technologies, data analysis and implementations

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	Face to face, distance teaching	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	1. Lectures in power point documents 2. Research or review papers in pdf documents 3. Laptops for the projection of relevant videos 4. The lectures in pdf documents that are announced to the students through the eclass platform The students get in touch with the instructor either directly (through face to face contact or email) or indirectly (through notes posted on the poster boards and the website of the Department).	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Lectures	2 × 13 = 26
	Literature analysis	10
	Preparation for the exams	39
	Total	***75***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:* *Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc.* *Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	The assessment language is Greek. The performance of the students is assessed through written exams.	

5. SUGGESTED BIBLIOGRAPHY

- Suggested bibliography:

- Jonathan Pevsner, Βιοπληροφορική και Λειτουργική Γονιδιωματική. ΑΚΑΔΗΜΑΪΚΕΣ ΕΚΔΟΣΕΙΣ Ι. ΜΠΑΣΔΡΑ & ΣΙΑ Ο.Ε., 2019.
- Arthur M. Lesk., Εισαγωγή στη Βιοπληροφορική. ΥΤΟΡΙΑ ΕΚΔΟΣΕΙΣ Μ. ΕΠΕ, 2021.

- Scientific journals:

- Bioinformatics
- BMC Bioinformatics
- Frontiers in Bioinformatics

Course Outline: "TH - Thesis"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**TH**	**SEMESTER**	**7th and 8th**
COURSE TITLE	**Thesis**		
COURSE TYPE Background knowledge, Scientific expertise, General Knowledge, Skills Development	General Knowledge Skills Development		
ECTS	**12**		
WORKLOAD	**300**		
PREREQUISITE COURSES	No		
LANGUAGE OF INSTRUCTION	GREEK		
LANGUAGE OF EXAMINATION/ASSESSMENT	GREEK		
THE COURSE IS OFFERED TO ERASMUS STUDENTS	No		
COURSE WEBSITE (URL)			

2. LEARNING OUTCOMES

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το

APPENDIX A

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and*

APPENDIX B

- *Guidelines for writing Learning Outcomes*

The diploma thesis aims to provide students the opportunity to work on research. It may be either bibliographic or research thesis. Students are expected to use methods and technological means (e.g. bibliographic search engines and/or statistical software and/or software for the preparation and presentation of the results of their thesis) to perform an in-depth literature review on the topic they selected and present it to an audience.

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies, Adapting to new situations Decision-making Individual/Independent work Group/Team work Working in an international environment Working in an interdisciplinary environment Introduction of innovative research

Project planning and management Respect for diversity and multiculturalism Environmental awareness Social, professional and ethical responsibility and sensitivity to gender issues Critical thinking Development of free, creative and inductive thinking …… (Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….

- Search for, analysis and synthesis of data and information
- Decision-making
- Individual/Independent work Group/Team work
- Introduction of innovative research
- Project planning and management
- Social, professional and ethical responsibility and sensitivity to gender issues
- Development of free, creative and inductive thinking

3. COURSE CONTENT

Students select a topic for their diploma thesis, in collaboration with their supervisor. Diploma theses may be either bibliographic or research theses. The preparation and evaluation of the diploma theses are based on the relevant regulation of the Department of Nutrition-Dietetics and includes the submission of the thesis in written form and its public, oral presentation.

Course Outline: "PL - Placement for Practical Training"

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**PL**	**SEMESTER**	**8th**
COURSE TITLE	**Placement for Practical Training**		

INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	**WEEKLY TEACHNG HOURS**	**CREDITS**
Placement for Practical Training		18
in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits		**18**

COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	Scientific expertise
PREREQUISITE COURSES	YES
LANGUAGE OF INSTRUCTION	Greek
LANGUAGE OF EXAMINATION/ASSESSMENT	Greek
THE COURSE IS OFFERED TO ERASMUS STUDENTS	YES
COURSE WEBSITE (URL)	

2. LEARNING OUTCOMES

Learning Outcomes

Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:Συμβουλευτείτε το ***APPENDIX A***

- *Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.*
- *Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and* ***APPENDIX B***
- *Guidelines for writing Learning Outcomes*

The Placement is an important part of Higher Education, as it is a way of connecting theory with practice and actively contributes to the better utilization of the knowledge and skills acquired by students during their studies, as well as to the easier and more beneficial integration of graduates in the labor market. The Placement aims, through the placement of students in institutions and organizations, in the consolidation of the cooperation between the Departments and the Business / Business environment.

Upon completion of the course students are expected to:

- get acquainted with the working environment and the requirements of a professional setting that will allow them to obtain realistic views on labor relations, the level of earnings and the labor market, as they are shaped in the Greek and European context.
- be able to apply theoretical knowledge in practice, in a controlled but real work environment.
- have the opportunity of future employment in the Companies, Services and Organizations where they carry out the Placement (connection with the labor marker and society).

General Competences

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies, Adapting to new situations *Decision-making* *Individual/Independent work* *Group/Team work* *Working in an international environment* *Working in an interdisciplinary environment* *Introduction of innovative research Project planning and management* *Respect for diversity and multiculturalism* *Environmental awareness* *Social, professional and ethical responsibility and sensitivity to gender issues* *Critical thinking* *Development of free, creative and inductive thinking …… (Other…….citizenship, spiritual freedom, social awareness, altruism etc.) …….*
• *Search for, analysis and synthesis of data and information by the use of appropriate technologies* • *Adapting to new situations* • *Respect for diversity and multiculturalism* • *Decision-making* • *Independent work* • *Teamwork* • *Work in an interdisciplinary environment* • *Promoting free, creative and inductive thinking*

3. COURSE CONTENT

The Placement takes place in any region of student's choice. Its duration is a total of five (5) months:

- five (5) months Placement in Community Settings (such as dietetic offices, food industries, Open Protection Centre for the Elderly (KAPI), nursing homes, camps, sports clubs, educational structures)
  or
- five (5) months Placement in Clinical/Healthcare Settings (such as hospitals, Healthcare Centers, rehabilitation centers, medical centers - clinics)

4. TEACHING METHODS - ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc..*	Face-to-face, at the premises of the collaborating bodies	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY *Use of ICT in teaching, Laboratory Education, Communication with students*	- Use of the Centralized Internship Support system for Greek Higher Education Students of the Greek Ministry of Education and Religious Affairs "Atlas" - Communication with institutions and students (via telephone, e-mail) - Archiving by electronic means	
COURSE DESIGN *Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	***Activity/Method***	***Semester workload***
	Placement for practical training	450
	Total	***450***
STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *Detailed description of the evaluation procedures:*	Evaluation by the health professionals who work in the respective fields of the Placement and are responsible for the training of the students, as well as by the coordinator (faculty member) as designated for each student.	

Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other……etc. *Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	Final evaluation of the total Placement results from the score in each field: • Placement in Community • Internship in Clinical/Healthcare Settings