



HAROKOPIO UNIVERSITY OF ATHENS
SCHOOL OF HEALTH SCIENCES & EDUCATION
DEPARTMENT OF NUTRITION & DIETETICS
POSTGRADUATE PROGRAM “Applied Nutrition & Dietetics”

El. Venizelou 70, 17676, Athens, Greece – ☎: +30 210 9549100, FAX: +30 210 9577050

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Table of Full-time programme courses

A¹ Semester Courses		HOURS	CREDITS	ECTS[#]
Sub-direction Clinical Nutrition				
ΕΔ.Δ.Π 100	Biostatistics-Research Methodology	4	5	7
ΕΔ.Δ.Π.101	Advanced topics in Biochemistry	3	4	8
ΕΔ.Δ.Π.102	Advanced topics in Metabolism and Nutrition	3	4	8
ΕΔ.Δ.Π.103	Current Nutrition and Nutritional Assessment topics	3	4	7
Sub-direction Nutrition and Exercise				
ΕΔ.Δ.Π.100	Biostatistics-Research Methodology	4	5	7
ΕΔ.Δ.Π.104	Advanced topics in Biochemistry & Nutrition Metabolism	4	5	8
ΕΔ.Δ.Π.105	Exercise Physiology	3	4	8
ΕΔ.Δ.Π.103	Current Nutrition and Nutritional Assessment topics	3	4	7
Sub-direction Molecular Nutrition				
ΕΔ.Δ.Π.100	Biostatistics-Research Methodology	4	5	7
ΕΔ.Δ.Π.104	Advanced topics in Biochemistry & Nutrition Metabolism	4	5	8
ΕΔ.Δ.Π.109	Nutrigenetics	3	4	8
ΕΔ.Δ.Π.103	Current Nutrition and Nutritional Assessment topics	3	4	7

[#]ECTS: European Credit Transfer and Accumulation System



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B' Semester Courses		HOURS	CREDITS	ECTS#
Sub-direction Clinical Nutrition				
ΕΔ.Δ.Π.200	Advanced Adult Clinical Nutrition	4	5	8
ΕΔ.Δ.Π.201	Advanced Pediatric Clinical Nutrition	3	4	8
	<i>Two elective compulsory courses from the list of B' Semester courses</i>	6	8	14
Sub-direction Nutrition and Exercise				
ΕΔ.Δ.Π.202	Exercise Biochemistry and Metabolism	3	4	8
ΕΔ.Δ.Π.203	Sports Nutrition	3	4	8
	<i>Two elective compulsory courses from the list of B' Semester courses</i>	6	8	14
Sub-direction Molecular Nutrition				
ΕΔ.Δ.Π.208	Epigenetics	3	4	8
ΕΔ.Δ.Π.209	Bioinformatics	3	4	8
	<i>Two elective compulsory courses from the list of B' Semester courses</i>	6	8	14

List by choice of compulsory courses of the B' Semester

Courses		HOURS	CREDITS	ECTS#
ΕΔ.Δ.Π.210	Nutrition, Lifestyle and Genetic Predisposition	3	4	7
ΕΔ.Δ.Π.213	Exercise Testing	3	4	7
ΕΔ.Δ.Π.214	Metabolomics	3	4	7
ΕΔ.Δ.Π.304	Diet and Physical Activity in Body Weight Management	3	4	7



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C' Semester Courses		HOURS	CREDITS	ECTS[#]
All sub-directions				
ΕΔ.Δ. 400	Master Thesis		12	23
	<i>An elective compulsory course from the list of C' Semester courses</i>	3	4	7

List by choice of compulsory courses of the C' Semester

Courses	HOURS	CREDITS	ECTS[#]	
Nutrition and Signal Transduction Pathways	3	4	7	
ΕΔ.Δ.Π.301				
ΕΔ.Δ.Π.303	Nutrition for Elite Athletes	3	4	7
ΕΔ.Δ.Π.219	Inborn Metabolic Diseases	3	4	7

#ECTS: European Credit Transfer and Accumulation System

Table of Part-time programme courses

1st year courses		HOURS	CREDITS	ECTS[#]
Sub-direction Clinical Nutrition				
ΕΔ.Δ.Μ.100	Biostatistics-Research Methodology	4	5	7
ΕΔ.Δ.Μ.101	Advanced topics in Biochemistry	3	4	8
ΕΔ.Δ.Μ.102	Advanced topics in Metabolism and Nutrition	3	4	8
ΕΔ.Δ.Μ.103	Current Nutrition and Nutritional Assessment topics	3	4	7
ΕΔ.Δ.Μ.200	Advanced Adult Clinical Nutrition	4	5	8



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Sub-direction Nutrition and Exercise				
ΕΔ.Δ.Μ.100	Biostatistics-Research Methodology	4	5	7
ΕΔ.Δ.Μ.104	Advanced topics in Biochemistry & Nutrition Metabolism	4	5	8
ΕΔ.Δ.Μ.105	Exercise Physiology	3	4	8
ΕΔ.Δ.Μ.103	Current Nutrition and Nutritional Assessment topics	3	4	7
ΕΔ.Δ.Μ.203	Sports Nutrition	3	4	8

Sub-direction Molecular Nutrition				
ΕΔ.Δ.Μ.100	Biostatistics-Research Methodology	4	5	7
ΕΔ.Δ.Μ.104	Advanced topics in Biochemistry & Nutrition Metabolism	4	5	8
ΕΔ.Δ.Μ.109	Nutrigenetics	3	4	8
ΕΔ.Δ.Μ.103	Current Nutrition and Nutritional Assessment topics	3	4	7
ΕΔ.Δ.Μ. 209	Bioinformatics	3	4	8

#ECTS: European Credit Transfer and Accumulation System

2nd year courses		HOURS	CREDITS	ECTS #
Sub-direction Clinical Nutrition				
ΕΔ.Δ.Μ.201	Advanced Pediatric Clinical Nutrition	3	4	8
<i>Three elective compulsory courses from the list of 2nd year courses</i>		9	12	21



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Sub-direction Nutrition and Exercise				
ΕΔ.Δ.Μ.202	Exercise Biochemistry and Metabolism	3	4	8
	<i>Three elective compulsory courses from the list of 2nd year courses</i>	9	12	21

Sub-direction Molecular Nutrition				
ΕΔ.Δ.Μ.208	Epigenetics	3	4	8
	<i>Three elective compulsory courses from the list of 2nd year courses</i>	9	12	21

List by choice of compulsory courses of the 2nd year

Students choose two (2) courses

	Courses	HOURS	CREDITS	ECTS #
ΕΔ.Δ.Μ.210	Nutrition, Lifestyle and Genetic Predisposition	3	4	7
ΕΔ.Δ.Μ.213	Exercise Testing	3	4	7
ΕΔ.Δ.Μ.214	Metabolomics	3	4	7
ΕΔ.Δ.Μ.304	Diet and Physical Activity in Body Weight Management	3	4	7

Students choose one (1) course

ΕΔ.Δ.Μ.301	Nutrition and Signal Transduction Pathways	3	4	7
ΕΔ.Δ.Μ.303	Nutrition for Elite Athletes	3	4	7
ΕΔ.Δ.Μ.219	Inborn Metabolic Diseases	3	4	7



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	E' Semester	CREDITS	ECTS[#]
	All sub-directions		
EΔ.Δ. 400	Master Thesis	12	23



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COURSE OUTLINE

ΕΔ.Δ.Π.100 & ΕΔΔ.Μ.100 – BIOSTATISTICS-RESEARCH METHODOLOGY

(1) GENERAL

SCHOOL	HEALTH SCIENCES AND EDUCATION		
ACADEMIC UNIT	DEPARTMENT OF NUTRITION AND DIETETICS		
LEVEL OF STUDIES	MASTER OF SCIENCE		
COURSE CODE	ΕΔ.Δ.Π.100	SEMESTER	A' Semester (Full time programme, FT)
	ΕΔ.Δ.Μ.100		1st year (Part time programme, PT)
COURSE TITLE	BIOSTATISTICS-RESEARCH METHODOLOGY		
COURSE INSTRUCTORS	Demosthenes Panagiotakos, Professor		
INDEPENDENT TEACHING ACTIVITIES <i>if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits</i>		TEACHING HOURS	CREDITS
Lectures		Total: 52 FT: 4/week PT: 6/month	8
<i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).</i>			
COURSE TYPE	General background		



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<i>general background, special background, specialised general knowledge, skills development</i>	
PREREQUISITE COURSES:	None
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek
IS THE COURSE OFFERED TO ERASMUS STUDENTS	No
COURSE WEBSITE (URL)	https://eclass.hua.gr/courses/DIET111/

(2) LEARNING OUTCOMES

<p>Learning outcomes</p> <p>The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.</p> <p>Consult Appendix A</p> <ul style="list-style-type: none"> • Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area • Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B • Guidelines for writing Learning Outcomes 									
<p>Aim of the course is to help students understand research methodologies in health sciences, and particularly in nutrition. Students will be taught principles of epidemiologic design, clinical trials, meta-analysis and data synthesis, as well as statistical methods in order to be able to achieve decisions in medical research.</p> <p>Upon successful completion of the course, students are expected to:</p> <ul style="list-style-type: none"> - get to know the principles of research methodologies in health sciences, - understand the basic techniques of nutritional and biological statistical analysis data, - to be able to process the data through computer programs. 									
<p>General Competences</p> <p>Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">Search for, analysis and synthesis of data and information, with the use of the necessary technology</td> <td style="width: 50%;">Project planning and management</td> </tr> <tr> <td>Adapting to new situations</td> <td>Respect for difference and multiculturalism</td> </tr> <tr> <td>Decision-making</td> <td>Respect for the natural environment</td> </tr> <tr> <td>Working independently</td> <td>Showing social, professional and ethical responsibility and sensitivity to gender issues</td> </tr> </table>		Search for, analysis and synthesis of data and information, with the use of the necessary technology	Project planning and management	Adapting to new situations	Respect for difference and multiculturalism	Decision-making	Respect for the natural environment	Working independently	Showing social, professional and ethical responsibility and sensitivity to gender issues
Search for, analysis and synthesis of data and information, with the use of the necessary technology	Project planning and management								
Adapting to new situations	Respect for difference and multiculturalism								
Decision-making	Respect for the natural environment								
Working independently	Showing social, professional and ethical responsibility and sensitivity to gender issues								



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<i>Team work</i>	<i>Criticism and self-criticism</i>
<i>Working in an international environment</i>	<i>Production of free, creative and inductive thinking</i>
<i>Working in an interdisciplinary environment</i>	<i>... ..</i>
<i>Production of new research ideas</i>	<i>Others...</i>
	<i>.....</i>

- Search for, analysis and synthesis of data and information, with the use of the necessary technology
- Working independently
- Production of free, creative and inductive thinking

(3) SYLLABUS

- Introduction to scientific research in health sciences.
- Bioethics. The institutional and ethical dimensions when carrying out research.
- Principles of data synthesis and analysis.
- Sampling. Required sample size.
- Epidemiologic studies. Prevalence studies, retrospective studies, prospective studies.
- Indicators, rates, ratios, odds ratio, relative ratio.
- Clinical trials. Design & Analysis.
- Hypothesis tests of qualitative variables (χ^2 test, Mantel–Haenszel test).
- Hypothesis tests of quantitative variables (t-test, ANOVA, RMANOVA).
- Correlation. Simple & Multiple Linear Regression.
- Logistic Regression.
- Survival analysis (Cox PH models).
- Cost effective and cost benefit analyses
- Financial evaluation techniques in the field of health.
- Questionnaires development and validity.
- Holistic nutrition assessment: Dietary patterns and indicators.
- Interpretation and Utilization of the Data of the National Health Surveillance Systems Population.
- Meta-analysis
- Databases in the field of Health sciences (PubMed, Scopus, SCI).
- Evaluation of a research project (impact factor, references, etc.).
- Techniques and Approaches to the presentation of research data. Use of PC programs. Applications.
- Publications: Procedure and Ethics for Authors, Reviewers, and Readers.

(4) TEACHING and LEARNING METHODS - EVALUATION

DELIVERY <i>Face-to-face, Distance learning, etc.</i>	FT: Face-to-face PT: Face-to-face and distance learning
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<p style="text-align: center;">USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY</p> <p><i>Use of ICT in teaching, laboratory education, communication with students</i></p>	<ul style="list-style-type: none"> - Use of Power Point for lectures presentation - Use of asynchronous e-learning platform for supporting learning procedure and as means of communication with students 														
<p style="text-align: center;">TEACHING METHODS</p> <p><i>The manner and methods of teaching are described in detail.</i></p> <p><i>Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc.</i></p> <p><i>The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS</i></p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Activity</th> <th style="text-align: center;">Semester workload</th> </tr> </thead> <tbody> <tr> <td>Lectures</td> <td style="text-align: center;">52</td> </tr> <tr> <td>Tutoring</td> <td style="text-align: center;">18</td> </tr> <tr> <td>Essay preparation</td> <td style="text-align: center;">60</td> </tr> <tr> <td>Essay presentation</td> <td style="text-align: center;">12</td> </tr> <tr> <td>Self-study</td> <td style="text-align: center;">98</td> </tr> <tr> <td>Course total</td> <td style="text-align: center;">242</td> </tr> </tbody> </table>	Activity	Semester workload	Lectures	52	Tutoring	18	Essay preparation	60	Essay presentation	12	Self-study	98	Course total	242
Activity	Semester workload														
Lectures	52														
Tutoring	18														
Essay preparation	60														
Essay presentation	12														
Self-study	98														
Course total	242														
<p style="text-align: center;">STUDENT PERFORMANCE EVALUATION</p> <p><i>Description of the evaluation procedure</i></p> <p><i>Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other</i></p> <p><i>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i></p>	<ul style="list-style-type: none"> - The language of evaluation is Greek - The method of evaluation is a written examination at the end of the semester regarding Research Methodology and a written essay and laboratory work regarding Biostatistics. 														

(5) ATTACHED BIBLIOGRAPHY

<ul style="list-style-type: none"> - Παναγιωτάκος ΔΒ., (2012). Μεθοδολογία της έρευνας και της Ανάλυσης δεδομένων, για τις επιστήμες της υγείας, Β' έκδοση. Εκδόσεις ΔΙΟΝΙΚΟΣ. - Σταυρινός Β, Παναγιωτάκος Δ, (2007). Βιοστατιστική, εκδόσεις Gutenberg. - Ιωαννίδης Ι, (2002). Αρχές Αποδεικτικής Ιατρικής, εκδόσεις Λίτσας. - Monsen RE (1992). Research: Successful Approaches, The American Dietetic Association
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ΕΔ.Δ.Π.101 & ΕΔ.Δ.Μ.101 – ADVANCED TOPICS IN BIOCHEMISTRY

(6) GENERAL

SCHOOL	HEALTH SCIENCES AND EDUCATION		
ACADEMIC UNIT	DEPARTMENT OF NUTRITION AND DIETETICS		
LEVEL OF STUDIES	MASTER OF SCIENCE		
COURSE CODE	ΕΔ.Δ.Π.101	SEMESTER	A' Semester (Full time programme, FT)
	ΕΔ.Δ.Μ.101		1st year (Part time programme, PT)
COURSE TITLE	ADVANCED TOPICS IN BIOCHEMISTRY		
COURSE INSTRUCTORS	Tzortzis Nomikos, Associate Professor Elizabeth Fragopoulou, Associate Professor		
INDEPENDENT TEACHING ACTIVITIES <i>if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits</i>		TEACHING HOURS	CREDITS
Lectures		Total: 39 FT: 3/week PT: 4-5/month	8
<i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).</i>			
COURSE TYPE	Special background		



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<i>general background, special background, specialised general knowledge, skills development</i>	
PREREQUISITE COURSES:	None
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek
IS THE COURSE OFFERED TO ERASMUS STUDENTS	Yes
COURSE WEBSITE (URL)	FT: https://eclass.hua.gr/courses/DIET123/ PT: https://eclass.hua.gr/courses/DIET124/

(7) LEARNING OUTCOMES

<p>Learning outcomes</p> <p><i>The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.</i></p> <p><i>Consult Appendix A</i></p> <ul style="list-style-type: none"> • <i>Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area</i> • <i>Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B</i> • <i>Guidelines for writing Learning Outcomes</i> 				
<p>Upon successful completion of the course, students are expected to:</p> <ul style="list-style-type: none"> - Acquire specialized knowledge in the regulation of metabolism and cell homeostasis. - Understand the basic cellular mechanisms that regulate the metabolism of macronutrients. - Get acquainted with the main allosteric, hormonal and genetic mechanisms that regulate the metabolism of dietary macronutrients (carbohydrates, lipids, proteins/amino acids). - Be able to compare the differences in the regulation of metabolism in the various organs based on their physiological role. - Develop the ability to use online databases, select appropriate articles for each topic, write and present various research topics related to the course. - Handle complex information and acquire the ability to critically interpret and present research data in the field of macronutrient biochemistry. 				
<p>General Competences</p> <p><i>Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?</i></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;"><i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i></td> <td style="width: 50%;"><i>Project planning and management</i></td> </tr> <tr> <td><i>Adapting to new situations</i></td> <td><i>Respect for difference and multiculturalism</i></td> </tr> </table>	<i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i>	<i>Project planning and management</i>	<i>Adapting to new situations</i>	<i>Respect for difference and multiculturalism</i>
<i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i>	<i>Project planning and management</i>			
<i>Adapting to new situations</i>	<i>Respect for difference and multiculturalism</i>			



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Decision-making	Respect for the natural environment
Working independently	Showing social, professional and ethical responsibility and sensitivity to gender issues
Team work	Criticism and self-criticism
Working in an international environment	Production of free, creative and inductive thinking
Working in an interdisciplinary environment
Production of new research ideas	Others...

<ul style="list-style-type: none"> - Search for, analysis and synthesis of data and information, with the use of the necessary technology - Working independently - Production of free, creative and inductive thinking 	

(8) SYLLABUS

<ul style="list-style-type: none"> - Introduction to metabolism - Enzymology-mechanisms of enzyme regulation. - Biological membranes – Mechanisms of transport through membranes. - Hormones: Classification, mode of action and signal transduction. - Regulation of carbohydrate, lipid, protein-amino acid metabolism. - Metabolism and main patho-physiological mechanisms (oxidation, hemostasis and inflammation).
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(9) TEACHING and LEARNING METHODS - EVALUATION

DELIVERY <i>Face-to-face, Distance learning, etc.</i>	FT: Face-to-face PT: Face-to-face and distance learning												
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i>	<ul style="list-style-type: none"> - Use of Power Point for lectures presentation - Use of asynchronous e-learning platform for supporting learning procedure - Use of e-mail and online platforms as means of communication with students - Reference to internet sites related to the curriculum 												
TEACHING METHODS <i>The manner and methods of teaching are described in detail.</i> <i>Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational</i>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Activity</th> <th style="text-align: center;">Semester workload</th> </tr> </thead> <tbody> <tr> <td>Lectures</td> <td style="text-align: center;">33</td> </tr> <tr> <td>Tutoring</td> <td style="text-align: center;">6</td> </tr> <tr> <td>Essay preparation</td> <td style="text-align: center;">75</td> </tr> <tr> <td>Essay presentation</td> <td style="text-align: center;">6</td> </tr> <tr> <td>Self-study</td> <td style="text-align: center;">120</td> </tr> </tbody> </table>	Activity	Semester workload	Lectures	33	Tutoring	6	Essay preparation	75	Essay presentation	6	Self-study	120
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Lectures	33												
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<p>visits, project, essay writing, artistic creativity, etc.</p> <p>The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS</p>	<table border="1" style="width: 100%;"> <tr> <td style="width: 70%;">Course total</td> <td style="width: 30%; text-align: center;">240</td> </tr> </table>	Course total	240
Course total	240		
<p style="text-align: center;">STUDENT PERFORMANCE EVALUATION</p> <p><i>Description of the evaluation procedure</i></p> <p><i>Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other</i></p> <p><i>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i></p>	<ul style="list-style-type: none"> - The language of evaluation is Greek - The language of evaluation for Erasmus students is English - The method of evaluation is a written examination accounting for the 70% of the final grade and a essay (includes written work and public presentation accounting for the 30% of the final grade. In the PT programme, the written exam takes place in two stages. - The criteria and methods of evaluation are announced at the beginning of the semester and they are uploaded at the e-class. 		

(10) ATTACHED BIBLIOGRAPHY

<ul style="list-style-type: none"> - “Lehninger Principles of Biochemistry”, Nelson DL, COX MM, 8th Edition, Editor: W.H. Freeman, 2021. - “Biochemistry”, Berg JM, Tymoczko JL, Gatto GJ, Hines JK, Styer JL, 10th edition, Editor: MacMillan Learning, 2023 - “Biochemistry”, Garrett RH, Grisham CM, 6th Edition, Editor: Cengage Learning, 2016



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ΕΔ.Δ.Π.102 & ΕΔ.Δ.Μ.102 – ADVANCED TOPICS IN METABOLISM AND NUTRITION

1. GENERAL

SCHOOL	HEALTH SCIENCES AND EDUCATION		
ACADEMIC UNIT	DEPARTMENT OF NUTRITION AND DIETETICS		
LEVEL OF STUDIES	MASTER OF SCIENCE		
COURSE CODE	ΕΔ.Δ.Π. 102 ΕΔ.Δ.Μ.102	SEMESTER	A' Semester (Full time programme, FT) 1 st year (Part time programme, PT)
COURSE TITLE	ADVANCED TOPICS IN METABOLISM AND NUTRITION		
COURSE INSTRUCTORS	Konstantinos Tsigos, Professor Katerina Skenderi, PhD, Tutor, EDIP		
INDEPENDENT TEACHING ACTIVITIES <i>if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits</i>	TEACHING HOURS	CREDITS	
Lectures	Total: 39 FT: 3/week PT: 4-5/month	8	
<i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).</i>			
COURSE TYPE <i>general background, special background, specialised general knowledge, skills development</i>	Special background		
PREREQUISITE COURSES:	None		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	Yes		
COURSE WEBSITE (URL)	FT: https://eclass.hua.gr/courses/DIET264/ PT: https://eclass.hua.gr/courses/DIET262/		



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o. LEARNING OUTCOMES

Learning outcomes

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

Consult Appendix A

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

The aim of the course is to analyze: 1) the regulation mechanisms of metabolism of the main substrates and to prove the importance of the physiological regulation of metabolism to maintain health
2) the impact of nutrition on the regulation of appetite/energy metabolism and on the mechanisms of chronic stress and chronic inflammation.

Upon successful completion of the course students are expected to:

- Analyze the regulation mechanisms of the main nutrients
- Understand the metabolic interactions of nutrients during the fed state and post-absorptive state.
- Understand the research methods and technics in biomedical sciences.
- Understand the mechanisms of appetite and energy metabolism regulation, as well as the role of chronic stress in cardiometabolic complications.
- Be able to know the biochemical procedures which occur in the cell and to explain the metabolic adaptations during the acute or chronic inflammation.
- Develop the ability to use online databases, select appropriate articles for each topic, write and present various research topics related to the course.

General Competences

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

Search for, analysis and synthesis of data and information, with the use of the necessary technology	Project planning and management
Adapting to new situations	Respect for difference and multiculturalism
Decision-making	Respect for the natural environment
Working independently	Showing social, professional and ethical responsibility and sensitivity to gender issues
Team work	Criticism and self-criticism
Working in an international environment	Production of free, creative and inductive thinking
Working in an interdisciplinary environment
Production of new research ideas	Others...

- Search for, analysis and synthesis of data and information, with the use of the necessary technology
- Working independently
- Team work
- Production of free, creative and inductive thinking



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o. SYLLABUS

- Review of Energy Metabolism (Metabolism of carbohydrates, lipids and proteins)
- Research methods and technics in Biomedical Sciences
- Hormonal regulation of metabolism and homeostasis
- Metabolic diseases, Obesity and insulin resistance
- Regulation of appetite/energy metabolism and on the mechanisms of chronic stress and chronic inflammation

o. TEACHING and LEARNING METHODS - EVALUATION

<p>DELIVERY <i>Face-to-face, Distance learning, etc.</i></p>	<p>FT: Face-to-face PT: Face-to-face and distance learning</p>												
<p>USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i></p>	<ul style="list-style-type: none"> ● Use of Power Point for lectures presentation ● Use of asynchronous e-learning platform for supporting learning procedure ● Use of e-mail and online platforms as means of communication with students 												
<p>TEACHING METHODS <i>The manner and methods of teaching are described in detail.</i> <i>Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc.</i></p> <p><i>The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS</i></p>	<table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr> <th style="text-align: center;">Activity</th> <th style="text-align: center;">Semester workload</th> </tr> </thead> <tbody> <tr> <td>Lectures</td> <td style="text-align: center;">39</td> </tr> <tr> <td>Essay preparation</td> <td style="text-align: center;">75</td> </tr> <tr> <td>Essay presentation</td> <td style="text-align: center;">6</td> </tr> <tr> <td>Self-study</td> <td style="text-align: center;">120</td> </tr> <tr> <td>Course total</td> <td style="text-align: center;">240</td> </tr> </tbody> </table>	Activity	Semester workload	Lectures	39	Essay preparation	75	Essay presentation	6	Self-study	120	Course total	240
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<p>STUDENT PERFORMANCE EVALUATION <i>Description of the evaluation procedure</i></p> <p><i>Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other</i></p> <p><i>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i></p>	<ul style="list-style-type: none"> ● The language of evaluation is Greek ● The language of evaluation for Erasmus students is English ● The method of evaluation is a written examination accounting for the 50% of the final grade and an essay (includes written work and public presentation accounting for the 50% of the final grade. ● The criteria and methods of evaluation are announced at the beginning of the semester and they are uploaded at the e-class. 												



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o. ATTACHED BIBLIOGRAPHY

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ΕΔ.Δ.Π. 103 & ΕΔ.Δ.Μ. 103 – CURRENT NUTRITION AND NUTRITIONAL ASSESSMENT TOPICS

1. GENERAL

SCHOOL	HEALTH SCIENCES AND EDUCATION		
ACADEMIC UNIT	DEPARTMENT OF NUTRITION AND DIETETICS		
LEVEL OF STUDIES	MASTER OF SCIENCE		
COURSE CODE	ΕΔ.Δ.Π.103 ΕΔ.Δ.Μ.103	SEMESTER	A' Semester (Full time programme, FT) 1 st year (Part time programme, PT)
COURSE TITLE	CURRENT NUTRITION AND NUTRITIONAL ASSESSMENT TOPICS		
COURSE INSTRUCTORS	Antonia Matalas, Professor Yannis Manios, Professor		
INDEPENDENT TEACHING ACTIVITIES <i>if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits</i>		TEACHING HOURS	CREDITS
Lectures		Total: 39 FT: 3/week PT: 4-5/month	7
<i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).</i>			
COURSE TYPE <i>general background, special background, specialised general knowledge, skills development</i>	Special background		
PREREQUISITE COURSES:	None		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	Yes		
COURSE WEBSITE (URL)	FT: https://eclass.hua.gr/courses/DIET163/ PT: https://eclass.hua.gr/courses/DIET172/		



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o. LEARNING OUTCOMES

<p>Learning outcomes</p> <p><i>The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.</i></p> <p>Consult Appendix A</p> <ul style="list-style-type: none"> ● Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area ● Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B ● Guidelines for writing Learning Outcomes 			
<p>Upon successful completion of the course, students are expected to:</p> <ul style="list-style-type: none"> -Develop the ability to use scientific databases, select appropriate studies, synthesize data and concisely present research topics related to the course content -Understand the basic principles of preventive nutrition and their public health implications -Acquire specialized knowledge with respect to the European regulatory framework of nutrition and health claims -Acquire specialized knowledge in nutrition education addressed to children -Recognize and assess high-risk populations and the factors associated with each health problem through the development of critical thinking and the ability to select the appropriate tools for each group/population -Acquire specialized knowledge in the use of digital tools -Understand the current data related to nutritional intake and nutritional counselling in clinical research and practice -Handle complex information and acquire the ability to critically interpret and present research data in the field of nutritional epidemiology 			
<p>General Competences</p> <p><i>Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?</i></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"> <p>Search for, analysis and synthesis of data and information, with the use of the necessary technology</p> <p>Adapting to new situations</p> <p>Decision-making</p> <p>Working independently</p> <p>Team work</p> <p>Working in an international environment</p> <p>Working in an interdisciplinary environment</p> <p>Production of new research ideas</p> </td> <td style="width: 50%; border: none;"> <p>Project planning and management</p> <p>Respect for difference and multiculturalism</p> <p>Respect for the natural environment</p> <p>Showing social, professional and ethical responsibility and sensitivity to gender issues</p> <p>Criticism and self-criticism</p> <p>Production of free, creative and inductive thinking</p> <p>....</p> <p>Others...</p> <p>.....</p> </td> </tr> </table>		<p>Search for, analysis and synthesis of data and information, with the use of the necessary technology</p> <p>Adapting to new situations</p> <p>Decision-making</p> <p>Working independently</p> <p>Team work</p> <p>Working in an international environment</p> <p>Working in an interdisciplinary environment</p> <p>Production of new research ideas</p>	<p>Project planning and management</p> <p>Respect for difference and multiculturalism</p> <p>Respect for the natural environment</p> <p>Showing social, professional and ethical responsibility and sensitivity to gender issues</p> <p>Criticism and self-criticism</p> <p>Production of free, creative and inductive thinking</p> <p>....</p> <p>Others...</p> <p>.....</p>
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<ul style="list-style-type: none"> ● Search for, analysis and synthesis of data and information, with the aid of appropriate IT tools ● Appreciate the implications of preventive nutrition in clinical practice and public health ● Publicly present scientific data ● Working in teams ● Production of free, creative and inductive thinking ● Conduct literature reviews 			



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o. SYLLABUS

- Preventive nutrition and micronutrient supplements
- The Mediterranean diet as a healthy eating model
- Principles and development of nutritional recommendations and nutritional interventions
- Principles, development and use of digital tools in clinical practice and research
- Principles and development of implementation research and effectiveness research
- Modern data in the field of Nutritional intake and Nutritional counselling in clinical research and practice

o. TEACHING and LEARNING METHODS - EVALUATION

<p>DELIVERY <i>Face-to-face, Distance learning, etc.</i></p>	<p>FT: Face-to-face PT: Face-to-face and distance learning</p>														
<p>USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i></p>	<ul style="list-style-type: none"> ● Use of Power Point for lectures presentation ● Use of asynchronous e-learning platform for supporting learning procedure ● Use of e-mail and online platforms as means of communication with students ● Reference to internet sites related to the curriculum 														
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<p>STUDENT PERFORMANCE EVALUATION <i>Description of the evaluation procedure</i></p> <p><i>Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other</i></p> <p><i>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i></p>	<ul style="list-style-type: none"> ● The language of evaluation is Greek ● The language of evaluation for Erasmus students is English ● The method of evaluation is a written examination accounting for the 70% of the final grade and an essay (includes written work and public presentation accounting for the 30% of the final grade. In the PT programme, the written exam takes place in two stages. ● The criteria and methods of evaluation are announced at the beginning of the semester and they are uploaded at the e-class 														



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o. SUGGESTED BIBLIOGRAPHY

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- “Nutrition and Health Claims in the European Union in 2022”, Collins N, PgCert D, and Verhagen H, EU Regulatory Affairs, September 2022
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- “Principles of nutritional assessment”, Gibson R., 3rd edition, 2023



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ΕΔ.Δ.Π.104 & ΕΔ.Δ.Μ.104 – ADVANCED TOPICS IN BIOCHEMISTRY & NUTRITION METABOLISM

1. GENERAL

SCHOOL	HEALTH SCIENCES AND EDUCATION		
ACADEMIC UNIT	DEPARTMENT OF NUTRITION AND DIETETICS		
LEVEL OF STUDIES	MASTER OF SCIENCE		
COURSE CODE	ΕΔ.Δ.Π.104	SEMESTER	A' Semester (Full time programme, FT)
	ΕΔ.Δ.Μ.104		1 st year (Part time programme, PT)
COURSE TITLE	ADVANCED TOPICS IN BIOCHEMISTRY & NUTRITION METABOLISM		
COURSE INSTRUCTORS	Smaragdi Antonopoulou, Professor Konstantinos Anastasiou, Assistant Professor		
INDEPENDENT TEACHING ACTIVITIES <i>if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits</i>		TEACHING HOURS	CREDITS
Lectures		Total: 52 FT: 4/week PT: 4-5/month	8
<i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).</i>			
COURSE TYPE <i>general background, special background, specialised general knowledge, skills development</i>	Special background, Skills Development		
PREREQUISITE COURSES:	None		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	No		
COURSE WEBSITE (URL)	FT: https://eclass.hua.gr/courses/DIET133/ PT: https://eclass.hua.gr/courses/DIET112/		



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ο. LEARNING OUTCOMES

Learning outcomes

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

Consult Appendix A

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

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

- Acquire specialized knowledge in the regulation of metabolism and how this regulation leads to cell and organism homeostasis.
- Understand the basic cellular mechanisms that regulate the metabolism of macronutrients.
- Be able to compare the differences in the regulation of metabolism in the various organs based on their physiological role.
- Be able to discuss inter-organ communication in metabolic regulation.
- Get to know with the main allosteric, hormonal and genetic mechanisms that regulate the metabolism of dietary macronutrients (carbohydrates, lipids, proteins/amino acids).
- Identify and describe the role of alterations in nutrient metabolism in the development and treatment of various diseases.
- Recognize biomedical research methodology and techniques.
- Discuss on the role of lifestyle factors in the prevention or development of metabolic diseases and lifestyle modification in the treatment of metabolic diseases
- Develop the ability to use online databases in research bibliography and critically interpret existing data.
- Communicate and present clearly research findings to a specialized audience.
- Propose research hypotheses and appropriate methodology for studies in the area of nutrition and metabolism.

General Competences

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

Search for, analysis and synthesis of data and information, with the use of the necessary technology	Project planning and management
Adapting to new situations	Respect for difference and multiculturalism
Decision-making	Respect for the natural environment
Working independently	Showing social, professional and ethical responsibility and sensitivity to gender issues
Team work	Criticism and self-criticism
Working in an international environment	Production of free, creative and inductive thinking
Working in an interdisciplinary environment
Production of new research ideas	Others...

- Search for, analysis and synthesis of data and information, with the use of the necessary technology
- Working independently
- Production of new research ideas
- Production of free, creative and inductive thinking



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o. SYLLABUS

- Introduction to metabolism
- Enzymology-mechanisms of enzyme regulation.
- Biological membranes – Mechanisms of transport through membranes.
- Regulation of carbohydrate, lipid, protein-amino acid metabolism.
- Energy metabolism at the level of the whole human organism and organ interactions in metabolic regulation.
- Research methods and techniques in biomedical research.
- Metabolism during starvation, semi-starvation and weight loss.
- Effect of diet composition on weight loss, overall metabolism and the progression of metabolic diseases.
- Alterations in human metabolism in the development of chronic diseases, with emphasis on insulin resistance, glycemic control and hyperlipidemias.
- Diet and exercise interventions for the management of human metabolism alterations.
- Presentation and analysis of selected topics in human metabolism of carbohydrates, lipids and proteins.

o. TEACHING and LEARNING METHODS - EVALUATION

DELIVERY <i>Face-to-face, Distance learning, etc.</i>	FT: Face-to-face PT: Face-to-face and distance learning														
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i>	<ul style="list-style-type: none"> ● Use of Power Point for lectures presentation ● Use of asynchronous e-learning platform for supporting learning procedure ● Use of e-mail and online platforms as means of communication with students ● Reference to internet sites related to the curriculum 														
TEACHING METHODS <i>The manner and methods of teaching are described in detail.</i> <i>Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc.</i> <i>The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS</i>	<table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr> <th style="text-align: center;">Activity</th> <th style="text-align: center;">Semester workload</th> </tr> </thead> <tbody> <tr> <td>Lectures</td> <td style="text-align: center;">44</td> </tr> <tr> <td>Tutoring</td> <td style="text-align: center;">6</td> </tr> <tr> <td>Assignment preparation</td> <td style="text-align: center;">70</td> </tr> <tr> <td>Assignment presentation</td> <td style="text-align: center;">8</td> </tr> <tr> <td>Self-study</td> <td style="text-align: center;">112</td> </tr> <tr> <td>Course total</td> <td style="text-align: center;">240</td> </tr> </tbody> </table>	Activity	Semester workload	Lectures	44	Tutoring	6	Assignment preparation	70	Assignment presentation	8	Self-study	112	Course total	240
Activity	Semester workload														
Lectures	44														
Tutoring	6														
Assignment preparation	70														
Assignment presentation	8														
Self-study	112														
Course total	240														
STUDENT PERFORMANCE EVALUATION <i>Description of the evaluation procedure</i> <i>Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other</i>	<ul style="list-style-type: none"> ● The language of evaluation is Greek ● The method of evaluation is a written examination accounting for 50% of the final grade and an essay (includes written work and public presentation) accounting for 50% of the final grade. In the PT programme, the written exam takes place in two stages. 														



HAROKOPIO UNIVERSITY OF ATHENS

SCHOOL OF HEALTH SCIENCES & EDUCATION

DEPARTMENT OF NUTRITION & DIETETICS

POSTGRADUATE PROGRAM “Applied Nutrition & Dietetics”

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<i>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i>	<ul style="list-style-type: none"> The criteria and methods of evaluation are announced at the beginning of the semester and they are uploaded at the e-class.
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o. ATTACHED BIBLIOGRAPHY

<ul style="list-style-type: none"> “Lehninger Principles of Biochemistry”, Nelson DL, COX MM, 8th Edition, Editor: W.H. Freeman, 2021. “Biochemistry”, Berg JM, Tymoczko JL, Gatto GJ, Hines JK, Styer JL, 10th edition, Editor: MacMillan Learning, 2023 “Biochemistry”, Garrett RH, Grisham CM, 6th Edition, Editor: Cengage Learning, 201 “Metabolic Regulation: A Human Perspective”, KN Frayn, Wiley-Blackwell, 3 edition, 2010 “Advanced Nutrition and Human Metabolism”. SS Gropper, JL Smith, TP Carr, Cengage Learning, 2021. Selected research manuscripts in the area of nutrition and metabolism.
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ΕΔ.Δ.Π.105 & ΕΔ.Δ.Μ.105 – EXERCISE PHYSIOLOGY

1. GENERAL

SCHOOL	HEALTH SCIENCES AND EDUCATION		
ACADEMIC UNIT	DEPARTMENT OF NUTRITION AND DIETETICS		
LEVEL OF STUDIES	MASTER OF SCIENCE		
COURSE CODE	ΕΔ.Δ.Π.105	SEMESTER	A' Semester (Full time programme, FT)
	ΕΔ.Δ.Μ.105		1 st year (Part time programme, PT)
COURSE TITLE	EXERCISE PHYSIOLOGY		
COURSE INSTRUCTORS	Roxane Tenta, Associate Professor Giannis Arnaoutis, Assistant Professor		
INDEPENDENT TEACHING ACTIVITIES <i>if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits</i>		TEACHING HOURS	CREDITS
Lectures		Total: 39 FT: 3/week PT: 4-5/month	8



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Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).		
COURSE TYPE <i>general background, special background, specialised general knowledge, skills development</i>	Special background, Skills development	
PREREQUISITE COURSES:	None	
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek	
IS THE COURSE OFFERED TO ERASMUS STUDENTS	NO	
COURSE WEBSITE (URL)	FT: https://eclass.hua.gr/courses/DIET151/ PT: https://eclass.hua.gr/courses/DIET101/	

o. LEARNING OUTCOMES

<p>Learning outcomes <i>The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.</i></p> <p>Consult Appendix A</p> <ul style="list-style-type: none"> • Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area • Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B • Guidelines for writing Learning Outcomes
<p>The purpose of the course is to present the physiological responses of the human body (cell, organ, tissue, system) both structurally and functionally during acute or long-term exercise. Moreover, to analyze the biological adaptations caused by muscle contraction and, and concomitantly, the effects of systematic exercise in various health parameters, as well as in maximizing the performance of the human body.</p> <p>Upon the completion of the course students are expected to:</p> <ul style="list-style-type: none"> • Understand the basic principles of muscle physiology. • Be informed about the relationship between genetics and athletic performance. • Understand the principles and factors affecting aerobic and anaerobic capacity, and how the body's various functional systems respond to acute and chronic exercise. • Understand the importance and the effect of physical activity in the prevention and/or treatment of diseases. • Develop the ability to use online databases, select appropriate articles for each topic, write and present various research topics related to the course. • Handle complex information and acquire the ability to critically interpret and present research data in the field of exercise physiology.
General Competences



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<p>Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?</p>	
<p>Search for, analysis and synthesis of data and information, with the use of the necessary technology Adapting to new situations Decision-making Working independently Team work Working in an international environment Working in an interdisciplinary environment Production of new research ideas</p>	<p>Project planning and management Respect for difference and multiculturalism Respect for the natural environment Showing social, professional and ethical responsibility and sensitivity to gender issues Criticism and self-criticism Production of free, creative and inductive thinking Others... </p>
<ul style="list-style-type: none"> ● Search for, analysis and synthesis of data and information, with the use of the necessary technology ● Working independently ● Production of free, creative and inductive thinking 	

o. SYLLABUS

<ul style="list-style-type: none"> ● Introduction of Exercise Physiology – The limits of Human Performance ● General principles of muscle molecular physiology ● Genetics and performance ● Aerobic & Anaerobic capacity ● Exercise and cardio/pulmonary function ● Thermoregulation & Thermo-acclimatization ● Exercise and sarcopenia ● Exercise and bone adaptations ● Exercise & oxidative stress ● Mechanisms of short term & long-term training adaptations

o. TEACHING and LEARNING METHODS - EVALUATION

DELIVERY <i>Face-to-face, Distance learning, etc.</i>	<p>FT: Face-to-face PT: Face-to-face and distance learning</p>										
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i>	<ul style="list-style-type: none"> ● Use of Power Point for lectures presentation ● Use of asynchronous e-learning platform for supporting learning procedure ● Use of e-mail and online platforms as means of communication with students ● Reference to internet sites related to the curriculum 										
TEACHING METHODS <i>The manner and methods of teaching are described in detail.</i> <i>Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc.</i>	<table border="1" style="width: 100%;"> <thead> <tr> <th style="text-align: center;">Activity</th> <th style="text-align: center;">Semester workload</th> </tr> </thead> <tbody> <tr> <td>Lectures</td> <td style="text-align: center;">33</td> </tr> <tr> <td>Tutoring</td> <td style="text-align: center;">6</td> </tr> <tr> <td>Essay preparation</td> <td style="text-align: center;">75</td> </tr> <tr> <td>Essay presentation</td> <td style="text-align: center;">6</td> </tr> </tbody> </table>	Activity	Semester workload	Lectures	33	Tutoring	6	Essay preparation	75	Essay presentation	6
Activity	Semester workload										
Lectures	33										
Tutoring	6										
Essay preparation	75										
Essay presentation	6										



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<p>The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS</p>	Self-study	120
	Course total	240
<p>STUDENT PERFORMANCE EVALUATION Description of the evaluation procedure</p> <p><i>Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other</i></p> <p><i>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i></p>	<ul style="list-style-type: none"> ● The language of evaluation is Greek ● The method of evaluation is a written examination accounting for 50% of the final grade and a public presentation accounting for the remaining 50% of the final grade. In the PT programme, the evaluation method is the same. ● The criteria and methods of evaluation are announced at the beginning of the semester and they are uploaded at the e-class. 	

o. ATTACHED BIBLIOGRAPHY

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| <ul style="list-style-type: none"> ● W. Larry Kenney, Jack Wilmore, David Costill. <i>Physiology of Sport and Exercise</i>. 7th Edition. 2019. ● Victor L. Katch & Frank I. Katch <i>Essentials of Exercise Physiology</i>. 4th Edition. 2010 |
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ΕΔ.Δ.Π.109 & ΕΔ.Δ.Μ.109 – NUTRIGENETICS

1. GENERAL

SCHOOL	HEALTH SCIENCES AND EDUCATION		
ACADEMIC UNIT	DEPARTMENT OF NUTRITION AND DIETETICS		
LEVEL OF STUDIES	MASTER OF SCIENCE		
COURSE CODE	ΕΔ.Δ.Π.109	SEMESTER	A' Semester (Full time programme, FT)
	ΕΔ.Δ.Μ.109		1 st year (Part time programme, PT)
COURSE TITLE	NUTRIGENETICS		
COURSE INSTRUCTORS	Georgios Dedoussis, Professor Nikolaos Yiannakouris, Associate Professor		
INDEPENDENT TEACHING ACTIVITIES <i>if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits</i>		TEACHING HOURS	CREDITS
Lectures		Total: 39 FT: 3/week PT: 4-5/month	8
<i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).</i>			
COURSE TYPE <i>general background, special background, specialised general knowledge, skills development</i>	Special background, Skills Development		
PREREQUISITE COURSES:	None		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	YES		
COURSE WEBSITE (URL)	https://eclass.hua.gr/courses/DIET222/		

ο. LEARNING OUTCOMES

Learning outcomes



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

Consult Appendix A

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

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

- Topics that describe the latest data on the analysis of the human genome, the similarities and differences in the genetic makeup of individuals, the percentage of genetic predisposition to chronic diseases and the different effect of dietary intake on health and disease based on the diversity of individuals.
- To manage complex information and acquire the ability to critically interpret and present research data in the field of genetics and the interaction with dietary intake of components.

General Competences

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

Search for, analysis and synthesis of data and information, with the use of the necessary technology	Project planning and management
Adapting to new situations	Respect for difference and multiculturalism
Decision-making	Respect for the natural environment
Working independently	Showing social, professional and ethical responsibility and sensitivity to gender issues
Team work	Criticism and self-criticism
Working in an international environment	Production of free, creative and inductive thinking
Working in an interdisciplinary environment
Production of new research ideas	Others...

- Search for, analysis and synthesis of data and information, with the use of the necessary technology
- Working independently
- Production of new research ideas
- Production of free, creative and inductive thinking

o. SYLLABUS

- Basic principles of human genetics. Introduction to Nutritional Genetics
- Interactions of genetic variants and dietary intake in obesity.
- Assessment of cardiovascular risk using genetic scores and interactions with diet
- Interactions of genes and dietary groups on lipid levels
- Dietary intake of zinc inflammatory markers and aging
- Interactions of genetic variants and dietary intake on glycemic index levels
- Non-alcoholic fatty liver disease. Genetic predisposition and dietary modifiers
- Genetic predisposition to macronutrient intake and alcohol consumption
- Dietary dairy intake, genetics and bone phenotypes
- Genetic regulation of sleep, timing and intake of macronutrients.
- Genetic predisposition to coffee intake. Relationship with health indicators



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o. TEACHING and LEARNING METHODS - EVALUATION

DELIVERY <i>Face-to-face, Distance learning, etc.</i>	FT: Face-to-face PT: Face-to-face and distance learning														
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i>	<ul style="list-style-type: none"> • Use of Power Point for lectures presentation • Use of asynchronous e-learning platform for supporting learning procedure • Use of e-mail and online platforms as means of communication with students • Reference to internet sites related to the curriculum 														
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o. ATTACHED BIBLIOGRAPHY

- Human Molecular Genetics. Georgios Dedoussis. Publisher: Utopia. Year 2022. ISBN: 9786185173531.
- Principles of Nutrigenetics and Nutrigenomics. Raffaele de Caterina, Alfredo J. Martinez, Martin Kohlmeier. Elsevier Science Publishing Co Inc, 2019



HAROKOPIO UNIVERSITY OF ATHENS
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ΕΔ.Δ.Π.200 & ΕΔ.Δ.Μ.200 – ADVANCED ADULT CLINICAL NUTRITION

1. GENERAL

SCHOOL	SCHOOL OF HEALTH SCIENCE AND EDUCATION		
DEPARTMENT	DEPARTMENT OF NUTRITION AND DIETETICS		
LEVEL OF STUDIE	POSTGRADUATE		
COURSE CODE	ΕΔ.Δ.Π. 200	SEMESTER	B' Semester (Full time programme, FT)
	ΕΔ.Δ.Μ. 200		1 st year (Part time programme, PT)
COURSE TITLE	ADVANCED ADULT CLINICAL NUTRITION		
COURSE INSTRUCTORS	Meropi Kontogianni, Associate Professor		
INDEPENDENT TEACHING ACTIVITIES <i>if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits</i>		WEEKLY TEACHING HOURS	ECTS
	Lectures	4 PT: 3/week FT: 4-5/month	8
COURSE TYPE <i>general background, special background, specialised general knowledge, skills development</i>	Scientific area		
PREREQUISITE COURSES:	None		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS:	No		
COURSE WEBSITE (URL)	https://dnd.hua.gr/course/eidika-themata-klinikis-diatrofis-enilikon/ http://eclass.hua.gr/courses/DIET118/		



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o. LEARNING OUTCOMES

Learning outcomes

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

Consult Appendix A

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

The aim of the module is students to understand the pathophysiological mechanisms of diseases, which require certain nutritional interventions, as a part of their management or their prevention, as well as to extensively review the dietary treatment of these diseases and relevant research activity.

Students are expected to:

- Become familiar with chronic non communicable diseases and other clinical conditions in which nutritional requirements are different from those of healthy adults.
- Become familiar with the up-to-date nutritional care of the abovementioned conditions.
- Review the recent scientific activities and literature regarding the dietary management of clinical conditions during adulthood.
- Attend the presentation of clinical case studies with emphasis on their nutritional management.

General Competences

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

<i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i>	<i>Project planning and management</i>
<i>Adapting to new situations</i>	<i>Respect for difference and multiculturalism</i>
<i>Decision-making</i>	<i>Respect for the natural environment</i>
<i>Working independently</i>	<i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i>
<i>Team work</i>	<i>Criticism and self-criticism</i>
<i>Working in an international environment</i>	<i>Production of free, creative and inductive thinking</i>
<i>Working in an interdisciplinary environment</i>	<i>.... .</i>
<i>Production of new research ideas</i>	<i>Others...</i>
	<i>.....</i>

- Retrieve, analyse and synthesise data and information, with the use of necessary technologies.
- Work autonomously
- Planning and management of projects



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- Generate new research ideas
- Advance free, creative and causative thinking
- Respect of diversity and multiculturalism
- Pass criticism and self criticism

o. SYLLABUS

This course gives emphasis on the dietary management of diseases like: malnutrition, dysphagia, eating disorders, cardiovascular disease, diabetes mellitus and metabolic syndrome, renal diseases, selective gastrointestinal disorders, hypermetabolic states, liver disorders, cancer and dementia. Moreover students are exposed to the current research activities regarding clinical nutrition.

o. TEACHING and LEARNING METHODS - EVALUATION

<p style="text-align: center;">DELIVERY <i>Face-to-face, Distance learning, etc.</i></p>	<p>Face to face lectures in the classroom.</p> <p>Remote lectures from experts in the field.</p> <p>Videos and narrative presentations uploaded in the e-class platform.</p>														
<p style="text-align: center;">USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i></p>	<ul style="list-style-type: none"> • Power point presentations in the classroom and in the e-class. • Video supporting power point presentations. • Live streaming lectures • Internet applications (e-class) • Electronically contact with students (e-mail) 														
<p style="text-align: center;">TEACHING METHODS <i>The manner and methods of teaching are described in detail.</i> Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc.</p> <p><i>The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS</i></p>	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 70%;">Activity</th> <th style="width: 30%;">Semester workload</th> </tr> </thead> <tbody> <tr> <td>Lectures</td> <td>52</td> </tr> <tr> <td>Literature's study and analysis</td> <td>70</td> </tr> <tr> <td>Essay's studying and writing</td> <td>20</td> </tr> <tr> <td>Essays' presentation</td> <td>8</td> </tr> <tr> <td>Autonomous study</td> <td>90</td> </tr> <tr> <td>Total contact hours and training</td> <td>240</td> </tr> </tbody> </table>	Activity	Semester workload	Lectures	52	Literature's study and analysis	70	Essay's studying and writing	20	Essays' presentation	8	Autonomous study	90	Total contact hours and training	240
Activity	Semester workload														
Lectures	52														
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STUDENT PERFORMANCE EVALUATION	
<p><i>Description of the evaluation procedure</i></p> <p><i>Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other</i></p> <p><i>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i></p>	<p>The final written exam and the essay are in Greek. The final grade consists of the following parts: Final written exam: 50% Essay: 40% Class participation: 10%</p> <p>In the final written exam students are asked to respond on questions related to topics covered in the lectures</p> <p>The information regarding students' assessment can be accessed at the course's website and at the Asynchronous Tele-teaching Platform (e-class).</p>

o. READING

<ul style="list-style-type: none">● Gandy J. Manual of Dietetic Practice, Wiley, 6th Edition, 2019.● Ζαμπέλας Α. Κλινική Διαιτολογία & Διατροφή», Ιατρικές Εκδόσεις Π.Χ. Πασχαλίδης-Broken Hills, 2^η έκδοση, 2022.● Gibney MJ, Elia M, Ljungqvist O, Dowsett J. Κλινική Διατροφή (2^η έκδοση). Επιμέλεια Ελληνικής έκδοσης: Μανιός Ι, Κοντογιάννη Μ. Εκδ. Παρσιάνου, Αθήνα 2020.● ESPEN Guidelines & Consensus Papers (https://www.espen.org/guidelines-home/espen-guidelines).● ADA Practice Guidelines Resources (https://professional.diabetes.org/standards-of-care/practice-guidelines-resources).● ESC Clinical Practice Guidelines (https://www.escardio.org/Guidelines/Clinical-Practice-Guidelines).● EASL Guidelines (https://easl.eu/publication-category/clinical-practice-guidelines/).● ECCO Guidelines (https://www.ecco-ibd.eu/publications/ecco-guidelines-science.html).● AGA Clinical Guidance (https://gastro.org/clinical-guidance/).● ESMO Guidelines. <p><u>Scientific journals:</u> American Journal of Clinical Nutrition, Clinical Nutrition, European Journal of Clinical Nutrition, Lancet, New England Journal of Medicine, Circulation, Diabetes Care, Hepatology, Gut.</p>
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HAROKOPIO UNIVERSITY OF ATHENS
SCHOOL OF HEALTH SCIENCES & EDUCATION
DEPARTMENT OF NUTRITION & DIETETICS
POSTGRADUATE PROGRAM “Applied Nutrition & Dietetics”

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ΕΔ.Δ.Π.201 & ΕΔ.Δ.Μ.201 – ADVANCED PEDIATRIC CLINICAL NUTRITION

1. GENERAL

SCHOOL	HEALTH SCIENCES AND EDUCATION		
ACADEMIC UNIT	DEPARTMENT OF NUTRITION AND DIETETICS		
LEVEL OF STUDIES	MASTER OF SCIENCE		
COURSE CODE	ΕΔ.Δ.Π.201	SEMESTER	2nd Semester (Full time programme, FT)
	ΕΔ.Δ.Μ.201		2 nd year (Part time programme, PT)
COURSE TITLE	ADVANCED PEDIATRIC CLINICAL NUTRITION		
COURSE INSTRUCTORS	Mary Yannakouliá, Professor		
INDEPENDENT TEACHING ACTIVITIES <i>if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits</i>	TEACHING HOURS	CREDITS	
Lectures	FT: 3/week PT: 4-5/month	8	
<i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).</i>			
COURSE TYPE <i>general background, special background, specialised general knowledge, skills development</i>	Scientific area		
PREREQUISITE COURSES:	None		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	No		
COURSE WEBSITE (URL)	http://eclass.hua.gr/courses/DIET188/ https://eclass.hua.gr/courses/DIET129/		



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ο. LEARNING OUTCOMES

<p>Learning outcomes</p> <p><i>The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.</i></p> <p>Consult Appendix A</p> <ul style="list-style-type: none"> ● Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area ● Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B ● Guidelines for writing Learning Outcomes 		
<p>Upon successful completion of the course, students are expected to:</p> <ul style="list-style-type: none"> - be familiar with the traditional dietary interventions that support optimal growth in children and adolescents with disease, in clinical and non-clinical setting - have an evidence based approach on the research advancements in this area - understand the specific characteristics of nutritional interventions in children-adolescents (composed to those in adults) - be able to evaluate the effectiveness of different nutritional interventions (in relation to specific outcomes). 		
<p>General Competences</p> <p><i>Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?</i></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none; vertical-align: top;"> <p><i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i></p> <p><i>Adapting to new situations</i></p> <p><i>Decision-making</i></p> <p><i>Working independently</i></p> <p><i>Team work</i></p> <p><i>Working in an international environment</i></p> <p><i>Working in an interdisciplinary environment</i></p> <p><i>Production of new research ideas</i></p> </td> <td style="width: 50%; border: none; vertical-align: top;"> <p><i>Project planning and management</i></p> <p><i>Respect for difference and multiculturalism</i></p> <p><i>Respect for the natural environment</i></p> <p><i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i></p> <p><i>Criticism and self-criticism</i></p> <p><i>Production of free, creative and inductive thinking</i></p> <p><i>... ..</i></p> <p><i>Others...</i></p> <p><i>... ..</i></p> </td> </tr> </table>	<p><i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i></p> <p><i>Adapting to new situations</i></p> <p><i>Decision-making</i></p> <p><i>Working independently</i></p> <p><i>Team work</i></p> <p><i>Working in an international environment</i></p> <p><i>Working in an interdisciplinary environment</i></p> <p><i>Production of new research ideas</i></p>	<p><i>Project planning and management</i></p> <p><i>Respect for difference and multiculturalism</i></p> <p><i>Respect for the natural environment</i></p> <p><i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i></p> <p><i>Criticism and self-criticism</i></p> <p><i>Production of free, creative and inductive thinking</i></p> <p><i>... ..</i></p> <p><i>Others...</i></p> <p><i>... ..</i></p>
<p><i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i></p> <p><i>Adapting to new situations</i></p> <p><i>Decision-making</i></p> <p><i>Working independently</i></p> <p><i>Team work</i></p> <p><i>Working in an international environment</i></p> <p><i>Working in an interdisciplinary environment</i></p> <p><i>Production of new research ideas</i></p>	<p><i>Project planning and management</i></p> <p><i>Respect for difference and multiculturalism</i></p> <p><i>Respect for the natural environment</i></p> <p><i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i></p> <p><i>Criticism and self-criticism</i></p> <p><i>Production of free, creative and inductive thinking</i></p> <p><i>... ..</i></p> <p><i>Others...</i></p> <p><i>... ..</i></p>	
<ul style="list-style-type: none"> ● Search for, analysis and synthesis of data and information, with the use of the necessary technology ● Working independently ● Teamwork ● Working in a multidisciplinary environment ● Production of new research ideas ● Respect for the natural environment ● Showing social, professional, and ethical responsibility and sensitivity to gender issues ● Criticism and self-criticism ● Production of free, creative and inductive thinking 		

ο. SYLLABUS

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|---|
| <ul style="list-style-type: none"> ● Introduction in childhood nutrition: assessment of the nutritional status and nutritional requirements. ● Breastfeeding and solid food introduction: feeding difficulties during the first year of life. |
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- Gut microbiota in infants and children.
- Cognitive development and behavior - the role of diet.
- Dietary management of children’s overweight.
- Clinical applications of pre- and probiotics in infants.
- Nutritional support in malnutrition.
- Malnutrition and developmental problems in renal disease.
- Nutritional management in children with cystic fibrosis.
- Nutritional management in common gastrointestinal problems and diseases.
- Dietary issues in asthma.
- Practical issues in the dietary management of type I diabetes mellitus.

o. TEACHING and LEARNING METHODS - EVALUATION

<p>DELIVERY <i>Face-to-face, Distance learning, etc.</i></p>	<p>FT: Face-to-face PT: Face-to-face and distance learning</p>														
<p>USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i></p>	<ul style="list-style-type: none"> ● Use of Power Point for lectures presentation ● Use of asynchronous e-learning platform for supporting learning procedure ● Use of e-mail and online platforms as means of communication with students ● Reference to electronic/web-based resources 														
<p>TEACHING METHODS <i>The manner and methods of teaching are described in detail. Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc.</i></p> <p><i>The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS</i></p>	<table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="text-align: center;">Activity</th> <th style="text-align: center;">Semester workload</th> </tr> </thead> <tbody> <tr> <td>Lectures</td> <td style="text-align: center;">36</td> </tr> <tr> <td>Study and analysis of scientific papers</td> <td style="text-align: center;">72</td> </tr> <tr> <td>Essay preparation</td> <td style="text-align: center;">33</td> </tr> <tr> <td>Presentations (as part of the lectures)</td> <td style="text-align: center;">3</td> </tr> <tr> <td>Autonomous study</td> <td style="text-align: center;">96</td> </tr> <tr> <td>Course total</td> <td style="text-align: center;">240</td> </tr> </tbody> </table>	Activity	Semester workload	Lectures	36	Study and analysis of scientific papers	72	Essay preparation	33	Presentations (as part of the lectures)	3	Autonomous study	96	Course total	240
Activity	Semester workload														
Lectures	36														
Study and analysis of scientific papers	72														
Essay preparation	33														
Presentations (as part of the lectures)	3														
Autonomous study	96														
Course total	240														
<p>STUDENT PERFORMANCE EVALUATION <i>Description of the evaluation procedure</i></p> <p><i>Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other</i></p>	<ul style="list-style-type: none"> ● The language of evaluation is Greek. ● The method of evaluation is announced at the beginning of the semester to all students orally and in written at the e-class. ● The method of evaluation is as follows. 														



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<i>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i>	I. Presentations of a specific (debatable) research issue (40%) II. Written exams (50%) including multiple choice questions and questions requiring brief response. Diligence (10%)
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o. RECOMMENDED READING

- ElSayed NA, Aleppo G, Aroda VR, Bannuru RR, Brown FM, Bruemmer D, Collins BS, Hilliard ME, Isaacs D, Johnson EL, Kahan S, Khunti K, Leon J, Lyons SK, Perry ML, Prahalad P, Pratley RE, Seley JJ, Stanton RC, Gabbay RA, on behalf of the American Diabetes Association. 14. Children and Adolescents: Standards of Care in Diabetes-2023. *Diabetes Care*. 2023; 46(Suppl 1): S230-S253.
- Expert Panel on Integrated Guidelines for Cardiovascular Health and Risk Reduction in Children and Adolescents: Summary Report. *Pediatrics*, 2011; 128 (5): 213 – 256.
- Foster BJ, Leonard MB. Measuring nutritional status in children with chronic kidney disease. *Am J Clin Nutr* 2004;80:801-14.
- Green Corkins K. Nutrition-focused physical examination in pediatric patients. *Nutr Clin Pract* 2015;30:203-9
- Jeremy E. Koeniga , Aymé Spora , Nicholas Scalfonea , Ashwana D. Frickera , Jesse Stombaughb , Rob Knightb,c, Largus T. Angenentd , and Ruth E. Ley. Succession of microbial consortia in the developing infant gut microbiome. *PNAS*, 108 (1); 4578–4585, 2011.
- Joffe A , Anton N , Lequier L , Vandermeer B , Tjosvold L , Larsen B , Hartling L. Nutritional support for critically ill children. *Cochrane Database of Systematic Reviews*. 2016, Issue 5. Art. No.: CD005144.
- KDOQI Clinical Practice Guideline for Nutrition in Children with CKD: 2008 Update. *American Journal of Kidney Diseases*, Vol 53, No 3, Suppl 2 (March), 2009: e1
- MacGillivray S, Fahey T, McGuire W. Lactose avoidance for young children with acute diarrhoea. *Cochrane Database Syst Rev* 2013;10:CD005433
- Mascarenhas MR, Zemel B, Stallings VA. Nutritional assessment in pediatrics. *Nutrition* 1998;14:105-15.
- Mehta N, Corkins M, Lyman B, Malone A, Goday P, Carney L, Monczka J, Plogsted S, Schwenk F, and the American Society for Parenteral and Enteral Nutrition (A.S.P.E.N.) Board of Directors. Defining Pediatric Malnutrition: A Paradigm Shift Toward Etiology-Related Definitions. *Journal of Parenteral and Enteral Nutrition*, 2013; 37(4): 460-481.
- Pugh A. What I tell families about renal diets for children with CKD. *British Journal of Renal Medicine* 2013; Vol 18 No 2.
- Rosen R, Vandenplas Y, Singendonk M, Cabana M, DiLorenzo C, Gottrand F, Gupta S, Langendam M, Staiano A, Thapar N, Tipnis N, Tabbers M. Pediatric Gastroesophageal Reflux Clinical Practice Guidelines: Joint Recommendations of the North American Society for Pediatric Gastroenterology, Hepatology, and Nutrition and the European Society for Pediatric Gastroenterology, Hepatology, and Nutrition. *JPGN* 2018;66: 516–554.



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- Rummelle F.M., Bier YD, Marteau ZP., Rechkemmer G., Bourdet-Sicard JJR., Walker W.A., and Goulet O.. Clinical Evidence for Immunomodulatory Effects of Probiotic Bacteria. *JPGN* 48:126–141, 2009.
- Rutten JM, Kortelink JJ, Venmans LM, Benninga MA, Tabbers MM. Nonpharmacologic treatment of functional abdominal pain disorders: a systematic review. *Pediatrics* 2015;135:522-35.
- Sharma D, Shastri S and Sharma P. Intrauterine Growth Restriction: Antenatal and Postnatal Aspects. *Clinical Medicine Insights: Pediatrics* 2016 ;10: 67-83.
- Smart CE, Annan F, Bruno LP, Higgins LA, Acerini CL. ISPAD Clinical Practice Consensus Guidelines 2014. Nutritional management in children and adolescents with diabetes. *Pediatr Diabetes* 2014;15 Suppl 20:135-53.
- Smart CE, Annan F, Bruno LPC, Higgins LA, Acerini CL. Nutritional management in children and adolescents with diabetes. *Pediatric Diabetes* 2014: 15 (20): 135–153.
- Tabbers M, DiLorenzo C., Berger M, Faure C, Langendam M, Nurko S., Staiano A, Vandeplass Y, and Benninga M. Evaluation and Treatment of Functional Constipation in Infants and Children: Evidence-Based Recommendations From ESPGHAN and NASPGHAN. *JPGN* 2014;58: 258–274



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ΕΔ.Δ.Π.202 & ΕΔ.Δ.Μ.202 – EXERCISE BIOCHEMISTRY AND METABOLISM

1. GENERAL

SCHOOL	HEALTH SCIENCES AND EDUCATION		
ACADEMIC UNIT	DEPARTMENT OF NUTRITION AND DIETETICS		
LEVEL OF STUDIES	MASTER OF SCIENCE		
COURSE CODE	ΕΔ.Δ.Π. 202	SEMESTER	B' Semester (Full time programme, FT) 2 nd year (Part time programme, PT)
	ΕΔ.Δ.Μ.202		
COURSE TITLE	EXERCISE BIOCHEMISTRY AND METABOLISM		
COURSE INSTRUCTORS	Konstantinos Tsigos, Professor Katerina Skenderi, PhD, Tutor, EDIP		
INDEPENDENT TEACHING ACTIVITIES <i>if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits</i>	TEACHING HOURS	CREDITS	
Lectures	Total: 39 FT: 3/week PT: 4-5/month	8	
<i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).</i>			
COURSE TYPE <i>general background, special background, specialised general knowledge, skills development</i>	Special background		
PREREQUISITE COURSES:	None		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	Yes		
COURSE WEBSITE (URL)	FT: https://eclass.hua.gr/courses/DIET266/ PT: https://eclass.hua.gr/courses/DIET270/		

ο. LEARNING OUTCOMES



HAROKOPIO UNIVERSITY OF ATHENS
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Learning outcomes

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

Consult Appendix A

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

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

- Understand the regulation mechanisms of metabolism during exercise.
- Understand the interactions of macronutrients metabolism during exercise and their effects on homeostasis.
- Be able to know the biochemical procedures which occur in the cell and to explain the metabolic adaptations during the acute or chronic exercise.
- Develop the ability to use online databases, select appropriate articles for each topic, write and present various research topics related to the course.
- Be able to explain the role of exercise as a measure to prevent or to cure metabolic diseases.
- Handle complex information and acquire the ability to critically interpret and present research data in the field of exercise biochemistry.
- To use the knowledge in order to find solutions on problems regarding metabolic disorders through exercise.

General Competences

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

Search for, analysis and synthesis of data and information, with the use of the necessary technology	Project planning and management
Adapting to new situations	Respect for difference and multiculturalism
Decision-making	Respect for the natural environment
Working independently	Showing social, professional and ethical responsibility and sensitivity to gender issues
Team work	Criticism and self-criticism
Working in an international environment	Production of free, creative and inductive thinking
Working in an interdisciplinary environment
Production of new research ideas	Others...

- Search for, analysis and synthesis of data and information, with the use of the necessary technology
- Working independently
- Team work
- Production of free, creative and inductive thinking

o. SYLLABUS

- Regulation of macronutrient metabolism during exercise (carbohydrates, lipids and proteins)
- Oxidative stress during exercise.
- Exercise and metabolic diseases.
- Metabolism during exercise in special conditions as hypoxia, hypothermia and diving.
- Metabolism during exercise in patients with cardio-respiratory diseases.



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- The role of supplements in the muscle damage (rhabdomyolysis) during exercise

o. TEACHING and LEARNING METHODS - EVALUATION

DELIVERY <i>Face-to-face, Distance learning, etc.</i>	FT: Face-to-face PT: Face-to-face and distance learning												
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i>	<ul style="list-style-type: none"> ● Use of Power Point for lectures presentation ● Use of asynchronous e-learning platform for supporting learning procedure ● Use of e-mail and online platforms as means of communication with students 												
TEACHING METHODS <i>The manner and methods of teaching are described in detail.</i> <i>Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc.</i> <i>The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS</i>	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="text-align: left;">Activity</th> <th style="text-align: left;">Semester workload</th> </tr> </thead> <tbody> <tr> <td>Lectures</td> <td>39</td> </tr> <tr> <td>Essay preparation</td> <td>75</td> </tr> <tr> <td>Essay presentation</td> <td>6</td> </tr> <tr> <td>Self-study</td> <td>120</td> </tr> <tr> <td>Course total</td> <td>240</td> </tr> </tbody> </table>	Activity	Semester workload	Lectures	39	Essay preparation	75	Essay presentation	6	Self-study	120	Course total	240
Activity	Semester workload												
Lectures	39												
Essay preparation	75												
Essay presentation	6												
Self-study	120												
Course total	240												
STUDENT PERFORMANCE EVALUATION <i>Description of the evaluation procedure</i> <i>Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other</i> <i>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i>	<ul style="list-style-type: none"> ● The language of evaluation is Greek ● The language of evaluation for Erasmus students is English ● The method of evaluation is a written examination accounting for the 50% of the final grade and an essay (includes written work and public presentation accounting for the 50% of the final grade. ● The criteria and methods of evaluation are announced at the beginning of the semester and they are uploaded at the e-class. 												



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o. ATTACHED BIBLIOGRAPHY

<ul style="list-style-type: none">• Fitness & Health Seventh Edition by Brian J. Sharkey and Steven E. Gaskill
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ΕΔ.Δ.Π.203 & ΕΔ.Δ.Μ.203 – SPORTS NUTRITION

1. GENERAL

SCHOOL	HEALTH SCIENCES AND EDUCATION		
ACADEMIC UNIT	DEPARTMENT OF NUTRITION AND DIETETICS		
LEVEL OF STUDIES	MASTER OF SCIENCE		
COURSE CODE	ΕΔ.Δ.Π.203	SEMESTER	B' Semester (Full time programme, FT)
	ΕΔ.Δ.Μ.203		1 st year (Part time programme, PT)
COURSE TITLE	SPORTS NUTRITION		
COURSE INSTRUCTORS	Konstantinos Anastasiou, Assistant Professor Giannis Arnaoutis, Assistant Professor		
INDEPENDENT TEACHING ACTIVITIES <i>if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits</i>	TEACHING HOURS	CREDITS	
Lectures	Total: 39 FT: 3/week PT: 4-5/month	8	
<i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).</i>			
COURSE TYPE <i>general background, special background, specialised general knowledge, skills development</i>	Special background, Skills development		
PREREQUISITE COURSES:	None		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	NO		
COURSE WEBSITE (URL)	FT: https://eclass.hua.gr/courses/DIET106/ PT: https://eclass.hua.gr/courses/DIET102/		

ο. LEARNING OUTCOMES



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POSTGRADUATE PROGRAM “Applied Nutrition & Dietetics”

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<p>Learning outcomes</p> <p><i>The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.</i></p> <p>Consult Appendix A</p> <ul style="list-style-type: none">• Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area• Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B• Guidelines for writing Learning Outcomes																		
<p>Upon successful completion of the course, students are expected to:</p> <ul style="list-style-type: none">• understand the basic principles of sports nutrition.• be informed about the role of nutritional support in sports performance and and its influence in training induced adaptations• understand the mechanisms of action of the main macronutrients in sports performance• understand the energy mechanisms through which muscle energy is produced during exercise• Develop the ability to use online databases, select appropriate articles for each topic, write and present various research topics related to the course.• Handle complex information and acquire the ability to critically interpret and present research data in the field of sports nutrition.																		
<p>General Competences</p> <p><i>Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?</i></p> <table><tr><td><i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i></td><td><i>Project planning and management</i></td></tr><tr><td><i>Adapting to new situations</i></td><td><i>Respect for difference and multiculturalism</i></td></tr><tr><td><i>Decision-making</i></td><td><i>Respect for the natural environment</i></td></tr><tr><td><i>Working independently</i></td><td><i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i></td></tr><tr><td><i>Team work</i></td><td><i>Criticism and self-criticism</i></td></tr><tr><td><i>Working in an international environment</i></td><td><i>Production of free, creative and inductive thinking</i></td></tr><tr><td><i>Working in an interdisciplinary environment</i></td><td><i>....</i></td></tr><tr><td><i>Production of new research ideas</i></td><td><i>Others...</i></td></tr><tr><td></td><td><i>....</i></td></tr></table>	<i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i>	<i>Project planning and management</i>	<i>Adapting to new situations</i>	<i>Respect for difference and multiculturalism</i>	<i>Decision-making</i>	<i>Respect for the natural environment</i>	<i>Working independently</i>	<i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i>	<i>Team work</i>	<i>Criticism and self-criticism</i>	<i>Working in an international environment</i>	<i>Production of free, creative and inductive thinking</i>	<i>Working in an interdisciplinary environment</i>	<i>....</i>	<i>Production of new research ideas</i>	<i>Others...</i>		<i>....</i>
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o. SYLLABUS



HAROKOPIO UNIVERSITY OF ATHENS
SCHOOL OF HEALTH SCIENCES & EDUCATION
DEPARTMENT OF NUTRITION & DIETETICS
POSTGRADUATE PROGRAM “Applied Nutrition & Dietetics”

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- Updated sports nutrition recommendations
- Nutritional assessment of athletes
- Energy production mechanisms
- Vitamins & minerals
- The importance of Carbohydrates in sports performance
- Dietary lipids and athletic performance
- Protein recommendations for athletes and exercisers
- Fluids and athletic performance
- Nutrition & weight regulation of athletes
- Popular diets & sports performance
- Commonly used ergogenic supplements for athletes

o. TEACHING and LEARNING METHODS - EVALUATION

<p>DELIVERY <i>Face-to-face, Distance learning, etc.</i></p>	<p>FT: Face-to-face PT: Face-to-face and distance learning</p>														
<p>USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i></p>	<ul style="list-style-type: none"> ● Use of Power Point for lectures presentation ● Use of asynchronous e-learning platform for supporting learning procedure ● Use of e-mail and online platforms as means of communication with students ● Reference to internet sites related to the curriculum 														
<p style="text-align: center;">TEACHING METHODS</p> <p><i>The manner and methods of teaching are described in detail.</i> Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc.</p> <p><i>The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS</i></p>	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 60%;">Activity</th> <th>Semester workload</th> </tr> </thead> <tbody> <tr> <td>Lectures</td> <td>33</td> </tr> <tr> <td>Tutoring</td> <td>6</td> </tr> <tr> <td>Essay preparation</td> <td>75</td> </tr> <tr> <td>Essay presentation</td> <td>6</td> </tr> <tr> <td>Self-study</td> <td>120</td> </tr> <tr> <td>Course total</td> <td>240</td> </tr> </tbody> </table>	Activity	Semester workload	Lectures	33	Tutoring	6	Essay preparation	75	Essay presentation	6	Self-study	120	Course total	240
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<p style="text-align: center;">STUDENT PERFORMANCE EVALUATION</p> <p><i>Description of the evaluation procedure</i></p> <p><i>Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other</i></p>	<ul style="list-style-type: none"> ● The language of evaluation is Greek ● The method of evaluation is a written essay accounting for the 50% of the final grade and a public presentation accounting for the other 50% of the final grade. In the PT programme, the evaluation method is the same. ● The criteria and methods of evaluation are announced at the beginning of the semester and they are uploaded at the e-class. 														



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<i>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i>	
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o. ATTACHED BIBLIOGRAPHY

- | |
|---|
| <ul style="list-style-type: none">• Williams H. Melvin, Dawn E. Anderson, and Eric. S. Rawson. “Nutrition for Health, Fitness & Sport (10th edition)”. McGraw-Hill Companies, Inc. 2014.• Asker Jeukendrup, Michael Gleeson. “Sports Nutrition”. 2020. |
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ΕΔ.Δ.Π.208 & ΕΔ.Δ.Μ.208 – EPIGENETICS

1. GENERAL

SCHOOL	HEALTH SCIENCES AND EDUCATION		
ACADEMIC UNIT	DEPARTMENT OF NUTRITION AND DIETETICS		
LEVEL OF STUDIES	MASTER OF SCIENCE		
COURSE CODE	ΕΔ.Δ.Π.208	SEMESTER	B' Semester (Full time programme, FT)
	ΕΔ.Δ.Μ.208		2 nd year (Part time programme, PT)
COURSE TITLE	EPIGENETICS		
COURSE INSTRUCTORS	Georgios Dedoussis, Professor Georgios Papanikolaou, Assistant Professor		
INDEPENDENT TEACHING ACTIVITIES <i>if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits</i>		TEACHING HOURS	CREDITS
Lectures		Total: 39 FT: 3/week PT: 4-5/month	8
<i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).</i>			
COURSE TYPE <i>general background, special background, specialised general knowledge, skills development</i>	Special background, Skills Development		
PREREQUISITE COURSES:	None		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	YES		
COURSE WEBSITE (URL)	https://eclass.hua.gr/courses/DIET237/		

ο. LEARNING OUTCOMES

Learning outcomes



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<p>The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.</p> <p>Consult Appendix A</p> <ul style="list-style-type: none"> ● Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area ● Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B ● Guidelines for writing Learning Outcomes 			
<p>Upon successful completion of the course, students are expected to:</p> <ul style="list-style-type: none"> ● Acquire specialized knowledge of how the structure of the genome can modify gene expression, to understand when the epigenetic modifications are initiating, to understand the basic epigenetic mechanisms and to identify the food ingredients and other environmental factors as regulators of epigenetic modifications. ● Manage complex information and acquire the ability to critically interpret and present research data in the field of Epigenetics. 			
<p>General Competences</p> <p>Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none; vertical-align: top;"> <p>Search for, analysis and synthesis of data and information, with the use of the necessary technology</p> <p>Adapting to new situations</p> <p>Decision-making</p> <p>Working independently</p> <p>Team work</p> <p>Working in an international environment</p> <p>Working in an interdisciplinary environment</p> <p>Production of new research ideas</p> </td> <td style="width: 50%; border: none; vertical-align: top;"> <p>Project planning and management</p> <p>Respect for difference and multiculturalism</p> <p>Respect for the natural environment</p> <p>Showing social, professional and ethical responsibility and sensitivity to gender issues</p> <p>Criticism and self-criticism</p> <p>Production of free, creative and inductive thinking</p> <p>.....</p> <p>Others...</p> <p>.....</p> </td> </tr> </table>		<p>Search for, analysis and synthesis of data and information, with the use of the necessary technology</p> <p>Adapting to new situations</p> <p>Decision-making</p> <p>Working independently</p> <p>Team work</p> <p>Working in an international environment</p> <p>Working in an interdisciplinary environment</p> <p>Production of new research ideas</p>	<p>Project planning and management</p> <p>Respect for difference and multiculturalism</p> <p>Respect for the natural environment</p> <p>Showing social, professional and ethical responsibility and sensitivity to gender issues</p> <p>Criticism and self-criticism</p> <p>Production of free, creative and inductive thinking</p> <p>.....</p> <p>Others...</p> <p>.....</p>
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o. SYLLABUS

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| <ul style="list-style-type: none"> ● Brief History of Epigenetics. ● Techniques for detecting epigenetic modifications ● Basic mechanisms of DNA methylation, Histone modification ● Epigenetics and metal deficiencies ● Maternal Nutrition and Pregonetic modifications in the first age ● Dietetics and cancer prevention ● Epigenetic regulation of energy intake in aging ● Adipose tissue and gene regulation ● Fetal uptake and methylation levels ● Alcohol intake and DNA methylation ● Natural products as modifiers of gene expression |
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o. TEACHING and LEARNING METHODS - EVALUATION

DELIVERY <i>Face-to-face, Distance learning, etc.</i>	FT: Face-to-face PT: Face-to-face and distance learning														
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o. ATTACHED BIBLIOGRAPHY

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| <ul style="list-style-type: none"> • Human Molecular Genetics. Georgios Dedoussis. Publisher: Utopia. Year 2022. ISBN: 9786185173531. |
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HAROKOPIO UNIVERSITY OF ATHENS
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ΕΔ.Δ.Π.209 & ΕΔ.Δ.Μ.209 – BIOINFORMATICS

1. GENERAL

SCHOOL	HEALTH SCIENCES AND EDUCATION		
ACADEMIC UNIT	DEPARTMENT OF NUTRITION AND DIETETICS		
LEVEL OF STUDIES	MASTER OF SCIENCE		
COURSE CODE	EΔ.Δ.Π.209	SEMESTER	B' Semester (Full time programme, FT)
	EΔ.Δ.Μ.209		2 nd year (Part time programme, PT)
COURSE TITLE	BIOINFORMATICS		
COURSE INSTRUCTORS	Iraklis Varlamis, Professor		
INDEPENDENT TEACHING ACTIVITIES <i>if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits</i>		TEACHING HOURS	CREDITS
Lectures		Total: 39 FT: 3/week PT: 4-5/month	8
<i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).</i>			
COURSE TYPE <i>general background, special background, specialised general knowledge, skills development</i>	Specialised general knowledge		
PREREQUISITE COURSES:	None		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	Yes (lectures in Greek, support in English)		
COURSE WEBSITE (URL)	FT: https://eclass.hua.gr/courses/DIET173/ PT: https://eclass.hua.gr/courses/DIET173/		



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o. LEARNING OUTCOMES

Learning outcomes

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

Consult Appendix A

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

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

- Understanding the importance of biological databases in research concerning
- Biochemistry and Genetics.
- Familiarity with modern Bioinformatics tools and in particular with its process
- data retrieval by searching biological databases.
- Understanding the basic mechanisms of translational and post-translational regulation.
- Understanding the importance of protein structures and interactions in Biochemistry.
- Manage complex information and acquire the ability to critically interpret and present research data in the field of bioinformatics.

General Competences

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

Search for, analysis and synthesis of data and information, with the use of the necessary technology	Project planning and management
Adapting to new situations	Respect for difference and multiculturalism
Decision-making	Respect for the natural environment
Working independently	Showing social, professional and ethical responsibility and sensitivity to gender issues
Team work	Criticism and self-criticism
Working in an international environment	Production of free, creative and inductive thinking
Working in an interdisciplinary environment
Production of new research ideas	Others...

- Search for, analysis and synthesis of data and information, with the use of the necessary technology
- Working independently
- Production of free, creative and inductive thinking

o. SYLLABUS

- Biological databases
- Gene regulation
- Alignment and comparison of nucleotide and protein sequences.
- Study of protein structures and interactions
- Phylogenetic analysis
- Genetic analyzes in population studies



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o. TEACHING and LEARNING METHODS - EVALUATION

DELIVERY <i>Face-to-face, Distance learning, etc.</i>	FT: Face-to-face PT: Face-to-face and distance learning										
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i>	<ul style="list-style-type: none"> • Use of Power Point for lectures presentation • Lectures given in the computer lab for immediate practical testing of knowledge • Use of asynchronous e-learning platform for supporting learning procedure • Use of e-mail and online platforms as means of communication with students • Reference to internet sites related to the curriculum 										
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o. ATTACHED BIBLIOGRAPHY

<ul style="list-style-type: none"> • Andreas D. Baxevanis (Ed), B. F. Francis Ouellette (Ed) - Bioinformatics: A Practical Guide to the Analysis of Genes and Proteins. 3rd edition, October 2004, Wiley, John & Sons, Incorporated • David R. Westhead, Richard M. Twyman, Instant Notes in Bioinformatics, 1st edition, October 2002, BIOS Scientific Publishing • Bagoos P. Bioinformatics, 2015 - Available for free at Kallipos: https://repository.kallipos.gr/handle/11419/5016 (in Greek)



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- Kossida S (ed.). Bioinformatics - Possibilities & Prospects. Medical Biological Research Foundation of the Academy of Athens, 2008 (in Greek)



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ΕΔ.Δ.Π.210 & ΕΔ.Δ.Μ.210 – NUTRITION, LIFESTYLE AND GENETIC PREDISPOSITION

1. GENERAL

SCHOOL	HEALTH SCIENCES AND EDUCATION		
ACADEMIC UNIT	DEPARTMENT OF NUTRITION AND DIETETICS		
LEVEL OF STUDIES	MASTER OF SCIENCE		
COURSE CODE	ΕΔ.Δ.Π.210	SEMESTER	B' Semester (Full time programme, FT)
	ΕΔ.Δ.Μ.210		2 nd year (Part time programme, PT)
COURSE TITLE	NUTRITION, LIFESTYLE AND GENETIC PREDISPOSITION		
COURSE INSTRUCTORS	Georgios Dedoussis, Professor Nikolaos Yiannakouris, Associate Professor		
INDEPENDENT TEACHING ACTIVITIES <i>if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits</i>		TEACHING HOURS	CREDITS
Lectures		Total: 39 FT: 3/week PT: 4-5/month	7
<i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).</i>			
COURSE TYPE <i>general background, special background, specialised general knowledge, skills development</i>	Special background, Skills Development		
PREREQUISITE COURSES:	None		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	YES		
COURSE WEBSITE (URL)	https://eclass.hua.gr/courses/DIET243/		

ο. LEARNING OUTCOMES

Learning outcomes



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DEPARTMENT OF NUTRITION & DIETETICS
POSTGRADUATE PROGRAM “Applied Nutrition & Dietetics”

El. Venizelou 70, 17676, Athens, Greece – ☎: +30 210 9549100, FAX: +30 210 9577050

<p>The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.</p> <p>Consult Appendix A</p> <ul style="list-style-type: none"> ● Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area ● Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B ● Guidelines for writing Learning Outcomes 			
<p>Upon successful completion of the course, students are expected to understand:</p> <ul style="list-style-type: none"> ● The environmental determinants of lifestyle that shape their phenotypes. They will also learn which loci interact with the environmental determinants and how the phenotypes are modified based on the genetic makeup of individuals. 			
<p>General Competences</p> <p>Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <p>Search for, analysis and synthesis of data and information, with the use of the necessary technology</p> <p>Adapting to new situations</p> <p>Decision-making</p> <p>Working independently</p> <p>Team work</p> <p>Working in an international environment</p> <p>Working in an interdisciplinary environment</p> <p>Production of new research ideas</p> </td> <td style="width: 50%; vertical-align: top;"> <p>Project planning and management</p> <p>Respect for difference and multiculturalism</p> <p>Respect for the natural environment</p> <p>Showing social, professional and ethical responsibility and sensitivity to gender issues</p> <p>Criticism and self-criticism</p> <p>Production of free, creative and inductive thinking</p> <p>.....</p> <p>Others...</p> <p>.....</p> </td> </tr> </table>		<p>Search for, analysis and synthesis of data and information, with the use of the necessary technology</p> <p>Adapting to new situations</p> <p>Decision-making</p> <p>Working independently</p> <p>Team work</p> <p>Working in an international environment</p> <p>Working in an interdisciplinary environment</p> <p>Production of new research ideas</p>	<p>Project planning and management</p> <p>Respect for difference and multiculturalism</p> <p>Respect for the natural environment</p> <p>Showing social, professional and ethical responsibility and sensitivity to gender issues</p> <p>Criticism and self-criticism</p> <p>Production of free, creative and inductive thinking</p> <p>.....</p> <p>Others...</p> <p>.....</p>
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<ul style="list-style-type: none"> ● Search for, analysis and synthesis of data and information, with the use of the necessary technology ● Working independently ● Production of new research ideas ● Production of free, creative and inductive thinking 			

o. SYLLABUS

- | |
|---|
| <ul style="list-style-type: none"> ● Determine lifestyle before pregnancy and their role on health during early childhood. ● Genetic determinants that alter the pregnant phenotypes. ● Breastfeeding and interaction with genetic variants in obesity traits. ● Physical activity as a modifying agent in genetic predisposition of cardiometabolic phenotypes ● Sun exposure, genetic modifiers and bone phenotypes. ● Cognitive functions and genetic predisposition. ● Sleep Duration, and lifestyle characteristics from childhood to aging. ● Cancer, genetics and lifestyle. ● Interventions lifestyle, chronic diseases and genetic makeup. ● Intestinal microflora environmental modifiers and interactions with the host. ● The role of gender and age in a differential response to lifestyle changes |
|---|

o. TEACHING and LEARNING METHODS - EVALUATION



HAROKOPIO UNIVERSITY OF ATHENS
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DELIVERY <i>Face-to-face, Distance learning, etc.</i>	FT: Face-to-face PT: Face-to-face and distance learning														
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i>	<ul style="list-style-type: none"> • Use of Power Point for lectures presentation • Use of asynchronous e-learning platform for supporting learning procedure • Use of e-mail and online platforms as means of communication with students • Reference to internet sites related to the curriculum 														
TEACHING METHODS <i>The manner and methods of teaching are described in detail. Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc.</i> <i>The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS</i>	<table border="1" style="width: 100%;"> <thead> <tr> <th style="text-align: center;">Activity</th> <th style="text-align: center;">Semester workload</th> </tr> </thead> <tbody> <tr> <td>Lectures</td> <td style="text-align: center;">33</td> </tr> <tr> <td>Tutoring</td> <td style="text-align: center;">6</td> </tr> <tr> <td>Assignment preparation</td> <td style="text-align: center;">75</td> </tr> <tr> <td>Assignment presentation</td> <td style="text-align: center;">6</td> </tr> <tr> <td>Self-study</td> <td style="text-align: center;">90</td> </tr> <tr> <td>Course total</td> <td style="text-align: center;">210</td> </tr> </tbody> </table>	Activity	Semester workload	Lectures	33	Tutoring	6	Assignment preparation	75	Assignment presentation	6	Self-study	90	Course total	210
Activity	Semester workload														
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STUDENT PERFORMANCE EVALUATION <i>Description of the evaluation procedure</i> <i>Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other</i> <i>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i>	<ul style="list-style-type: none"> • The language of evaluation is Greek and in English for the Erasmus students • The method of evaluation is a written examination accounting for 50% of the final grade and an essay (includes written work and public presentation) accounting for 50% of the final grade. • The criteria and methods of evaluation are announced at the beginning of the semester and they are uploaded at the e-class. 														

o. ATTACHED BIBLIOGRAPHY

- Human Molecular Genetics. Georgios Dedoussis. Publisher: Utopia. Year 2022. ISBN: 9786185173531.
- Principles of Nutrigenetics and Nutrigenomics. Raffaele de Caterina, Alfredo J. Martinez, Martin Kohlmeier. Elsevier Science Publishing Co Inc, 2019



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ΕΔ.Δ.Π.213 & ΕΔ.Δ.Μ.213 – EXERCISE TESTING

1. GENERAL

SCHOOL	HEALTH SCIENCES AND EDUCATION		
ACADEMIC UNIT	DEPARTMENT OF NUTRITION AND DIETETICS		
LEVEL OF STUDIES	MASTER OF SCIENCE		
COURSE CODE	ΕΔ.Δ.Π.213	SEMESTER	B' Semester (Full time programme, FT)
	ΕΔ.Δ.Μ.213		2 nd year (Part time programme, PT)
COURSE TITLE	EXERCISE TESTING		
COURSE INSTRUCTORS	Giannis Amaoutis, Assistant Professor		
INDEPENDENT TEACHING ACTIVITIES <i>if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits</i>	TEACHING HOURS	CREDITS	
Lectures	Total: 39 FT: 3/week PT: 4-5/month	7	
<i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).</i>			
COURSE TYPE <i>general background, special background, specialised general knowledge, skills development</i>	Special background, Skills development		
PREREQUISITE COURSES:	None		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	no		
COURSE WEBSITE (URL)	FT: https://eclass.hua.gr/courses/DIET143/ PT: https://eclass.hua.gr/courses/DIET143/		

ο. LEARNING OUTCOMES



HAROKOPIO UNIVERSITY OF ATHENS
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<p>Learning outcomes</p> <p>The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.</p> <p>Consult Appendix A</p> <ul style="list-style-type: none">● Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area● Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B● Guidelines for writing Learning Outcomes																		
<p>To present the principles of fitness assessment for athletes and for the general population. The purpose is the in-depth understanding of different exercise protocols as well as the evaluation of the results derived from an exercise testing.</p> <p>Students are expected to:</p> <ul style="list-style-type: none">● Understand the principles of exercise testing● Learn the role of exercise testing for fitness assessment and monitoring of the training adaptations.● Understand the methodology of different protocols in order to design, perform and evaluate a battery of exercise tests.																		
<p>General Competences</p> <p>Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?</p> <table><tr><td>Search for, analysis and synthesis of data and information, with the use of the necessary technology</td><td>Project planning and management</td></tr><tr><td>Adapting to new situations</td><td>Respect for difference and multiculturalism</td></tr><tr><td>Decision-making</td><td>Respect for the natural environment</td></tr><tr><td>Working independently</td><td>Showing social, professional and ethical responsibility and sensitivity to gender issues</td></tr><tr><td>Team work</td><td>Criticism and self-criticism</td></tr><tr><td>Working in an international environment</td><td>Production of free, creative and inductive thinking</td></tr><tr><td>Working in an interdisciplinary environment</td><td>.... ..</td></tr><tr><td>Production of new research ideas</td><td>Others...</td></tr><tr><td></td><td>.... ..</td></tr></table>	Search for, analysis and synthesis of data and information, with the use of the necessary technology	Project planning and management	Adapting to new situations	Respect for difference and multiculturalism	Decision-making	Respect for the natural environment	Working independently	Showing social, professional and ethical responsibility and sensitivity to gender issues	Team work	Criticism and self-criticism	Working in an international environment	Production of free, creative and inductive thinking	Working in an interdisciplinary environment	Production of new research ideas	Others...	
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o. SYLLABUS



HAROKOPIO UNIVERSITY OF ATHENS
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<ul style="list-style-type: none"> ● Introduction of Exercise testing ● Physical activity assessment ● Astrand bike test ● VO₂max protocol (running & cycling) ● Body composition assessment techniques ● Anaerobic – lactate threshold ● Running Economy ● Anaerobic Capacity-Wingate test ● Maximal O₂ Deficit Test ● Isokinetic muscle strength test ● Flexibility, balance and explosiveness tests

o. TEACHING and LEARNING METHODS - EVALUATION

DELIVERY <i>Face-to-face, Distance learning, etc.</i>	<p>FT: Face-to-face PT: Face-to-face and distance learning</p>														
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i>	<ul style="list-style-type: none"> ● Use of Power Point for lectures presentation ● Use of asynchronous e-learning platform for supporting learning procedure ● Use of e-mail and online platforms as means of communication with students ● Reference to internet sites related to the curriculum 														
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<i>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i>	
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o. ATTACHED BIBLIOGRAPHY

- | |
|---|
| <ul style="list-style-type: none">• American College of Sports Medicine. “ACSM’s Guidelines for Exercise Testing and Prescription (12th Edition). 2017. |
|---|



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ΕΔ.Δ.Π.214 & ΕΔ.Δ.Μ.214 – METABOLOMICS

1. GENERAL

SCHOOL	HEALTH SCIENCES AND EDUCATION		
ACADEMIC UNIT	DEPARTMENT OF NUTRITION AND DIETETICS		
LEVEL OF STUDIES	MASTER OF SCIENCE		
COURSE CODE	ΕΔ.Δ.Π.214	SEMESTER	B' Semester (Full time programme, FT)
	ΕΔ.Δ.Μ.214		2 nd year (Part time programme, PT)
COURSE TITLE	METABOLOMICS		
COURSE INSTRUCTORS	Elizabeth Fragopoulou, Associate Professor		
INDEPENDENT TEACHING ACTIVITIES <i>if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits</i>		TEACHING HOURS	CREDITS
Lectures		Total: 39 FT: 3/week PT: 4-5/month	7
<i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).</i>			
COURSE TYPE <i>general background, special background, specialised general knowledge, skills development</i>	Specialised general knowledge		
PREREQUISITE COURSES:	None		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	No		
COURSE WEBSITE (URL)	FT: https://eclass.hua.gr/courses/DIET253/ PT: https://eclass.hua.gr/courses/DIET268/		

ο. LEARNING OUTCOMES

Learning outcomes



HAROKOPIO UNIVERSITY OF ATHENS

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

Consult Appendix A

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

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

- Understand the basic principles of metabolomic analysis (strategies, design, workflow)
- Know advanced methods for metabolite analysis (including design of metabolomics experiments, sample processing, selection of proper analytical methods and data analysis).
- Understand the importance of metabolomic analysis in nutritional research
- Understand the importance of metabolomic analysis in pathological conditions
- Understand the effect of various factors on the metabolic fingerprint.
- Develop the ability to use online databases, select appropriate articles for each topic, write and present various research topics related to the course.
- Handle complex information and acquire the ability to critically interpret and present research data in the field of metabolomics.

General Competences

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

Search for, analysis and synthesis of data and information, with the use of the necessary technology	Project planning and management
Adapting to new situations	Respect for difference and multiculturalism
Decision-making	Respect for the natural environment
Working independently	Showing social, professional and ethical responsibility and sensitivity to gender issues
Team work	Criticism and self-criticism
Working in an international environment	Production of free, creative and inductive thinking
Working in an interdisciplinary environment
Production of new research ideas	Others...

- Search for, analysis and synthesis of data and information, with the use of the necessary technology.
- Working independently.
- Production of free, creative and inductive thinking.

o. SYLLABUS

Metabolism is the set of biochemical reactions that occur in living organisms to maintain life. Metabolomics is the systematic study of small molecules, meaning metabolic profile. It is the newest «-omics» in science, and a complementary tool in genomics and proteomics to systems biology. The lectures will include:

- Introduction to metabolomics
- Description of modern analytical techniques (methodologies of sample processing, separation and detection of metabolites, data processing).
- Description of the metabolites detected with modern analytical techniques.
- Applications of metabolomic analysis in nutrition (food composition/foodomics, food safety, dietary biomarkers).



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- Explain the role of metabolomics in biological and medical research. The metabolic fingerprint in pathological conditions (obesity, cancer, diabetes, cardiovascular diseases)
- Effect of dietary habits on the metabolic fingerprint.

o. TEACHING and LEARNING METHODS - EVALUATION

<p style="text-align: center;">DELIVERY <i>Face-to-face, Distance learning, etc.</i></p>	<p>FT: Face-to-face PT: Face-to-face and distance learning</p>														
<p style="text-align: center;">USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i></p>	<ul style="list-style-type: none"> • Use of Power Point for lectures presentation. • Use of asynchronous e-learning platform for supporting learning procedure. • Use of e-mail and online platforms as means of communication with students. • Reference to internet sites related to the curriculum. 														
<p style="text-align: center;">TEACHING METHODS <i>The manner and methods of teaching are described in detail.</i> <i>Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc.</i></p> <p><i>The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS</i></p>	<table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr> <th style="text-align: center;">Activity</th> <th style="text-align: center;">Semester workload</th> </tr> </thead> <tbody> <tr> <td>Lectures</td> <td style="text-align: center;">33</td> </tr> <tr> <td>Tutoring</td> <td style="text-align: center;">6</td> </tr> <tr> <td>Essay preparation</td> <td style="text-align: center;">75</td> </tr> <tr> <td>Essay presentation</td> <td style="text-align: center;">3</td> </tr> <tr> <td>Self-study</td> <td style="text-align: center;">93</td> </tr> <tr> <td>Course total</td> <td style="text-align: center;">210</td> </tr> </tbody> </table>	Activity	Semester workload	Lectures	33	Tutoring	6	Essay preparation	75	Essay presentation	3	Self-study	93	Course total	210
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Lectures	33														
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o. ATTACHED BIBLIOGRAPHY

Review articles from the literature



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ΕΔ.Δ.Π.219 & ΕΔ.Δ.Μ.219 – INBORN METABOLIC DISEASES

1. GENERAL

SCHOOL	SCHOOL OF HEALTH SCIENCE AND EDUCATION		
DEPARTMENT	DEPARTMENT OF NUTRITION AND DIETETICS		
LEVEL OF STUDIE	POSTGRADUATE		
COURSE CODE	ΕΔ.Δ.Π.219 ΕΔ.Δ.Μ.219	SEMESTER	3rd semester (full time, FT) 2nd year (part time, PT)
COURSE TITLE	INBORN METABOLIC DISEASES		
COURSE INSTRUCTORS	Meropi Kontogianni, Associate Professor		
INDEPENDENT TEACHING ACTIVITIES <i>if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits</i>	WEEKLY TEACHING HOURS	ECTS	
Lectures	FT: 3/week PT: 4-5/month	7	
COURSE TYPE <i>general background, special background, specialised general knowledge, skills development</i>	Scientific area		
PREREQUISITE COURSES:	None		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS:	No		
COURSE WEBSITE (URL)	https://eclass.hua.gr/modules/document/?course=DIET305		

ο. LEARNING OUTCOMES

<p>Learning outcomes <i>The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.</i></p> <p>Consult Appendix A</p> <ul style="list-style-type: none"> ● Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area ● Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B ● Guidelines for writing Learning Outcomes ●
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The aim of the course is to present the genetic and biochemical basis, clinical implications and therapeutic approaches of the inborn metabolic diseases with an emphasis on their dietary treatment. The subject is being covered in a multi-disciplinary way targeting a holistic perception regarding the genetic, biochemical, medical and nutritional dimensions of inborn metabolic diseases.

With this course, students are expected to:

- Understand the biochemical and genetic basis of inborn metabolic diseases of interest for the dieticians.
- Understand the principles of dietary therapy and care plan.
- To familiarize with some of the special dietary treatment regimes used in their therapy, as well as with relevant dietary supplements and foods.

General Competences

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

<i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i>	<i>Project planning and management</i>
<i>Adapting to new situations</i>	<i>Respect for difference and multiculturalism</i>
<i>Decision-making</i>	<i>Respect for the natural environment</i>
<i>Working independently</i>	<i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i>
<i>Team work</i>	<i>Criticism and self-criticism</i>
<i>Working in an international environment</i>	<i>Production of free, creative and inductive thinking</i>
<i>Working in an interdisciplinary environment</i>	<i>... ..</i>
<i>Production of new research ideas</i>	<i>Others...</i>
	<i>... ..</i>

- Retrieve, analyse and synthesise data and information, with the use of necessary technologies.
- Work autonomously
- Planning and management of projects
- Generate new research ideas
- Advance free, creative and causative thinking
- Respect of diversity and multiculturalism
- Pass criticism and self criticism

o. SYLLABUS

This course includes:

- Introduction to genetics
- Principles of diagnosis and therapy. Neonatal screening.
- Hyperphenylalaninemias / Phenylketonuria.
- Amino-acidopathies (tyrosinemia, homocystinuria, MSUD)
- Urea cycle disorders and organic aciduria.
- Disorders of carbohydrate metabolism (glycogenemia, fructosaemia, galactosaemia).
- Disorders of Mitochondrial Fatty Acid Oxidation.
- Presentation of clinical cases studies of phenylketonuria, disorders of carbohydrate and fatty acid metabolism.
- Production of diets very low in protein or fat.
- Disorders of lipid and lipoprotein metabolism.
- Current research activity in nutritional management of endogenous metabolic disorders.



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o. TEACHING and LEARNING METHODS - EVALUATION

DELIVERY <i>Face-to-face, Distance learning, etc.</i>	Face to face lectures in the classroom. Selective remote lectures from experts in the field living abroad.										
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i>	<ul style="list-style-type: none"> ● Power point presentations in the classroom and in the e-class. ● Video supporting power point presentations. ● Live streaming lectures ● Internet applications (e-class) ● Electronically contact with students (e-mail) 										
TEACHING METHODS <i>The manner and methods of teaching are described in detail. Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc. The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS</i>	<table border="1" style="width: 100%;"> <thead> <tr> <th style="text-align: center;">Activity</th> <th style="text-align: center;">Semester workload</th> </tr> </thead> <tbody> <tr> <td>Lectures</td> <td style="text-align: center;">39</td> </tr> <tr> <td>Literature's study and analysis</td> <td style="text-align: center;">91</td> </tr> <tr> <td>Autonomous study</td> <td style="text-align: center;">80</td> </tr> <tr> <td>Total contact hours and training</td> <td style="text-align: center;">210</td> </tr> </tbody> </table>	Activity	Semester workload	Lectures	39	Literature's study and analysis	91	Autonomous study	80	Total contact hours and training	210
Activity	Semester workload										
Lectures	39										
Literature's study and analysis	91										
Autonomous study	80										
Total contact hours and training	210										
STUDENT PERFORMANCE EVALUATION <i>Description of the evaluation procedure Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i>	<p>The final written exam and the essay are in Greek. The final grade consists of the following parts: Final written exam: 100% In the final written exam students are asked to respond to multiple choices or questions related to topics covered in the lectures.</p> <p>The information regarding students' assessment can be accessed at the course's website and at the Asynchronous Tele-teaching Platform (e-class).</p>										

o. READING

1. SHAW V. (2020). Clinical paediatric dietetics. Wiley-Blackwell.
2. Nyhan, W. L., & Hoffmann, G. F. (2020). Atlas of inherited metabolic diseases. CRC Press.



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Scientific journals: Journal of Inherited Metabolic Diseases, Molecular Genetics and Metabolism, Orphanet Journal of Rare Diseases, Translational Science of Rare Diseases, Pediatrics in Review



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ΕΔ.Δ.Π.301 & ΕΔ.Δ.Μ.301 – NUTRITION AND SIGNAL TRANSDUCTION PATHWAYS

1. GENERAL

SCHOOL	HEALTH SCIENCES AND EDUCATION		
ACADEMIC UNIT	DEPARTMENT OF NUTRITION AND DIETETICS		
LEVEL OF STUDIES	MASTER OF SCIENCE		
COURSE CODE	ΕΔ.Δ.Π.301	SEMESTER	3rd Semester (Full time programme, FT)
	ΕΔ.Δ.Μ.301		2 nd year (Part time programme, PT)
COURSE TITLE	NUTRITION AND SIGNAL TRANSDUCTION PATHWAYS		
COURSE INSTRUCTORS	Tzortzis Nomikos, Associate Professor Roxane Tenta, Associate Professor		
INDEPENDENT TEACHING ACTIVITIES <i>if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits</i>		TEACHING HOURS	CREDITS
Lectures		FT: 3/week PT: 4-5/month	7
<i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).</i>			
COURSE TYPE <i>general background, special background, specialised general knowledge, skills development</i>	Special background, Skills Development		
PREREQUISITE COURSES:	None		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	Yes		
COURSE WEBSITE (URL)	http://eclass.hua.gr/courses/DIET240/ http://eclass.hua.gr/courses/DIET245/		



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o. LEARNING OUTCOMES

<p>Learning outcomes <i>The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.</i></p> <p>Consult Appendix A</p> <ul style="list-style-type: none"> • Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area • Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B • Guidelines for writing Learning Outcomes 			
<p>Students are expected to understand the basic cellular pathways of signal transduction, their involvement in the regulation of the physiological effects of macro- and micronutrients and their implication in the prevention or induction of chronic diseases.</p>			
<p>General Competences <i>Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?</i></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"> <i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i> <i>Adapting to new situations</i> <i>Decision-making</i> <i>Working independently</i> <i>Team work</i> <i>Working in an international environment</i> <i>Working in an interdisciplinary environment</i> <i>Production of new research ideas</i> </td> <td style="width: 50%; border: none;"> <i>Project planning and management</i> <i>Respect for difference and multiculturalism</i> <i>Respect for the natural environment</i> <i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i> <i>Criticism and self-criticism</i> <i>Production of free, creative and inductive thinking</i> <i>.....</i> <i>Others...</i> <i>.....</i> </td> </tr> </table>		<i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i> <i>Adapting to new situations</i> <i>Decision-making</i> <i>Working independently</i> <i>Team work</i> <i>Working in an international environment</i> <i>Working in an interdisciplinary environment</i> <i>Production of new research ideas</i>	<i>Project planning and management</i> <i>Respect for difference and multiculturalism</i> <i>Respect for the natural environment</i> <i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i> <i>Criticism and self-criticism</i> <i>Production of free, creative and inductive thinking</i> <i>.....</i> <i>Others...</i> <i>.....</i>
<i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i> <i>Adapting to new situations</i> <i>Decision-making</i> <i>Working independently</i> <i>Team work</i> <i>Working in an international environment</i> <i>Working in an interdisciplinary environment</i> <i>Production of new research ideas</i>	<i>Project planning and management</i> <i>Respect for difference and multiculturalism</i> <i>Respect for the natural environment</i> <i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i> <i>Criticism and self-criticism</i> <i>Production of free, creative and inductive thinking</i> <i>.....</i> <i>Others...</i> <i>.....</i>		
<ul style="list-style-type: none"> • Search for, analysis and synthesis of data and information, with the use of the necessary technology • Working independently • Teamwork • Working in a multidisciplinary environment • Production of new research ideas • Showing social, professional, and ethical responsibility and sensitivity to gender issues • Production of free, creative and inductive thinking 			

o. SYLLABUS

<ul style="list-style-type: none"> • Introduction to signal transduction • Regulation of signal transduction pathways and gene expression • Molecular mechanisms of taste transduction • Signal transduction pathways in gastrointestinal system’s physiology and in metabolic functions of gut microbiome • Interaction of dietary components with intracellular pathways which affect: <ul style="list-style-type: none"> • Carbohydrate, lipid and amino acid metabolism • Inflammation • Apoptosis/Autophagy mechanisms
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- | |
|--|
| <ul style="list-style-type: none"> ● Cancer progression ● Oxidative stress ● Iron homeostasis |
|--|

o. TEACHING and LEARNING METHODS - EVALUATION

<p style="text-align: center;">DELIVERY <i>Face-to-face, Distance learning, etc.</i></p>	<p>Face to face (full time studies courses) Face to face and ODL lectures (part time studies courses)</p>														
<p style="text-align: center;">USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i></p>	<ul style="list-style-type: none"> ● Use of Power Point for lectures presentation ● Use of asynchronous e-learning platform for supporting learning procedure ● Use of e-mail and online platforms as means of communication with students ● Reference to electronic/web-based resources 														
<p style="text-align: center;">TEACHING METHODS <i>The manner and methods of teaching are described in detail. Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc.</i></p> <p><i>The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS</i></p>	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 70%;">Activity</th> <th style="width: 30%;">Semester workload</th> </tr> </thead> <tbody> <tr> <td>Lectures</td> <td>33</td> </tr> <tr> <td>Study and analysis of scientific papers</td> <td>6</td> </tr> <tr> <td>Essay preparation</td> <td>75</td> </tr> <tr> <td>Presentations (as part of the lectures)</td> <td>6</td> </tr> <tr> <td>Autonomous study</td> <td>90</td> </tr> <tr> <td>Course total</td> <td>210</td> </tr> </tbody> </table>	Activity	Semester workload	Lectures	33	Study and analysis of scientific papers	6	Essay preparation	75	Presentations (as part of the lectures)	6	Autonomous study	90	Course total	210
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o. READING

- | |
|---|
| <ul style="list-style-type: none"> ● Review articles from the literature updated each year |
|---|



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ΕΔ.Δ.Π.303 & ΕΔ.Δ.Μ.303 – NUTRITION FOR ELITE ATHLETES

1. GENERAL

SCHOOL	HEALTH SCIENCES AND EDUCATION		
ACADEMIC UNIT	DEPARTMENT OF NUTRITION AND DIETETICS		
LEVEL OF STUDIES	MASTER OF SCIENCE		
COURSE CODE	ΕΔ.Δ.Π.303	SEMESTER	C' Semester (Full time programme, FT)
	ΕΔ.Δ.Μ.303		2 nd year (Part time programme, PT)
COURSE TITLE	NUTRITION FOR ELITE ATHLETES		
COURSE INSTRUCTORS	Giannis Arnaoutis, Assistant Professor		
INDEPENDENT TEACHING ACTIVITIES <i>if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits</i>		TEACHING HOURS	CREDITS
Lectures		Total: 39 FT: 3/week PT: 4-5/month	7
<i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).</i>			
COURSE TYPE <i>general background, special background, specialised general knowledge, skills development</i>	Special background, Skills development		
PREREQUISITE COURSES:	None		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	no		
COURSE WEBSITE (URL)	FT: https://eclass.hua.gr/courses/DIET105/ PT: https://eclass.hua.gr/courses/DIET144/		



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o. LEARNING OUTCOMES

<p>Learning outcomes <i>The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.</i></p> <p>Consult Appendix A</p> <ul style="list-style-type: none"> • Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area • Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B • Guidelines for writing Learning Outcomes 			
<p>The purpose of the course is to present the special nutritional requirements of high-level athletes both during training and during the competition period, the importance of their nutritional support in order to maximize their athletic performance, as well as to examine the effect of possible nutritional ergogenic supplements used by athletes. Finally, to present the methods of detecting prohibited substances (doping control) and the legal framework surrounding doping control.</p> <p>Upon the completion of the course students are expected to:</p> <ul style="list-style-type: none"> • understand the energy mechanisms through which muscle energy is produced during exercise • be informed about the role of nutritional support in sports performance and training adaptations • recognize the role of macro- and micro-nutrients in the diet, as well as water for optimal athletic performance • evaluate dietary ergogenic supplements, about their safety and efficiency for the performance of elite athletes 			
<p>General Competences <i>Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?</i></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"> <i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i> <i>Adapting to new situations</i> <i>Decision-making</i> <i>Working independently</i> <i>Team work</i> <i>Working in an international environment</i> <i>Working in an interdisciplinary environment</i> <i>Production of new research ideas</i> </td> <td style="width: 50%; border: none;"> <i>Project planning and management</i> <i>Respect for difference and multiculturalism</i> <i>Respect for the natural environment</i> <i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i> <i>Criticism and self-criticism</i> <i>Production of free, creative and inductive thinking</i> <i>.....</i> <i>Others...</i> <i>.....</i> </td> </tr> </table>		<i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i> <i>Adapting to new situations</i> <i>Decision-making</i> <i>Working independently</i> <i>Team work</i> <i>Working in an international environment</i> <i>Working in an interdisciplinary environment</i> <i>Production of new research ideas</i>	<i>Project planning and management</i> <i>Respect for difference and multiculturalism</i> <i>Respect for the natural environment</i> <i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i> <i>Criticism and self-criticism</i> <i>Production of free, creative and inductive thinking</i> <i>.....</i> <i>Others...</i> <i>.....</i>
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<ul style="list-style-type: none"> • Search for, analysis and synthesis of data and information, with the use of the necessary technology • Working independently • Production of free, creative and inductive thinking 			

o. SYLLABUS



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- Introduction to nutrition for elite athletes and doping control
- Use of proteins & creatine as ergogenic aids
- Caffeine and sodium bicarbonate and their effect in athletic performance
- Beta alanine & nitric oxide
- Nutritional needs for ultra-endurance events
- The importance of sleep for elite athletes
- Psychology and the elite athlete
- REDs syndrome
- Blood doping, EPO and derivatives
- The role of a sports nutritionist in sports

o. TEACHING and LEARNING METHODS - EVALUATION

DELIVERY <i>Face-to-face, Distance learning, etc.</i>	FT: Face-to-face PT: Face-to-face and distance learning														
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i>	<ul style="list-style-type: none"> ● Use of Power Point for lectures presentation ● Use of asynchronous e-learning platform for supporting learning procedure ● Use of e-mail and online platforms as means of communication with students ● Reference to internet sites related to the curriculum 														
TEACHING METHODS <i>The manner and methods of teaching are described in detail.</i> Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc. <i>The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS</i>	<table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr> <th style="text-align: center;">Activity</th> <th style="text-align: center;">Semester workload</th> </tr> </thead> <tbody> <tr> <td>Lectures</td> <td style="text-align: center;">33</td> </tr> <tr> <td>Tutoring</td> <td style="text-align: center;">6</td> </tr> <tr> <td>Essay preparation</td> <td style="text-align: center;">75</td> </tr> <tr> <td>Essay presentation</td> <td style="text-align: center;">6</td> </tr> <tr> <td>Self-study</td> <td style="text-align: center;">90</td> </tr> <tr> <td>Course total</td> <td style="text-align: center;">210</td> </tr> </tbody> </table>	Activity	Semester workload	Lectures	33	Tutoring	6	Essay preparation	75	Essay presentation	6	Self-study	90	Course total	210
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o. ATTACHED BIBLIOGRAPHY

- Jose Antonio et al., *Essentials of Sports Nutrition and Supplements*, Springer-Verlag New York. 2016
- Asker Jeukendrup, Michael Gleeson. “Sports Nutrition”. 2020



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ΕΔ.Δ.Π.304 & ΕΔ.Δ.Μ.304 – DIET AND PHYSICAL ACTIVITY IN BODY WEIGHT MANAGEMENT

1. GENERAL

SCHOOL	HEALTH SCIENCES AND EDUCATION		
ACADEMIC UNIT	DEPARTMENT OF NUTRITION AND DIETETICS		
LEVEL OF STUDIES	MASTER OF SCIENCE		
COURSE CODE	ΕΔ.Δ.Π.304	SEMESTER	2nd Semester (Full time programme, FT)
	ΕΔ.Δ.Μ.304		2 nd year (Part time programme, PT)
COURSE TITLE	DIET AND PHYSICAL ACTIVITY IN BODY WEIGHT MANAGEMENT		
COURSE INSTRUCTORS	Mary Yannakoulia, Professor Costas Anastasiou. Assistant Professor		
INDEPENDENT TEACHING ACTIVITIES <i>if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits</i>		TEACHING HOURS	CREDITS
Lectures		FT: 3/week. PT: 4-5/month	7
<i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).</i>			
COURSE TYPE <i>general background, special background, specialised general knowledge, skills development</i>	Scientific area		
PREREQUISITE COURSES:	None		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	No		
COURSE WEBSITE (URL)	http://eclass.hua.gr/courses/DIET185 και http://eclass.hua.gr/courses/DIET136		



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ο. LEARNING OUTCOMES

<p>Learning outcomes</p> <p><i>The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.</i></p> <p>Consult Appendix A</p> <ul style="list-style-type: none"> ● Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area ● Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B ● Guidelines for writing Learning Outcomes 			
<p>The course promotes the in-depth and critical understanding of factors that influence energy balance, energy intake and energy expenditure, as well as the strategies for the management of body weight. On successful completion of the module the student will be able to:</p> <ul style="list-style-type: none"> ● be familiar with the parameters of dietary intake and physical activity that predispose to weight gain and overweight maintenance. ● understand the various effective strategies that could be used for the management of obesity. ● recognize the most relevant personalized appropriate therapeutic approach for weight management in clinical practice. ● evaluate and critically analyze the published research articles and review of the evidence on obesity management. ● communicate with clarity and purity the research findings to a specialized audience. 			
<p>General Competences</p> <p><i>Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?</i></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"> <p><i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i></p> <p><i>Adapting to new situations</i></p> <p><i>Decision-making</i></p> <p><i>Working independently</i></p> <p><i>Team work</i></p> <p><i>Working in an international environment</i></p> <p><i>Working in an interdisciplinary environment</i></p> <p><i>Production of new research ideas</i></p> </td> <td style="width: 50%; border: none;"> <p><i>Project planning and management</i></p> <p><i>Respect for difference and multiculturalism</i></p> <p><i>Respect for the natural environment</i></p> <p><i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i></p> <p><i>Criticism and self-criticism</i></p> <p><i>Production of free, creative and inductive thinking</i></p> <p><i>.....</i></p> <p><i>Others...</i></p> <p><i>.....</i></p> </td> </tr> </table>		<p><i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i></p> <p><i>Adapting to new situations</i></p> <p><i>Decision-making</i></p> <p><i>Working independently</i></p> <p><i>Team work</i></p> <p><i>Working in an international environment</i></p> <p><i>Working in an interdisciplinary environment</i></p> <p><i>Production of new research ideas</i></p>	<p><i>Project planning and management</i></p> <p><i>Respect for difference and multiculturalism</i></p> <p><i>Respect for the natural environment</i></p> <p><i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i></p> <p><i>Criticism and self-criticism</i></p> <p><i>Production of free, creative and inductive thinking</i></p> <p><i>.....</i></p> <p><i>Others...</i></p> <p><i>.....</i></p>
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<ul style="list-style-type: none"> ● Search for, analysis and synthesis of data and information, with the use of the necessary technology ● Working independently ● Teamwork ● Working in a multidisciplinary environment ● Production of new research ideas ● Showing social, professional, and ethical responsibility and sensitivity to gender issues ● Production of free, creative and inductive thinking 			

ο. SYLLABUS



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<ul style="list-style-type: none"> ● Guidelines for obesity ● Weight maintenance and relapse prevention ● Appetite control: effect of diet and physical activity ● “Fit & fat” hypothesis ● Physical activity, types of exercise in weight control ● Macronutrient and weight management ● Sugar and sweeteners and their contribution to weight management ● Micronutrients and and weight management ● Behavior modification in body weight management ● Chrononutrition and weight management ● Dietary supplements and weight management ● Gut microbiota and its role in weight control ● Weight management in older adults.
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o. TEACHING and LEARNING METHODS - EVALUATION

DELIVERY <i>Face-to-face, Distance learning, etc.</i>	<p>FT: Face-to-face PT: Face-to-face and distance learning</p>																
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i>	<ul style="list-style-type: none"> ● Use of Power Point for lectures presentation ● Use of asynchronous e-learning platform for supporting learning procedure ● Use of e-mail and online platforms as means of communication with students ● Reference to electronic/web-based resources 																
TEACHING METHODS <i>The manner and methods of teaching are described in detail. Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc.</i> <i>The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS</i>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Activity</th> <th style="text-align: center;">Semester workload</th> </tr> </thead> <tbody> <tr> <td>Lectures</td> <td style="text-align: center;">36</td> </tr> <tr> <td>Study and analysis of scientific papers</td> <td style="text-align: center;">60</td> </tr> <tr> <td>Essay preparation</td> <td style="text-align: center;">60</td> </tr> <tr> <td>Presentations (as part of the lectures)</td> <td style="text-align: center;">3</td> </tr> <tr> <td>Discussion</td> <td style="text-align: center;">3</td> </tr> <tr> <td>Autonomous study</td> <td style="text-align: center;">48</td> </tr> <tr> <td>Course total</td> <td style="text-align: center;">210</td> </tr> </tbody> </table>	Activity	Semester workload	Lectures	36	Study and analysis of scientific papers	60	Essay preparation	60	Presentations (as part of the lectures)	3	Discussion	3	Autonomous study	48	Course total	210
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STUDENT PERFORMANCE EVALUATION <i>Description of the evaluation procedure</i> <i>Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving, written work,</i>	<ul style="list-style-type: none"> ● The language of evaluation is Greek. ● The method of evaluation is announced at the beginning of the semester to all students orally and in written at the e-class. 																



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<p>essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other</p> <p>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</p>	<ul style="list-style-type: none">• The method of evaluation is as follows.<ol style="list-style-type: none">I. Presentations of a specific (debatable) research issue (50%)II. Written exams (50%) that include problem solving questions.
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o. READING

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ΕΔ.Δ.400 – MASTER THESIS

Guidelines on Writing a Master’s Thesis

In order to achieve uniformity, postgraduate Thesis must include: a) cover page, b) title page, c) acknowledgements page (optional), d) contents page, e) **body of the Thesis**, f) appendices. Formatting requirements are as follows: A4 paper size, justified alignment, 12 pt. *Times New Roman* font, text 1.5 cm. spaced, double spacing between paragraphs, margins set at 2 cm. top, bottom and right, and at 2.5 cm. left. It is suggested that Theses should be structured with Chapters or include Chapters. Chapters and sub-chapters should be numbered in Arabic numbers e.g. 1.1., 1.2. or 1.1.1., 1.2.1., 1.2.2. etc.

The **body of the Thesis** must include the following sections:

- i) Abstract (both in English and in Greek) and keywords
- ii) Literature Review
- iii) Methodology
- iv) Statistical Analysis
- v) Findings
- vi) Conclusions – Discussion
- vii) Bibliography
- viii) Appendices

i) Abstract

It gives a short and informative summary of study design, conduct and findings of the Thesis. Abstract should be structured in the following sections: Introduction and Aim, Materials and Methods, Results, Conclusions. It is recommended not to exceed 500 words.

Keywords: After the Abstract, list up to 5 keywords. These should represent international lexicographical terms. For medical-biological sciences the Index Medicus and IATROTEK (MeSH-Hellas-Biomedicine Terminology) in Greek should be used.

ii) Literature Review

This section presents in a systematic way the scientific literature on the subject area of the Thesis. The student gives an overview of the subject area and of the specific issue under consideration and identifies research needs, thus justifying why the specific topic was chosen and how the thesis is important

Aim: This paragraph should state the research gaps in the literature and then the research hypotheses and specific objectives that are the subject of the Thesis.



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iii) Methodology

It describes in detail the research method and procedure and, in particular, the way the sample was selected, the intervention program, the instruments, the data collection methodology and the activity timetable. It is recommended to divide this section into individual sub-sections:

- **Research design:** It is described whether it is laboratory research, epidemiological observational study, double-blind, randomized intervention study, or meta-analysis, the place and time period. In addition, it should be made a clear determination of all outcomes, exposures, predictors, and if necessary, diagnostic criteria.
- **Research sample:** It is described in detail the subjects of the study (study in humans, study in experimental animals, in vitro study) and the sample size, the sampling method (e.g. random, stratified, clusters, non-systematic sampling), the way of selecting samples (inclusion and exclusion criteria), the participation rate (if the study conducts in humans), the data collection methods (personal interview, self-report, by phone calls, etc.), as well as the timeline of the study.
- **Measurable characteristics:** Detailed chemical and/or biochemical processes, clinical examination, molecular genetic analyses, use of bioinformatics programs, as well as the questionnaires used (with the respective licenses), and a list of the references of the methodology and details regarding the methods and tools used.
- **Bioethics:** It is stated that the research was conducted based on the principles of Bioethics for humans and animals, as defined by the National Bioethics Committee and Greek legislation. In cases of research in humans, it must be specified that the study is in accordance with the Declaration of Helsinki (1989) and that the participants had been informed about the purposes of the study and giving writing consent to their participation in the study. This section also states any conflict of interest that may have existed during the study.

iv) Statistical Analysis

Here the student outlines the methodology used in the statistical data analysis. If required by the project design, power calculation is also described here.

v) Findings



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This section clearly and explicitly presents the findings from the research data process. Findings are not commented upon here. Results are presented in the form of tables, graphs and/or through a description.

For example, in studies conducted in humans, the number of participants at each stage of the study (number of potentially selected, screened for eligibility, not eligible for participation in the study, those included, those who completed the follow-up/intervention process and those finally use for analyses) is recommended to present using a flowchart. In addition, the descriptive characteristics of the participants (socio-demographic, clinical, nutritional, etc.) should be reported. Correspondingly, in studies investigating chemical, microbiological analyses of food or of various biological samples, the main characteristics of the study samples should be examined.

Regarding the main findings, first, the unweighted estimates should be listed, followed by the adjusted estimates after using confounding factors. Finally, any additional analyses (e.g. subgroups analyses, other sensitivity analyses) should be performed.

For the best presentation of the results, it is recommended to use Tables, Figures or Graphs. As for Tables, each column should have a short explanatory heading, whereas the use of vertical lines to separate columns should be avoided. Each Table, Figure or Graph should be self-explained. Any explanations (e.g. use of abbreviations, etc.) should be noted immediately after the Table, Figure or Graph. It is recommended that the results presented in Tables are not repeated in the Results section in the text and vice versa.

vi) Conclusions – Discussion

This section is connected with the abstract and especially with the part that regards the case examined in the Thesis. The researcher interprets the findings, describes their importance and compares them with those from other relevant projects discussing differences and similarities. The section concludes with considerations for further research and the addressing of questions that arose from the findings.

Limitations: Limitations of the study should be stated and discussed, taking into account potential sources of bias. At this point, every attempt to deal with possible sources of systematic errors should be described.

Conclusions: This section should close the Thesis with a discussion of wider acceptance of the findings, recommendations for public health arising from the findings of the Thesis or perspectives for future research, even formulating possible questions arising from the findings presented.

vii) Bibliography



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All sources used in the Thesis are presented here (books, articles, announcements from conference minutes, etc.). Each reference must be listed according to the information for authors provided by the American Journal of Clinical Nutrition.

Examples:

Article in a Magazine: Hamer M, Steptoe A. Prospective study of physical fitness, adiposity, and inflammatory markers in healthy middle-aged men and women. *Am J Clin Nutr* 2009;89:85-89.

Chapter in a Book: Young VR, Tharakan JF. Nutritional essentiality of amino acids and amino acid requirements in healthy adults. 2nd. ed. In: Cynober LA, ed. *Metabolic and therapeutic aspects of amino acids in clinical nutrition*. Boca Raton, FL: CRC Press, 2004:439–7

For references from a website, note the name of the author (if known) or the organization/institute that cites this information, e.g.

Food and Agriculture Organization [FAO] (2010) Rice farming in Kenya. Accessed February 24, 2010, at <http://www.fao.org/isfp/isfp-home/en/>

viii) Appendices

The appendix lists the research questionnaires, and any other informational material necessary for understanding the text. If there have been publications and/or announcements at international conferences, it would be useful to include them in the Appendix, at the end of the Thesis.

FOR MORE INFORMATION and details for each type of methodological design of the Thesis, the authors should consult the international guidelines STROBE and CONSORT:

- STROBE statement: Guidelines for recording and publishing observational epidemiological studies (prospective studies, case-control studies, cross-sectional studies)
 - http://www.strobe-statement.org/fileadmin/Strobe/uploads/translations/STROBE_Statement_Greek_2011.pdf

- CONSORT statement: Guidelines for recording and publishing randomized clinical trials
 - www.consort-statement.org/index.aspx?o=4156



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- <http://annals.org/article.aspx?articleid=745807>

More information for each type of methodological design:

- <http://www.cochrane.org/about-us/evidence-based-health-care/webliography/books/reporting>