

Course Outline: “7110 - Genetic Predisposition and Lifestyle - Critical Review of the Literature using ICT”

1. General information

FACULTY/SCHOOL	Physical Education, Sport Science & Nutrition		
DEPARTMENT	Nutrition & Dietetics		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	7110	SEMESTER	7th
COURSE TITLE	Genetic Predisposition and Lifestyle - Critical Review of the Literature using ICT		
INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits	WEEKLY TEACHING HOURS	CREDITS	
Lectures	2		
<i>αAdd rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4</i>	2	3	
COURSE TYPE <i>Background knowledge, Scientific expertise, General Knowledge, Skills Development</i>	Scientific expertise General Knowledge Skills Development		
PREREQUISITE COURSES	No		
LANGUAGE OF INSTRUCTION	Greek		
LANGUAGE OF EXAMINATION/ASSESSMENT	Greek		
THE COURSE IS OFFERED TO ERASMUS STUDENTS	No		
COURSE WEBSITE (URL)	https://eclass.uth.gr/courses/DND_U_274/		

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2. LEARNING OUTCOMES

<p>Learning Outcomes</p> <p><i>The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult: Συμβουλευτείτε το APPENDIX A</i></p> <ul style="list-style-type: none"> • <i>Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.</i> • <i>Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and APPENDIX B</i> • <i>Guidelines for writing Learning Outcomes</i>

This course aims at a multi-level combination of knowledge acquired throughout the 4 years. It aims to introduce and deepen the student in the field of personalized nutrition and personalized lifestyle in relation to health and disease. Emphasis is placed on the critical evaluation of the literature. The aim of the course is for students to come into contact with the decoding of the determinants of both health and complex and multifactorial diseases. Through critical evaluation of the most up-to-date literature, the aim is for students to cultivate a way of thinking, synthesizing their previous knowledge with new knowledge that will be acquired in the context of the course, about the genetic diversity of the genetic material, lifestyle factors and ultimately their interaction which forms the final phenotype. By the end of the course, the goal is for the student to be able to properly evaluate course-related literature and provide scientifically based personalized advice.

General Competences

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

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

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3. COURSE CONTENT

- Basic principles of human genetics. Introduction to the Science of Gene-Lifestyle Interactions
- Physical activity as a modifying factor in health and disease
- Sleep and the circadian rhythm as modifying factors in health and disease
- Smoking as a modifying factor in health and disease
- Weight loss, lifestyle and genetic predisposition
- Cardiovascular diseases, lifestyle and genetic predisposition
- Type 2 diabetes mellitus, lifestyle and genetic predisposition
- Obesity prevention: the role of breastfeeding
- Bone density: the role of genes and lifestyle
- The role of genes and lifestyle in intelligence markers
- Non-alcoholic fatty liver disease: the role of genes and lifestyle
- Metabolic syndrome: the role of genes and lifestyle
- Personalized recommendations: are we there yet?

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4. TEACHING METHODS - ASSESSMENT

<p>MODES OF DELIVERY <i>Face-to-face, in-class lecturing, distance teaching and distance learning etc..</i></p>	Face-to-face
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<p align="center">USE OF INFORMATION AND COMMUNICATION TECHNOLOGY</p> <p align="center"><i>Use of ICT in teaching, Laboratory Education, Communication with students</i></p>	<p>1. Lectures in power point documents 2. Research or review papers in pdf documents 3. Lectures in pdf documents that are announced to the students through the eclass platform</p> <p>The students get in touch with the instructor either directly (through face to face contact or email) or indirectly (through notes posted on the poster boards and the website of the Department).</p>	
<p align="center">COURSE DESIGN</p> <p><i>Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc. The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.</i></p>	Activity/Method	Semester workload
	Lectures	30
	Study and analysis of bibliography	15
	Independent study	10
	Essay writing	20
<p align="center">STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS</p> <p><i>Detailed description of the evaluation procedures:</i></p> <p><i>Language of evaluation, assessment methods, formative or summative (conclusive), multiple choice tests, short- answer questions, open-ended questions, problem solving, written work, essay/report, oral exam, presentation, laboratory work, other.....etc.</i></p> <p><i>Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.</i></p>	<p>Written individual assignment (100% of the final grade) in which the student is asked to critically analyze a scientific article in the field of genetic predisposition and lifestyle. The student will be evaluated based on the depth of the analysis he/she has carried out, the soundness of what he has recorded, as well as his final conclusions.</p>	
Total		75

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5. SUGGESTED BIBLIOGRAPHY

<p>-- Suggested bibliography:</p> <ol style="list-style-type: none"> 1. Μοριακή Γενετική του Ανθρώπου, Γ. Δεδούσης, Utopia, 2022 2. Handbook of statistical genetics υπό Balding, D. J., Bishop, Martin J., Cannings, Christopher 1942- Chichester, UK ; Hoboken, NJ : J. Wiley & Sons c2007. <p>-- Scientific journals:</p> <ul style="list-style-type: none"> - Journal of Nutrigenetics and Nutrigenomics [online] Available at: https://www.karger.com/Journal/Home/275177 - Genes & Nutrition [online] Available at: https://genesandnutrition.biomedcentral.com/

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