## COURSE OUTLINE

## (1) General information

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|---|---|---|---|
| **FACULTY/SCHOOL** | TECHNOLOGY | | |
| **DEPARTMENT** | ENVIRONMENTAL SCIENCES | | |
| **LEVEL OF STUDY** | *Undergraduate* | | |
| **COURSE UNIT CODE** | NEW **COURSE** | **SEMESTER** | 7 or 8 |
| **COURSE TITLE** | DEMOGRAPHY AND NATURAL RESOURCES | | |

| **INDEPENDENT TEACHING ACTIVITIES in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits** | **WEEKLY TEACHNG HOURS** | **CREDITS** |
|---|---|---|
| **THEORETICAL BACKGROUND** | 2 | 3 |
| **LABORATORY PRACTICE** | | |
| **TOTAL** | 2 | 3 |

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

## (2) LEARNING OUTCOMES

***Learning Outcomes***

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

***APPENDIX A***

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

***APPENDIX B***

- *Guidelines for writing Learning Outcomes*

1. General objectives - General learning outcomes

The aim of the course is to present students with modern scientific approaches and developments regarding the two-way relationship between demography and natural resources. In particular, the effects of demographic characteristics on economic growth, employment, investment, savings, and economic-productive activities in the coastal area. In addition, to analyze the correlation between a dynamic demographic profile ("new" population) and economic growth, the nature and volume of

demand, employment policy in the active population, innovation, dynamism, creativity. Finally, to approach the effects of population aging, such as insurance costs, production costs.

How they specialize in the following categories:
1.1. Knowledge
Students gain proven knowledge and understanding of topics in the cognitive field of demography and the economic demographics of natural resources. They are able to make use of the proposed theories and concepts of economic demography, the sources of demographic data, the tools of demography, the methods and techniques of demographic analysis and the socio-economic implications of demographic change focusing on natural resources.

1.2. Skills
At the end of the course, students will be able to acquire skills that will allow them:
- to understand what demography is, what its subject is, what the different fields are, what the branches are and what the fields of application of science are today,
- understand the basic sources of primary data used in demographic analysis, demographic indicators and demographic methods and techniques.

1.3. Abilities
At the end of the course, students are able to:
- to analyze and manage certain aspects of the socio-economic implications of demographic change and the prospects for population growth in relation to natural resources, and
- to delve into the latest trends that are already different from those of the last century and highlight the main demographic challenges of the coming decades.

## General Competences

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

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

The course aims to acquire the following skills:
- Adapting to new situations (exploratory analysis of future developments / scenarios)
- Decision-making
- Working in an interdisciplinary environment
- Apply critique to self and others' actions
- Elaboration of individual/independent, but also group work in a future interdisciplinary environment.
- Respect for natural environment
- Development of free, creative and inductive thinking

The above are ensured by the content of the lectures, the active participation of the students during the lectures, the projects that are implemented within the course as well as through the presentation of the obligatory projects.

## (3) COURSE CONTENT

The course refers to the science of Demography and the deep and reciprocal interdependence of Population and Natural Resources. The focus of the course is on Demography and population pressures exerted on natural resources. Utilization of the socio-economic effects of demographic changes on natural resources. Application of detailed tools and models of demography and natural resources.

The course includes the following topics:

1. Introduction to Demography: basic concepts, importance of demographic characteristics and developments.
2. Sources of demographic data: population censuses, registers, etc.
3. Demographic analysis tools. Methods and techniques of demographic analysis.
4. Macroeconomic effects of demographic developments.
5. Demographic transition and economic growth at global and European level.
6. Analysis of the correlation between one or less dynamic demographic profile and economic growth.
7. Demography: Economic and social policies.
8. The demographic situation of Greece in the context of the European Union.
9. Population pressures and natural resources.
10. Greece's natural resources within the European Union.
11. Demographic situation - demographic prospects natural resources.
12. Effects of demographics on economic growth, employment, investment, savings, and economic-productive activities related to natural resources.
13. Case study. Review of the taught material.

## (4) TEACHING METHODS-ASSESSMENT

<table>
<tr><td>MODES OF DELIVERY<br>Face-to-face, in-class lecturing, distance teaching and distance learning etc.</td><td>In-class lecturing</td></tr>
<tr><td>USE OF INFORMATION AND COMMUNICATION TECHNOLOGY<br>Use of ICT in teaching, Laboratory Education, Communication with students</td><td>• Use of presentation software, internet and asynchronous distance learning platform.<br>• Communication via e-mail.<br>• E-class platform</td></tr>
<tr><td>COURSE DESIGN<br>Description of teaching techniques, practices and methods:<br>Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity, etc.<br><br>The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.</td><td>
<table>
<tr><th>Activity/Method</th><th>Semester workload</th></tr>
<tr><td>Lectures</td><td>20</td></tr>
<tr><td>Laboratory Practice</td><td>10</td></tr>
<tr><td>Essay writing</td><td>15</td></tr>
<tr><td>Theory study</td><td>30</td></tr>
<tr><td>Course total<br>(25 hours of workload per credit unit)</td><td>75</td></tr>
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<tr><td>STUDENT PERFORMANCE EVALUATION/ASSESSMENT</td><td></td></tr>
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| **METHODS**<br>**Detailed description of the evaluation procedures:**<br><br>**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.**<br><br>**Specifically, defined evaluation criteria are stated, as well as if and where they are accessible by the students.** | ***Evaluation can be done in either Greek or English language. The final grade is the outcome of the following evaluations:***<br><br>• Written examinations<br>• Intermediate examination (optional) = 40%<br>• Final examination = 60% or 100% if there is no intermediate examination grade<br>• Instead of intermediate examination, the student can choose a written work. |

## (5) SUGGESTED BIBLIOGRAPHY:

-***Suggested bibliography***

Tragaki, A., Bagavos, X., Ntounas, D., 2016, *ABOUT CREATION AND COMPLETE EVOLUTIONS*, Greek Academic Electronic Books and Aids, www.kallipos.gr.
Chalkos G. (2016), *Economics of Natural Resources & Environment*, Athens, Publications: DISIGMA.
Faucheux S., Noel J.F. (2007), *Economics of Natural Resources and the Environment*, Athens, Publications: GUTENBERG.
Tietenberg T., Lewis L. (2010), *Economic Environment & Natural Resources*, Athens, Publications: GUTENBERG.

-***Complementary bibliography***

Professor's notes: Material of theory lectures and laboratory exercises, which are available through the asynchronous training platform.