COURSE OUTLINE

(1) General

School:	Social Sciences		
Academic Unit:	Geography		
Level of studies	Undergraduate		
Course Code:	GEO 312	**Semester:**	E
Course Title:	Geography and Management of Natural Resources		
Independent Teaching Activities	**Weekly Teaching Hours**	**Credits**	
Lecture		3	
		Course total	5
Course Type:	Required Elective		
Prerequisite Courses:	None		
Language of Instruction and Examinations	Greek		
Is the course offered to Erasmus students:	No		
Course Website (Url):	https://geography.aegean.gr/pps/index_en.php?content=0&lesson=312		

(2) Learning Outcomes

Learning Outcomes

At the end of the course, the student is expected to:

- estimate the utilitarian (e.g. economic) and non-utilitarian/intrinsic (e.g. ethical) value of natural resources, including ecosystem services
- distinguish and classify natural resources from several viewpoints, e.g. as tangible/non-tangible, on the basis of their derivation source, regarding their occurrence in reserves, their renewability and recyclability
- participate in the planning of using and managing important natural resources worldwide, such as water, soil, and food
- contribute to the sustainable management of natural resources at local, national, and world scale
- participate in studies related to availability, management and environmental impact assessment of natural resources
- be better advised to contribute to Environmental Impact Assessment Studies.

General Competences

1. Search for, analysis and synthesis of data and information, with the use of the necessary technology
2. Adapting to new situations
3. Working independently
4. Respect for the natural environment
5. Criticism and self-criticism
6. Production of free, creative and inductive thinking

(3) Syllabus

Concept, perception and rationale for the classification of natural resources. Renewability and recyclability of natural resources. Assessment of natural resources and reserves – indicators. Management of natural resources by humans – a geographical and historical approach. Geography and management of major natural resources (water, soil, ores): world distribution, availability, methods of use and management, related problems (environmental, social, political). Food as a resource (agriculture, animal products, fisheries). Food production (farming) models: traditional, conventional and alternative (organic) – Biotechnology and genetic engineering – Harvesting nature (oceans, forests, wetlands, other ecosystems). Wildlife and biodiversity as resources. Energy: classic/conventional (mineral fuels, nuclear) and alternative forms of energy (e.g. renewable, hydrogen). World strategy for a sustainable management of natural resources. Human ecology.

(4) Teaching and Learning Methods - Evaluation

Delivery:	The course includes face-to-face teaching, i.e. lectures in a lecture room, and a homework-report to be delivered orally in the classroom by each student, to be discussed in the frame of a seminar with the teacher.	
Use of Information and Communication Technology:	Lectures are carried out using powerpoint and other high tec methods.	
Teaching Methods:	**Activity**	**Semester workload**
Lecture	39	
Tutorials	13	
Project	30	
Non-supervised study	60	
Performance evaluation/Exams	2	
	Course total<	144
Student Performance Evaluation	Both theory and presentations in seminars are evaluated as follows: Theory: A written exam at the end of the course is evaluated (30% of the final mark). student presentation Seminar: The quality of the presentation and the ability to support the presented materiar as well as to hold discussion on the matter is evaluated (40%). The contribution during the course is also evaluated (30%).	

(5) Attached Bibliography

1. Handouts to be found at: geo-fscoursesPPSNatural Resources
2. Wright RT, Boorse DF (2012). Περιβαλλοντική Επιστήμη – Προς ένα βιώσιμο μέλλον. Πετανίδου Θ, Ριζοπούλου Σ, επιστημονική και μεταφραστική επιμέλεια. Επιστημονικές Εκδόσεις Παρισιάνου, Αθήνα, σελ. 723 + xxii.
3. Γεωργόπουλος Α., Νικολάου Κ., Δημητρίου Α., Γαβριλάκης Κ., Μπλιώνης Γ. (2014). Γη – Ένας Μικρός και Εύθραυστος Πλανήτης. Εκδόσεις Gutenberg, Αθήνα.
4. Petanidou T. (2015). *Terraces of the Aegean – the example of Dodecanese*. Parisianou Scientific Publications, Athens, pp. 280.

6. Camp WC, Daugherty TB (1998). Διαχείριση & προστασία φυσικών πόρων. Εκδόσεις ΙΩΝ, Αθήνα.
7. Conrad JM (1999). Resource economics. Cambridge University Press, Cambridge.
8. Dale VH (ed) (2003). Ecological modeling for resource management. Springer, New York.
9. Dale VH, Kline KL, Wiens J, Fargione J (2010). Biofuels: Implications for Land Use and Biodiversity Biofuels: Implications for Land Use and Biodiversity. Biofuels and Sustainability Reports, ESA (http://www.esa.org/biofuelsreports/)
10. Grant WE, Pedersen EK, Marin SL (1997). Ecology and natural resource management: systems

analysis and simulation. John Wiley and Sons, New York.
11. Nemetz PN (ed) (2007). Sustainable resource management : reality or illusion? Edward Elgar, Cheltenham.
12. Owen OS, Chiras DD, Reganold JP. (1998). Natural resource conservation: management for a sustainable future. Prentice Hall, New Jersey.
13. Simmons IG (1986). The ecology of natural resources. Edward Arnold, London.
14. Smith BD (1998). The emergence of Agriculture. Scientific American Library, New York.
15. Tietenberg TH (1998). Οικονομική του Περιβάλλοντος και των Φυσικών Πόρων. Gutenberg, Αθήνα.
16. Zohary D, Hopf M (2000). Domestication of Plants in the Old World – The origin and spread of cultivated plants in W. Asia, Europe and the Nile valley, third edition. Oxford, New York: Oxford UP.