Course Title	Environmental Impact Assessment from projects in or near natural areas				
Course Code	DLCLIMA514				
Course Type	Elective				
Level	MSc (Level 2)				
Year / Semester	2nd year / 3rd semester				
Teacher's Name	Marios Andreou				
ECTS	7,5	**Lectures / week**		**Laboratories/week**	
Course Purpose	The purpose of the course is to provide information and develop skills related to the impact assessment process that development projects may have on natural areas. It involves the evaluation of potential negative impacts on biodiversity, ecosystems, air quality, water, soil, as well as human health. Through this specific course, students are expected to understand the basic principles and the process involved in environmental impact assessment, including data collection, impact analysis, examination of alternative solutions, and proposing measures to minimize negative impacts.				
Learning Outcomes	Upon successful completion of the course, students will be able to: • Provide historical examples that outline the need for environmental management/ EIA • Identify some key environmental issues faced today • Effectively use basic vocabulary related to sustainable development, such as carrying capacity and ecological footprint • Outline the historical development of EIA as an environmental management tool • Identify key environmental policies and laws in the European Union (EU), in Cyprus and Greece • Identify the main aims and objectives of EIA • Define an 'impact' based on the identification of a 'baseline' • Characterize and categorize environmental impacts • Chart the generalized EIA process • Ensure public participation in EIA through a variety of means • Discuss the root causes of environmental problems • Argue the advantages and disadvantages of EIA • Explain the main elements of EIA • Explain the core values and guiding principles of EIA • Explain the purpose and outcomes of each stage in the EIA process • Recognize the commonly-used methods for impact prediction				

	• Identify the sources of uncertainty in impact prediction • Describe concepts of environmental pollution and engineering • Become conversant in basic terminology relating to air, water, soil pollution • Become aware of such specialized set of studies (within an EIA) as noise studies, ecological impact studies, transportation impact studies, visual impact assessments, etc. • Apply learned EIA concepts by putting them in the context of case-studies. • Critically review environmental impact statements.		
Prerequisites	None	**Corequisites**	None
Course Content	Over the past decades, there has been significant interest in environmental issues. The catalyst for this was the 1987 report of the World Commission on Environment and Development (the Brundtland Report). Later, the 1992 Rio Conference sought to accelerate this interest. Many discussions on environmental issues and sustainable development focus on better management of current activities in harmony with the environment. However, there will always be a desire and pressure for new developments. For this reason, it would be wiser to avoid or reduce possible harmful impacts of any future development at the planning stage. Environmental Impact Assessment (EIA) evaluates the impacts of planned activities on the environment in advance, thus allowing for the adoption of preventive or mitigation measures. The assessment of environmental impacts due to development projects today requires the preparation of studies assessing environmental impacts based on actions that significantly affect the quality of the human environment. Environmental Impact Assessment was officially established for the first time in the United States in 1969. It has spread worldwide and gained significant momentum in Europe with the introduction of Directive 85/337/EEC in 1985 for the assessment of environmental impacts from certain public and private projects. Environmental Impact Assessment is now an integral part of the agenda due to the introduction of legislation at both national and international levels. It is in full agreement with the broad and growing concern for environmental issues and the impacts of development on the environment. All of the above are addressed in the course of 'Environmental Impact Assessment from projects within or near natural areas'. The aim of the course is to provide information and develop skills related to the process of assessing the impacts that the development of projects may have on natural areas. Environmental Impact Assessment is an interdisciplinary scientific tool, and being successful in this field requires a good understanding, study, and deepening of the multitude of concepts covered in the course. A holistic approach to EIA is necessary to form an understanding of the challenges that professionals will face when solving environmental problems, whether at a micro or macro level. This is particularly important for environmental engineers, scientists, consultants, and other stakeholders who must formulate and implement practical solutions to address negative impacts, with the ultimate goal of achieving sustainable development.		

Teaching Methodology	The course is structure based on the principles of distance learning, good practices as well as the directions of the regulatory authority, and finally the Pedagogical Framework developed and employed by our University. Also, through the design and development of the Distance Learning courses, interaction, communication and collaboration are implemented in 3 levels: 1) between instructor-students, 2) among students, and 3) between students-content. The course is entirely taught online through the Moodle LMS platform. Required and additional readings (e.g. books, articles, websites, newsletters, open educational resources, case studies) in combination with lecture notes are available for students to use via the LMS. Additionally, a variety of appropriate educational material is available to students via the LMS platform such as narrated presentations, annotated presentations, interactive presentations and videos, interactive, learning scenarios, gamification activities, use of avatars and digital twins, podcasting documents, online quizzes and midterms). Numerous new and emergent technologies are employed such as communication tools (e.g. videoconferencing, audio conferencing and text conferencing), collaboration tools (e.g. discussion forums, blogs and wikis) and content development tools. Students are encouraged to interact with their peers and the instructor via the platform and various technological tools, aiming to become active members of the online learning community developed within the course. Finally, the use of various technological tools, is expected by the students in order to develop their own learning community.
Bibliography	• E Holden, K Linnerud, D Banister. (2014). Sustainable development: our common future revisited. Global Environmental Change, 26, 130-139. • UN General Assembly. 2015. Transforming our World: the 2030 Agenda for Sustainable Development (21 October 2015), A/RES/70/1, available at: https://www.refworld.org/docid/57b6e3e44.html [accessed 14 April 2020]. • Jeffrey Sachs. (2015). Chapter 1 from the book "The Age of Sustainable Development". Columbia University Press, March 2015, ISBN-13: 978-0231173155. • EU Environmental acquis (A summary with links – prepared by C. Anastasiou). • Law 127(I)2018. • European Commission. (2017). Environmental Impact Assessment of Projects: Guidance on Screening (Directive 2011/92/EU as amended by 2014/52/EU). ISBN 978-92-79-74372-6. Accessed through https://ec.europa.eu/environment/eia/eia-support.htm • Anji Reddy Mareddy. (2017). Environmental Impact Assessment: Theory and Practice (Chapter 1: Conceptual Facets of EIA, Chapter 4: Conceptual Facets of EIA, Chapter 15: Conceptual Facets of EIA). Elsevier - Health Sciences Division. ISBN: 9780128111390. • United Nations University (UNU), UNEP, & RMIT. (2007). Environmental Impact Assessment (EIA) – Open educational resource. Retrieved from http://sustainability-research.mcgill.ca/documents/EIA%20readings/eia-local/page173.htm • European Commission. (2017). Environmental Impact Assessment of Projects: Guidance on Scoping (Directive 2011/92/EU as amended by

	2014/52/EU). ISBN 978-79-74376-4. Accessed through https://ec.europa.eu/environment/eia/eia-support.htm • European Commission. (2017). Environmental Impact Assessment of Projects: Guidance on the preparation of the Environmental Impact Assessment Report (Directive 2011/92/EU as amended by 2014/52/EU). 978-92-7974374-0. Accessed through https://ec.europa.eu/environment/eia/eia-support.htm • Bosko Josimovic, Jasna Petric & Sasa Milijic. (2014). The Use of the Leopold Matrix in Carrying Out the EIA for Wind Farms in Serbia. Energy and Environment Research; Vol. 4, No. 1, pp 43-54. • Marttunen, M., Vienonen, S., Koivisto, U. and Ikaheimo, E. (2013). Impact Significance Determination in Environmental Impact Assessment – Literature Review. Accessed from here. • Καραθανάσης Σ., Κούγκολος Α. 2023. Εκτίμηση Περιβαλλοντικών Επιπτώσεων, 2η Έκδοση. Εκδόσεις Τζιόλα. • Law127(I)2018 • Law 4014/2011 ΦΕΚ 209/A/2011 • Mackenzie L.D. and Susan J.M. 2020. Principles of environmental engineering and science. Fourth edition. New York: McGraw-Hill Education. (Chapters 9: pages 396-436, 12: pages 603-631, 13: pages 679-693, 15: pages 779-805).
Assessment	• Two Weekly Educational Activities (10%) • Assignment 1 (20%) • Assignment 2 (20%) • Final Exam (50%)
Language	Greek / English