

## MEER502 / MEEB502 Environmental Impact: Legislation and Standards

<b>Course Title</b>	Environmental Impact: Legislation and Standards		
<b>Course Code</b>	MEER502 / MEEB502		
<b>Course Type</b>	Elective		
<b>Level</b>	Masters (2 <sup>nd</sup> Level)		
<b>Year / Semester</b>	1 <sup>st</sup> year/ 2 <sup>nd</sup> semester or 2 <sup>nd</sup> year/ 3 <sup>rd</sup> semester		
<b>Teacher's Name</b>	Dr. Christos Anastasiou		
<b>ECTS</b>	10	Lectures / week	3
		Laboratories/week	0
<b>Course Purpose</b>	<p>This course is designed to introduce students to a systematic process for predicting and evaluating the significant environmental consequences of a proposed project, action, or other undertaking.</p> <p>The process of environmental impact assessment has been applied primarily to new infrastructure projects, such as power plants, highways, pipelines, dams, mines, airports, incinerators, and landfills. Assessment processes have also been used to consider the implications of new technologies, plans, and policies that may result in significant social, economic, and biophysical effects.</p> <p>This course focuses on environmental assessment processes, what they are meant to accomplish, and how they are designed or should be designed to be effective, efficient, and fair.</p> <p>The course is designed so that it can impart to students the essential skills that will allow them to critically read and evaluate, review and begin to conduct impact assessments to balance and integrate environmental, social and economic needs</p> <p>During the course, emphasis is placed on practical aspects (internationally used approaches), and the implementation of European Directives as well as National Legislation and Standards.</p>		
<b>Learning Outcomes</b>	<p>By the end of the course, students must be able to:</p> <ol style="list-style-type: none"> <li>1. Understand the basic concepts, methodological approaches, and technological components of an Environmental Impact Assessment</li> <li>2. Identify all applicable European Norms, National Codes and Standards concerning EIA (and especially as this relates to the environment and energy systems)</li> <li>3. Exhibit knowledge and understanding of the way that an EIA is conducted within the framework of the energy sector in Cyprus and in the EU</li> <li>4. Coordinate an Environmental Impact Assessment, including             <ol style="list-style-type: none"> <li>a. Selecting team-members, and</li> <li>b. Outlining the key issues to be addressed (scoping).</li> </ol> </li> </ol>		
<b>Prerequisites</b>	Prior taught experience on environmental issues or instructor's approval	<b>Corequisites</b>	None
<b>Course Content</b>	<ol style="list-style-type: none"> <li><b>1. Basic Concepts</b> <ul style="list-style-type: none"> <li>- Basic concept of EIA : Initial environmental Examination</li> <li>- Elements of EIA</li> <li>- Factors affecting EIA Impact evaluation and analysis</li> <li>- Preparation of Environmental Base map</li> <li>- Classification of environmental parameters.</li> </ul> </li> <li><b>2. EIA Methodological Approaches</b> <ul style="list-style-type: none"> <li>- EIA Methodologies: introduction</li> <li>- Criteria for the selection of EIA Methodology</li> <li>- EIA Methods               <ul style="list-style-type: none"> <li>- predictive methods</li> <li>- environmental risk assessment</li> <li>- economic methods</li> </ul> </li> </ul> </li> <li><b>3. Technical Components of Environmental Impact Assessment</b> <ul style="list-style-type: none"> <li>- Basic concepts pertaining to an EIA for               <ul style="list-style-type: none"> <li>- Surface &amp; Ground Water and the Marine environment</li> <li>- Air</li> <li>- Soils</li> <li>- Fauna and Flora</li> </ul> </li> </ul> </li> </ol>		

	<ul style="list-style-type: none"> <li>- Impact prediction</li> <li>- Assessment of Impact significance</li> <li>- Identification and Incorporation of Mitigation Measures</li> </ul> <p><b>4. Procedures and Law</b></p> <ul style="list-style-type: none"> <li>- Environmental Impact Assessment Process in the European / Cyprus Context</li> <li>- Roles and Responsibilities of Groups Involved in the EIA System</li> <li>- Laws and Regulatory Frameworks for Environmental Impact Assessment             <ul style="list-style-type: none"> <li>- European Union Directives</li> <li>- National Laws and Standards</li> </ul> </li> </ul> <p><b>5. Synthesis and Case Applications</b> (<i>this module is interspersed throughout the duration of the course</i>)</p> <ul style="list-style-type: none"> <li>- Case studies</li> <li>- Preparation of an (preliminary) Environmental Impact Assessment for activities in the energy sector</li> </ul>						
<b>Teaching Methodology</b>	<p>The course will be presented through theoretical lectures in class. The lectures will present to the student the course content and allow for questions. The material will be delivered using visual aids (e.g. PowerPoint presentation slides, documentaries). The aim is to familiarize the student with the material at a faster pace of presentation, while allowing the instructor to use the presented material for meaningful discussions. The learning process will be enhanced with the requirement from the student to carry in-class discussions and tackling of hypothetical scenarios in small-group exercises. In-class case-studies are an integral part of this course.</p> <p>Homework assignments / mini projects, which will be required as part of the students' assessment for the course, will allow students the opportunity to carry out independent research, synthesize basic concepts presented in class, as well as hone their analytical, writing and presentation skills.</p> <p>Besides from the notes taken by students in class, all of the course material will be made available through the class website which will be available through the University's E-learning platform.</p> <p>The instructor will be available to students during office hours or by appointment in order to provide necessary guidance.</p>						
<b>Bibliography</b>	<p><b>Textbook:</b> Anji Reddy Mareddy. (2017). Environmental Impact Assessment: Theory and Practice. Butterworth-Heinemann. ISBN 9780128111390.</p> <p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. J. Glasson, R. Therivel, and A. Chadwick. (2005). Introduction to Environmental Impact Assessment, 3rd edition. Routledge</li> <li>2. Leonard Ortolano. (1997). Environmental Regulation and Impact Assessment. John Wiley</li> <li>3. Larry W. Canter. (1995). Environmental Impact Assessment. McGraw-Hill</li> <li>4. European Commission Environment: Environmental Impact Assessment. <a href="http://ec.europa.eu/environment/eia/home.htm">http://ec.europa.eu/environment/eia/home.htm</a></li> <li>5. European Commission Environment: Energy and environment. <a href="http://ec.europa.eu/environment/integration/energy/index_en.htm">http://ec.europa.eu/environment/integration/energy/index_en.htm</a></li> </ol>						
<b>Assessment</b>	<table style="width: 100%; border: none;"> <tr> <td style="width: 80%;">Assignments (two assignments / mini projects)</td> <td style="width: 20%; text-align: right;">20%</td> </tr> <tr> <td>Midterm Exam</td> <td style="text-align: right;">30%</td> </tr> <tr> <td>Final Exam (comprehensive)</td> <td style="text-align: right;">50%</td> </tr> </table>	Assignments (two assignments / mini projects)	20%	Midterm Exam	30%	Final Exam (comprehensive)	50%
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<b>Language</b>	English						