UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Evironmental Impact Assessment

2122-2-F7501Q004

Aims

The course aims at providing cultural basis and practical knowledge on Environmental Impact Assessment (EIA) and on Strategic Environmental Assessment (SEA).

In particular:

Knowledge and understanding: students are expected to uptake the knowledge of rules and procedures to predict and criteria to evaluate the different environmental impacts deriving from plans, programs and projects.

Applying knowledge and understanding: the aquired skills will make the student able to prepare Environmental Impact Studies and related documents, as well as to evaluate the environmental compatibility of plans, programs and projects

Making judgements: this is an important point which will have to be aquired by the student to make possible the impact assessment and the definition of the overall environmental compatibility.

Communication skills: As for all subjects, the communication efficiay is important. in the specific domain of Environmental Impact Assessment, an important point is actually related to the management of public opinion and interventions. So, synthetisis and critical analysis are needed to fulfill a correct information transfer.

Learning skills: as the subject is in continuous evolution, a fast and efficient ability in updating is required in order to uptake all the arising scientific, operational and regulatory elements.

The subject of the course is itself an important component of any strategy of sustainable development. With respect to the 2030 Sustainable Development Goals defined by the United Nations. The most evident links concern: 3. Good health and well-being, 6. Clean water and sanitation, 7. Affordable and clean energy, 9. Industry, innovation and infrastructure, 11. Sustainable cities and communities, 12. Responsible consumption and production, 13. Climate action, 14. Life below water, 15. Life on land

Contents

Cultural basis of Environmental Impact Assessment (EIA) and Strategic Environmental Assessment (SEA). Laws and regulations in force. Characteristics of environmental components and factors, criteria and methods for their ante operam analysis and for the prediction of their evolution with and without the examined project or plan. Measures for mitigation and compensation. Criteria for environmental compatibility. Weighting predicted impacts. Final balance of environmental impacts.

Detailed program

The course will include a first part defining the basic principles, methods and criteria for environmental assessment. Then, the laws in force will be analysed and explained with reference to their evolution with time and in the international framework. The subsequent lectures will develop according to the procedures set by the rules in force in Italy, dealing with all items Environmental Impact Studies and Environmental Reports for Strategic Environmental Assessment must include. First, the study outline and technical details concerning the reference to specific laws and the description of the project will be presented. Then, lectures will deal with specific environmental components and factors such as: atmosphere, water environment, geology and hydrogeology, biotic components, ecosystems, landscape, public health, noise and vibrations, radiation. For each environmental component and factor in the last lessons an open discussion wiill be carried out on specific case studies.

Prerequisites

Basic scientific knowledge of environmental sciences, including chemistry, physics, biology, microbiology, and, of course, ecology.

Teaching form

Frontal lessons. 8 Credits, 64 hours

Textbook and teaching resource

Didactic material can be available on the e-learning platform: http://elearning.unimib.it/course.

In addition, the following texts can be used:

•ISPRA: Elementi per l’aggiornamento delle norme tecniche in materia di valutazione ambientale

•Regione Lombardia: Linee Guida VIA (SILVIA)

•V. Torretta: Studi e procedure di valutazione impatto ambientale. Dario Flaccovio Editore, 253 pp.

•A. Zeppetella, M. Bresso, G. Gamba: Valutazione Ambientale e Processi di Decisione. NIS, La Nuova Italia Scientifica, 212 pages

Semester

First semester

Assessment method

The exam includes two parts:

- Written exam with OPEN QUESTIONS on the theoretical part (fundamentals, criteria and methods for assessment and evaluation of environmental quality and impacts, environmental scenarios, laws). The exam will consist of 5 questions, chosen from the list in e-learning. The evaluation will depend on the aquired knowledge, on the precision and clarity of exposition. In case of sanitary problems the first part of the exam will also be oral; the details will be defined according to the situation.

- Oral exam consisting in a REPORT ON SUBJECTS NOT PRESENTED DURING THE LESSONS. Th exam will consist in the critical analysis of a case study, summarized in a .ppt presentation (10-15 slides, 15 minutes). The subject must not have been used in previous exams, whose list is published in the e-learning site.

The work for the oral exam can be prepared individually or by two students who will discuss it together. The exam will be evaluated considering not only aquired knowledge but also the skill to apply them in analytical and proposal perspective.

The final grade is the average of the grades obtained in two exams, expressed in the range 18-30/30

Office hours

to be defined by e-mail to: valeria.mezzanotte@unimib.it