UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Evironmental Impact Assessment

2526-2-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

68 hours, including:
20 two-hour lectures (40 hours) of Delivered Didactics in person
4 two-hour lessons (8 hours) of e-learning Delivered Didactics
5 two-hour (20 hours) interactive activities

Textbook and teaching resource

Didactic material will be available before the lectures 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 will be oral, individual, and will be an interview on the topics explained during the course. The evaluation will consider the level of knowledge of the general program (basic concepts and definitions, criteria, methods and procedures for Environmemntal Impact Assessment, Strategic Environmental Assessment and Integrated Pollution Prevention and Control) and of their application (elements for the analysis and the prediction of impacts on the differen environmental components), as well as the ability of solving some proposed practical problems.

Office hours

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

Sustainable Development Goals

GOOD HEALTH AND WELL-BEING | CLEAN WATER AND SANITATION | AFFORDABLE AND CLEAN ENERGY | INDUSTRY, INNOVATION AND INFRASTRUCTURE | SUSTAINABLE CITIES AND COMMUNITIES | RESPONSIBLE CONSUMPTION AND PRODUCTION | CLIMATE ACTION | LIFE BELOW WATER | LIFE ON LAND