



**UNIVERSITÀ DEGLI STUDI DELL'AQUILA
CORSI DI INGEGNERIA**

A.A. 2025/2026

ENVIRONMENTAL ASSESSMENT TECHNIQUES (I4B)

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(Aggiornato il 12-09-2025)

Contenuti del corso (abstract del programma):

This course allows students to acquire skills in the field of environmental assessments, with an interdisciplinary approach on the complex environmental issues dealt with. It will be mainly focused on: Environmental Impact Assessment (EIA), Strategic Environmental Assessment (SEA) and assessment of plans and projects significantly affecting Natura 2000 sites. The course also provides basic knowledge on the use of open source GIS software for the preparation of the technical assessments required in the context of the various environmental procedures; through the definition, calculation and treatment of territorial and environmental indicators.

Programma esteso:

The course allows to acquire skills in the field of environmental assessments, with an interdisciplinary approach on the complex environmental issues dealt with in:

- Environmental Impact Assessment (EIA);
- Strategic Environmental Assessment (SEA);
- Assessment of plans and projects significantly affecting Natura 2000 sites.

This course is divided into two major parts. The first part aims at introduction of the environmental assessments and at studying and deepening of their legal and planning framework; with particular attention on major impacts/issues which are very important in the environmental assessment and the approaches used by various disciplines to assess and monitor environmental change. The second part, more practical, focuses on the redaction of some practical and explanatory exercises, with the use of

open source GIS software.

Moreover, the course lessons are structured as follow:

- definitions and overview of environmental assessment;
- introduction to the different types of environmental assessment;
- international and national laws about the environmental assessment;
- study of the different processes for each types of environmental assessment;
- detailed analysis of the single phases of environmental assessment (i.e. scoping, screening, proposal for alternatives, data collection and analysis, public involvement, writing the report containing the results of analysis and evaluation);
- examples of case studies and practice in the national context;
- introduction to Territorial Information System (TIS);
- basic knowledge on the use of open source GIS software, with practical exercises;
- drafting of environmental assessment reports for selected case studies.

The main aim of this course is the training of professionals, with specific skills, capable of responding to the technical requirements in the field of technical consultancy relating to the environmental assessment techniques.

Moreover, the course will be developed through lectures and practical exercises with open source GIS software.

Modalità d'esame:

oral exam

Risultati d'apprendimento previsti:

At the completion of the course, students should be able to:

- structuring and carrying out the environmental assessment process, including the data collection and analysis using open source GIS software;
- develop diagnostic analysis and discuss critically the results obtained;
- how impacts might be mitigated and monitored;
- write technical reports

Testi di riferimento:

course materials provided by the teacher.