



ALERT Geomaterials

Alliance of Laboratories in Europe for Education, Research and Technology
<http://alertgeomaterials.eu>

Learning Outcome Template

A learning outcome statement clearly describes what students should know, be able to do, or value as a result of the Doctoral School. You may use this template as a guide to articulate specific, measurable, and actionable outcomes. You are welcome to use other templates if you are more familiar with them.

Knowledge Outcomes

These outcomes define the theoretical and factual knowledge students are expected to acquire.

Examples:

Students will demonstrate an understanding of [specific concept or principle].

Students will demonstrate an understanding of the principles of stress-strain behavior in soils and rocks.

Students will explain what bifurcations and instabilities are.

Skill-Based Outcomes

These outcomes focus on the practical application of knowledge and technical skills.

Examples:

Students will be able to [specific task or skill] using [method, tool, or approach].

Students will be able to apply bifurcation to theory to explain human-induced seismicity in geological reservoirs.

Students will apply finite element analysis to assess the stability of geotechnical structures.

Students will conduct laboratory experiments to determine the shear strength of soils under different loading conditions.

Attitudes/Values Outcomes

These outcomes emphasize the development of ethical, professional, or value-driven perspectives related to the subject.

Examples:

Students will [specific value, attitude, or ethical perspective] in [context or application].

Students will demonstrate an appreciation for sustainable engineering practices by integrating environmental considerations into geotechnical design.

Students will value the importance of lifelong learning in advancing geomechanics knowledge and technologies.

Checklist for Crafting Effective Learning Outcomes

- Clarity: Is the outcome clearly stated and free of ambiguity?
- Measurability: Can the outcome be assessed objectively?
- Relevance: Does the outcome align with the program's goals?
- Specificity: Does the outcome detail what the students will achieve?