

GRADUATE CERTIFICATE IN TAILINGS ENGINEERING

This certificate will provide students with an introduction to tailings and mine waste concepts and practices, with a four-course series that instills key core competencies and skills needed to practice as a tailings engineer. Students learn how and why to apply aspects of tailings engineering. This certificate program prepares engineers or other professionals in geotechnical and geoenvironmental engineering with the knowledge and training needed to practice the environmental stewardship of mine waste from planning through implementation to post closure.

[Students interested in graduate work should refer to the Graduate and Professional Bulletin \(https://catalog.colostate.edu/general-catalog/graduate-bulletin/\).](https://catalog.colostate.edu/general-catalog/graduate-bulletin/)

Learning Objectives

Upon successful completion, students will be able to:

1. Identify fundamental components tailings management.
2. Define fundamental properties of tailings and mine waste that govern engineering behavior.
3. Analyze engineering performance of tailings and mine waste storage facilities.
4. Assess strength, volume change, and fluid flow behavior of tailings.
5. Collaborate on environmental, social, and governance (ESG) aspects of tailings management.