

COMPETENCY 1 FOR GEOTECHNICAL AND CIVIL ENGINEERS		Developing a reconnaissance program	
<i>Workplace situations</i>		<i>Development trajectories</i>	
Infrastructure project or natural or environmental risk studies		Factor in the technical and economic environment and sustainable development issues.	
		Determine the geological and hydrological reconnaissance missions to complete.	
		Determine the geophysical reconnaissance missions to complete.	
Post-damage geotechnical assessments		Determine the geotechnical reconnaissance missions to complete.	
		Seek out the geotechnical causes of the damage.	
		Recommend additional reconnaissance.	

COMPETENCY 2 FOR GEOTECHNICAL AND CIVIL ENGINEERS		Assessing a site's geological and geotechnical risks	
<i>Workplace situations</i>		<i>Development trajectories</i>	
Identification of unforeseeable natural phenomena and environmental and geotechnical problems		Summarize the existing data (bibliography and database).	
		Complete field reconnaissance (geomorphology, survey of the community).	
		Implement instrumentation.	
Risk analysis		Assess legal and societal factors.	
		Evaluate potential damage.	
		Recommend solutions to reduce risks.	
		Contribute to cost-benefit analyses.	
Communication of risk		Explain complex situations so that they are easy to understand.	
		Present information orally and in writing clearly in French and English.	

COMPETENCY 3 FOR GEOTECHNICAL AND CIVIL ENGINEERS		Designing infrastructure	
<i>Workplace situations</i>		<i>Development trajectories</i>	
Pre-project and project studies		Select a technical and economic solution.	
		Ensure that the infrastructure is appropriate to the terrain.	
		Check the infrastructure's stability and deformability.	
		Factor in environmental and safety aspects.	
Execution studies		Validate geotechnical hypotheses.	
		Optimize the dimensioning.	
		Factor in safety and environmental aspects.	

**COMPETENCY 4
FOR GEOTECHNICAL AND CIVIL
ENGINEERS**

Managing a project

Workplace situations

Development trajectories

Technical management of an infrastructure project

Respond to a request for proposals.
Write the proposal.
Assist the customer during the proposal assessment phase.

Administrative management of an infrastructure project

Prepare a budget and ensure financial profitability.
Demonstrate an understanding of the needs and requirements of a market.
Demonstrate knowledge of scheduling and management tools.

Management of his or her career plan

Develop a career plan.
Build and expand a professional network.
Demonstrate ethical, environmentally-responsible behavior.
Promote creativity, innovation, and entrepreneurship.

**COMPETENCY 5
FOR GEOTECHNICAL AND CIVIL
ENGINEERS**

Managing the execution of geotechnical works

Workplace situations

Development trajectories

Technical management of execution

Make adjustments to project stages.
Monitor work methods and conditions.
Check quality and safety of work.

Administrative management of execution

Factor in legal and contractual requirements.
Manage costs.

Teamwork

Manage a project in a multicultural context.
Utilize communication tools appropriate to different contexts.
Demonstrate active listening and promote creativity.
Develop a capacity for empathy.

**COMPETENCY 6
FOR GEOTECHNICAL AND CIVIL
ENGINEERS**

Ensuring the long-term viability of infrastructures and sites: monitoring, surveillance, and remediation

Workplace situations

Development trajectories

Development of an infrastructure or site monitoring or surveillance program

Recommend appropriate instrumentation.
Interpret data.
Model the phenomenon at work.
Determine monitoring and alert thresholds.

Management of infrastructure pathology and damage

Diagnose hazardous states.
Recommend remediation solutions.
Contribute to communication and decision-making processes.