Seneca POLYTECHNIC

2024-2025

PROJECT MANAGEMENT – ENVIRONMENTAL (PME)

About the Program

This eight-month graduate certificate program prepares you for careers in project development and management in both environmental and civil engineering industries. Your studies will encompass all aspects of project management, from the competitive bid process to scheduling, risk management and the closing of projects. During the second semester, you will gain valuable industry experience under the guidance of a mentor.

Laptop Requirement

It is strongly recommended that you have a laptop before the first day of this program. It should include the following technical specifications:

- Windows 10 Operating System
- Intel i7 or equivalent processor
- 16 GB of RAM (32 GB of RAM is recommended)
- 256 GB Solid State Hard Drive (SSD) (512 GB SSD is recommended)
- High-end graphics video card (consider a dedicated video card with at least 2 GB of video memory)
- 13 inch or larger screen
- Three USB 3.0 ports
- Wireless 802.11ac

Credential Awarded

Ontario College Graduate Certificate

Duration

2 Semesters (8 Months)

Starts

January, May, September

Program and Course Delivery

This program is offered in Seneca's hybrid delivery format. Some coursework is online and some must be completed in person. Students will need to come on campus to complete in-person learning requirements.

Skills

Throughout this program you will develop the following skills:

- Project management
- Leadership
- Collaborative teamwork
- Risk management
- Bid process
- Scheduling
- Closing projects

Your Career

Graduates of the program can explore the following career options:

- Project associate, assistant or co-ordinator for environmental projects
- Team lead for field investigations
- Policy analyst

Program of Study

Course Code	Course Name	Weekly Hours
Semester 1		
PME100	Applied Communications for Business and Industry	3
PME101	The Sustainability Matrix	3
PME104	Introduction to Internship	2
PME170	Business Principles	4
PME200	Project Management Fundamentals	4
PME201	Planning and Controlling the Baseline	3
Semester 2		
PME202	Geographic Information Systems and Data Management	4
PME230	Environmental Law	3
PME240	Civil Infrastructure	3
PME400	Applied Project Management II	4
PME707	Environmental Management Systems	3
PME808	Environmental Risk Management	3

Program Learning Outcomes

This Seneca program has been validated by the Credential Validation Service as an Ontario College Credential as required by the Ministry of Colleges and Universities.

As a graduate, you will be prepared to reliably demonstrate the ability to:

- Link projects with organization’s strategic plans, documenting the business needs and justifications for the project.
- Define and manage the overall scope of the project, documenting project goals, deliverables, constraints, performance criteria and resource requirements in consultation with project stakeholders.
- Develop a comprehensive project plan while applying principles of management for sustainability:
  - Prepare effective plans for the approval of specialized profession specific practitioners.
- Integrate project functions, making trade-offs among competing objectives and alternatives in order to meet or exceed project objectives.
- Implement planning and control procedures, resource management, and risk management plans specifically related to the fields of environmental science and engineering.
- Employ a range of methodologies, techniques, and tools available to project managers including the use of foundational engineering and scientific principles applicable to analysis and solutions approach:
  - Use mathematical and scientific analyses to identify and solve technical problems.
  - Apply decision tree principles of logic to determine conclusions.
  - Use principles of source-pathway-receptor model to identify potential areas of adverse impact, to define study sites and to select appropriate mitigative options.
  - Select appropriate scientific and technical reference material.

    - Relate physical and mathematical sciences to remediation and redevelopment work.
- Develop, implement, and analyze key financial information, translating financial information into project terms and establishing financial benchmarks.
- Identify, analyze, and refine project costs to produce a budget and control project costs.
- Determine quality requirements and implement quality assessment activities.
- Identify and allocate human resources required to manage project tasks, both within the core project team and the broader organization.
- Manage communications to ensure the timely and appropriate generation, collection, dissemination, storage and disposition of project information to aid in the achievement of project activities:
    - Communicate information effectively and accurately by analysing, translating and producing relevant documents and reports, by written, oral and visual means.
    - Interpret reports of technical specialists and make informed recommendations based on these reports.
    - Communicate effectively with a range of audiences appropriate to their context and needs.
- Identify potential risk events, monitor and control risk events, and assess risk management outcomes:
    - Monitor adherence to occupational health and safety regulations.
- Identify procurement requirements, establish procurement processes, and implement and evaluate contracts.
- Monitor project progress, identify variances and take timely action to deal with problems and opportunities:
    - Monitor the quality and quantity of work.
- Anticipate and respond to challenges inherent in complex projects.
- Develop creative and flexible solutions that bring projects in on time and within budget.
- Practice of professional ethics and responsibilities:
    - Interact with team and stakeholders in a professional manner, respecting differences, to ensure a collaborative project management environment.
    - Perform job related tasks in a manner consistent with those of professional associations and other relevant bodies related to the environmental field.
    - Exhibit a strong sense of integrity and ethical awareness.
    - Be cognizant of the expectations and limitations of technology in problem solving and the limitations of specific professional practices.
    - Recognize personal limits and seek assistance in a timely manner to resolve problems beyond own knowledge and skill.
    - Apply knowledge of existing confidentiality, privacy and reporting regulations to daily work.
    - Advocate adherence to ethical principles and standards.
    - Keep abreast of relevant technological change.

Admission Requirements

- Post-secondary diploma or degree or equivalent in environmental studies, planning, general science, environmental science, earth sciences or life sciences
- Applicants with a diploma in another discipline with a minimum of 2-years of full-time industry-related experience detailed in a professional resume may be considered
- English proficiency (https://www.senecapolytechnic.ca/registrar/canadian-applicants/admission-requirements/english-proficiency.html) for graduate certificates

Canadian citizens or permanent residents educated outside of Canada must provide a World Education Services (WES) or ICAS Canada credential evaluation.

International Student Information

International admissions requirements vary by program and in addition to English requirements (https://www.senecapolytechnic.ca/international/apply/how-to-apply/admission-requirements/english-requirements.html), programs may require credits in mathematics, biology, and chemistry at a level equivalent to Ontario's curriculum, or a postsecondary degree or diploma, equivalent to an Ontario university or college. Program-specific pre-requisite courses and credentials are listed with the admission requirements on each program page. To review the academic requirements please visit: Academic Requirements - Seneca, Toronto, Canada (senecapolytechnic.ca) (https://www.senecapolytechnic.ca/international/apply/how-to-apply/admission-requirements/academic-requirements.html).

Pathways

As a leader in academic pathways, we offer a range of options that will allow you to take your credential further in another Seneca program or a program at a partner institution.

To learn more about your eligibility, visit the Academic Pathways (https://www.senecapolytechnic.ca/pathways.html) web page.

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