RESEARCH INTERNSHIP PROGRAM

POLYTECHNIQUE MONTRÉAL

TECHNOLOGICAL UNIVERSITY

WINTER 2026

Polytechnique Montréal is one of Canada's leading research engineering universities. Founded in 1873, Polytechnique Montréal has the largest engineering student body in Quebec and is highly ranked for the number of Canada Research Chairs in Engineering and the scope of its research activities. The world needs creative and innovative engineers more than ever. Polytechnique is producing them, in Montreal, a city ranked among the top student cities in the world for the last 5 years!

RESEARCH INTERNSHIP PROGRAM

Every year, Polytechnique's research laboratories welcome over 250 students from other universities wishing to put into practice the technical and scientific knowledge acquired in their studies. The research conducted, supervised by a Polytechnique professor and respectful of all health and safety measures, emanates from a real societal or industrial need, and is carried out in the lab or *in situ*.

ELIGIBILITY CRITERIA

- Enrolled in one of Polytechnique Montréal's partner universities
- Be officially nominated by your home university before applying to this program. Do to so, please contact your International Relations Office or your Internship Office
- Completed at least two years of an engineering undergraduate program or be registred in a graduate program (Master or Ph.D.) according to the projects' university cycle requirements
- Enrolled in a full-time program and will continue to be enrolled after your internship
- Minimum GPA of 2.75 out of 4 (or equivalent)
- Meet the required skills for the internship
- Be fluent in English or in French (research intern must have a competency sufficient to succeed in a university-level engineering research project and to fully participate in the life of their host lab)

DURATION

The recommended duration of the internship is 4 months, with 4 possible starting dates in January and February. Once the admission to the program has been confirmed, no change in the duration or the dates can be made. Please confirm the research duration with your home university Program Coordinator before applying. Note that it is a full-time research internship in Montreal (7 hours a day, 35 hours a week).

Outstanding candidates may receive one of the 25 scholarships available annually!

Maximum amount of the scholarship: 6,000 CAD for 4 months (prorated at 1 500 CAD/month).

APPLICATION PROCEDURE

Follow the link below to browse the list of research projects offered by area(s) of expertise and/or university cycle, and apply by **August 25, 2025**:

https://polymtl.adv-pub.moveonca.com/rip/

Note that an online conference call may be organized for final selection.

LIST OF RESEARCH PROJECTS

For any questions regarding your application, please contact:
Polytechnique Montréal International • *point@polymtl.ca*

CHEMICAL ENGINEERING

CHE 01	Advanced Recycling technologies for Polycarbonate
CHE 02	Artificial Intelligence in the design of membranes for Carbondioxide Conversion
CHE 03	Control System for Active EMI Shielding
CHE 04	Electrified catalytic partial oxidation (CPOX) of natural gas
CHE 05	Highly Conductive and Magnetic, Polymer based Electromagnet
CHE 06	Ink-jet Printed Flexible Organic Electrochemical Transistor for Neuromorphic Functions
CHE 07	Optimization of Ultrasound Assisted Membrane deposition for Carbon Dioxide Conversion
CHE 08	PEDOT/GAGs electrodeposition on flexible PCBs for bioelectronic application
CHE 09	Predicting liquid-liquid separation in electrolytes using computational thermodynamics
CHE 10	Printable soft bioelectronic device
CHE 11	Process Development of a Micro gas to liquid technology
CHE 12	Self-healing conductive polymers for neuronal repair
CHE 13	Surface and interface engineering of materials
CHE 14	Synthesis of ultrathin LTA zeolite membranes for CO_2 to e-fuel
CHE 15	Visualization tools for complex phase diagrams for lithium-ion battery electrolytes
CHE 16	Water Removal Membrane reactors (WRZM) for Carbon Dioxide Conversion

CIVIL, GEOLOGICAL AND MINING ENGINEERING

CGM 01	Automated Borehole Data Extraction from PDF Reports Using Machine Learning
CGM 02	Automated Borehole Data Extraction from PDF Reports Using OCR Technology
CGM 03	Block caving simulations through DEM modeling
CGM 04	Developing the Atlas of Human Movements on Roads and Streets
CGM 05	Development of advanced respirometric techniques for biological wastewater treatment
CGM 06	Effect of climate conditions on mine drainage in filtered tailings
CGM 07	Fluid-induced seismicity in subsurface geonergy technologies
CGM 08	Geostatistical Methods for Complex Earth Patterns: Internship in Data Analysis
CGM 09	Modeling the leaching of emerging contaminants from contaminated soils
CGM 10	Modeling the risk of exposure to bioaerosols in wastewater
CGM 11	Multiphase flow in porous media for hydrogen and CO2 storage
CGM 12	Multivariate Geostatistical Analysis of Concrete Slab Inspections Using Geophysical Methods
CGM 13	Optimizing hospital sink drains to reduce antimicrobial resistance
CGM 14	Recovering Real World Road User Positions in Traffic Videos
CGM 15	Revealing Complex Patterns in Geotechnical Data: A Novel Geostatistical Framework
CGM 16	Street Function Analysis Based on Direct Observation
CGM 17	UHPFRC : From material development to structural applications

COMPUTER ENGINEERING AND SOFTWARE ENGINEERING

GIGL 01	Adaptive Robot Learning in a Multi-Robot Ecosystem
GIGL 02	Automated Framework for Health-Data Regulation Compliance Testing
GIGL 03	Educational robotics with real robots
GIGL 04	Enhancing API-Led Integration Using Large Language Models
GIGL 05	Entity-Led Integration of Enterprise Applications Using LLMs
GIGL 06	Foundation Models for Swarm Robotics
GIGL 07	From Social, Ethical, Empathetic, and Cultural requirements to LLM Guardrails
GIGL 08	Machine Learning and Interaction of Large Dataset of Medical Images
GIGL 09	Mitigating Adversarial Attacks in Machine Learning
GIGL 10	Multi-Robot Collaborative Simultaneous Localization and Mapping
GIGL 11	Multi-Robot Systems and Swarm Robotics
GIGL 12	Optimizing and Expanding Semantic Analytics to Multi-modal Data Systems
GIGL 13	Realistic Test Scenario Generation for Social, Ethical, and Empathetic LLMs
GIGL 14	Robust data-driven robotic object manipulation
GIGL 15	Spatio-Temporal AI Models for Analyzing Dynamic Multi-Robot Maps
GIGL 16	The Portiloop - an AI-based closed-loop brain stimulation system
GIGL 17	User experience (UX) design for and with AI

ELECTRICAL ENGINEERING

DGE 01	Active navigation and perception strategies for autonomous object search
DGE 02	AI for intelligent neuromodulation medicine
DGE 03	Automated production and testing of superconducting cables
DGE 04	Binarized neural networks : implementation, optimization and explanation
DGE 05	Compact Star Tracker for Space Navigation
DGE 06	Controlling and Learning Large Networks of Dynamic Populations
DGE 07	Intelligent Reflecting Surface (IRS) for 5G Applications
DGE 08	Interference Cancellation Techniques in LEO Networks to Combat Jamming
DGE 09	Neurotechnology to recover paralyzed hand function in rat models
DGE 10	Privacy-preserving distributed signal processing and control
DGE 11	Quantitative MRI of Iron and Myelin in the Brain

ENGINEERING PHYSICS

PHY 01	Blood-based colorectal cancer screening and recurrence detection using optical spectroscopy
PHY 02	Graph theory and Gaussian States
PHY 03	Interfacing robotics with a high-resolution microscope to understand disordered proteins
PHY 04	Raman spectroscopy for margins inspection during breast conserving surgery
PHY 05	Ultrasensitive biosensing by single-particle tracking

MATHEMATICS AND INDUSTRIAL ENGINEERING

MAGI 01	Robotic Vision System for Samart Manufacturing Workcell

MECHANICAL ENGINEERING

MEC 01	A human-interface sensor-activator: increasing it's tech maturity
MEC 02	A new-generation personal service robot: increasing the mechatronics maturity
MEC 03	Additive manufacturing of polymer composites
MEC 04	Advanced portable neuro-rehab robot: human-machine interface
MEC 05	Advanced portable neuro-rehab robot: machine-human interface
MEC 06	Analysis of Manufacturing Process and Machine Interaction
MEC 07	Application of computational fluid dynamics to study foam growth dynamics
MEC 08	Deep learning algorithms for predicting flows through porous media
MEC 09	Development of a Cost-Effective Tele-Rehabilitation System
MEC 10	Development of an Interactive VR Environment for Robotic Rehabilitation Applications
MEC 11	Digital molding: next-generation production method in orthotics
MEC 12	Finite Element Neural Network Method (FENNM)
MEC 13	Integrating neuro-rehab tech into new-generation low-cost orthotics
MEC 14	Mechatronic and AI contributions to a body weight support
MEC 15	Multiplexing of data acquisition system for Piezoelectric sensors
MEC 16	Next-gen of walking orthotics and BWS: determining weight supports requirements
MEC 17	Numerical analysis of non-spherical graphite particles in flows
MEC 18	Numerical analysis of the condensation of high-purity metal droplets
MEC 19	Personal service robot base for mounted devices on power-chair
MEC 20	Reducing helicopter noise: simulating acoustic devices for quieter urban skies
MEC 21	Shape morphing drones/aerial vehicles
MEC 22	Simulating impulsively driven liquid metal flows in fusion power machines
MEC 23	Soft Coral Fluid Structure Interaction
MEC 24	Study of Human Balance Control Using Virtual Reality
MEC 25	Study of Human Upperlimb Neuromotor Adaptation Using a 7-DOF Cobot
MEC 26	Sustainable 3D printing materials
MEC 27	Validation of a temperature history model in Greenland
MEC 28	Vibrations suppression methods in machining
MEC 29	Wind tunnel study of flag flutter