APPLY NOW

STEM CANADA

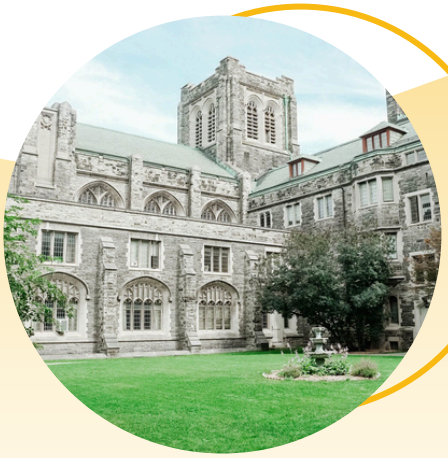
PRE-UNIVERSITY
STEM INNOVATION SUMMER PROGRAM

July 6 - August 14, 2026

Medical Science | Engineering | Math | Robotics & AI

PRE-UNIVERSITY
PROGRAM LOCATIONS

STEM CANADA



UNIVERSITY OF TORONTO - TORONTO, ON
JULY 6 - AUGUST 14, 2026

UNIVERSITY OF WATERLOO - KITCHENER, ON
JULY 13 - JULY 28, 2026

MCMASTER UNIVERSITY - HAMILTON, ON
JULY 21 - AUGUST 1, 2026

UNIVERSITY OF CALGARY - CALGARY, AB
JULY 28 - AUGUST 1, 2026

SIMON FRASER UNIVERSITY - SURREY BC
AUGUST 4 - AUGUST 8, 2026

SEE OUR IMPACT
(CLICK THE LINK TO VIEW VIDEO)

(877) 822-0080 stemcanada.org

PRE-UNIVERSITY
PROGRAM OVERVIEW

STEM CANADA

Students who are given the experience to live on campus and take classes to live a university experience take on a great advantage. Participating in a pre-university program on campus can offer a myriad of benefits for a young student, especially those who are uncertain about their future academic path.

Academic Exploration:
Our pre-university programs in various STEM fields allow students to explore different areas, helping them discover their interests and potential future paths.

Lifelong Friendships:
Attending a summer program can forge lasting friendships that offer emotional support beyond university.

Competitive Edge & Improved Self- Esteem:
Participating in university-mirrored programming builds students' confidence and motivation for higher education by showcasing their initiative and ability to succeed in a challenging environment, enhancing their college applications.

Cultural and Social Exposure:
University campuses are typically diverse environments. Interacting with fellow program attendees from different backgrounds can broaden students' perspectives and improve their social skills and sense of global connection.

University Preparedness:
The program provides a preview of university life, fostering motivation and readiness for academic challenges and social interactions on campus, and aiding students in envisioning themselves in a university environment.

Academic, Skill & Personal Development:
This program boosts academic, personal, and skill development such as problem-solving, critical thinking, research, teamwork, and leadership. These skills enhance discipline, communication, and academic success from elementary to high school.

Networking & Mentorship Opportunities:
The programs involve interacting with university professors, researchers, industry professionals, and current students to build networks, gain insights into university life, and receive guidance on courses and career paths.

SEE OUR IMPACT
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STEM CANADA

SEE YOURSELF ON CAMPUS AS A UNIVERSITY STUDENT.

ACHIEVE IT! BELIEVE IT!

UNLOCK & ACHIEVE YOUR POTENTIAL

STEM CANADA

FUTURE READY

Providing an inclusive and unmatched mix of opportunities, the STEM Innovation Summer program allows students to explore their academic interests and gain confidence to see a future for themselves as they reach their full potential.

What you get:

- STEM Immersion Innovation Programming across 6 streams
- Up to 24 hours of immersive classroom instruction for each week of programming
- Course administration and delivery
- Use of academic facilities
- On-campus residence accommodations
- Course equipment, resources and supplies (STEM Kits, Robotics Kits, VR Goggles, Microscopes etc)
- Program backpack
- Program stream shirt
- All meals included during the program duration
- All snacks included during the program
- duration
- Awards and Achievement Gala
- Program stream achievement and completion certificate
- Program awards
- Team building activities
- 24-hour supervision (ratio of 1 staff to 10 participants)
- Program general apparel (t-shirt, lanyard)
- Evening activities (residential stream only)

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Age of Eligibility

We offer an advanced, innovative and enriched experience for students ages 10 – 17 (grade 5-12). We believe education is a personal journey and every student, of any age, learns differently.

Elementary & Middle School Cohort

Grade 5 ..... Ages 10/11 years old
Grade 6 ..... Ages 11/12 years old
Grade 7 ..... Ages 12/13 years old
Grade 8 ..... Ages 13/14 years old

Highschool Cohort

Grade 9 ..... Ages 14/15 years old
Grade 10 ..... Ages 15/16 years old
Grade 11 ..... Ages 16/17 years old

Experience intensive, hands-on workshops facilitated by subject-matter experts with opportunities to develop and apply teamwork and leadership knowledge, skills, and abilities.

See you on campus!

SEE OUR IMPACT
(CLICK THE LINK TO VIEW VIDEO)

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STEM CANADA

PROGRAM HIGHLIGHTS & PERKS

In the Pre-University STEM Innovation Summer Program, students will engage in classes, activities and experiences that will allow them to grow intellectually while building critical thinking and problem-solving skills alongside like-minded students from their community and around the world.

Program Stream Shirt:

Show off your pre-university pride with our specially designed Stream Shirt, a symbol of unity and belonging that will remind you of your unforgettable experiences in the program. It's not just a shirt; it's a token of your journey towards higher education.

Awards Gala & Program Certificate:

Celebrate your achievements in a grand Awards Gala and carry home a prestigious Program Certificate that is a testament to your hard work and dedication throughout the program. This celebration marks not just the end of the camp, but the beginning of your academic pursuits.

Keep Your Resources:

Post-program week, students will keep all personally issued educational resources that aided their learning, fostering continuous self-improvement and serving as lifelong learning tools and keepsakes from the time spent in the program. These resources can be an invaluable tool for further exploration and personal academic growth.

Daily Activities and Outings:

Our program is a perfect blend of learning and fun, with daily activities and outings that facilitate peer interaction, team building, and an understanding of the university atmosphere. These experiences, while educational, also add the much-needed element of excitement and adventure to student routine.

All Meals and Snacks Included:

We offer an all-inclusive package that takes care of all dietary needs, providing wholesome meals and snacks throughout the stay. No need to worry about food; we ensure a well-balanced diet that fuels academic endeavours and keeps up energy levels.

Experience University:

Gain a real-world glimpse of university life, getting accustomed to its rhythm and expectations, which will prove invaluable when you eventually step into a chosen institution. The program serves as a gentle transition to higher education, allowing students to navigate the university ecosystem with confidence.

SEE OUR IMPACT
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MEDICAL SCIENCE

Explore daily labs, neuroscience, biology, chemistry, pathology, physiology, and biotechnology with medical sciences through the Med-Sci stream of the Pre-University STEM Innovation Summer Program Ages 10 - 17.

Pre-University STEM Innovation Summer Program

EARLY EXPOSURE TO MEDICAL SCIENCES

This Pre-University STEM Innovation Summer Program is an excellent way to give students early access to medical sciences programming. The program provides aspiring doctors and researchers exposure to the medical science studies in a university environment.

Hands-on Laboratory Experience & In-depth Scientific Knowledge

Our pre-med program involves lab work, offering students practical experience in conducting experiments, using laboratory equipment, and interpreting data across subjects including biotechnology, recombinant DNA, biology, chemistry, physiology, pathology and more, providing students with a strong foundation in the sciences.

Preparation for Medical Studies & Competitive Edge

A pre-medical science program prepares students for the rigors of medical science undergraduate studies. Having taken a pre-medical program, students gain a head start and a competitive edge. when applying to post secondary institutions and medical schools. Attending the program shows a serious commitment to pursuing a career in medicine and demonstrates initiative and dedication.

Career Guidance

The program provides career guidance, helping students understand the various career paths and post-secondary study pathways available to pursue medical sciences. This process will guide the to make informed decisions about their future studies and careers.

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Personal Development

Apart from academics, the Med-sci stream fosters skills like leadership, communication, teamwork, and resilience. These skills are beneficial for any future doctor or medical researcher, as the medical field demands collaboration, leadership, and the ability to handle stressful situations.

COURSES

- BioChemistry
- Neuroscience
- Pathology
- Human Physiology
- BioTechnology

RESOURCES PROVIDED

- Microscope
- Molecular Model Sets
- Lab Coat
- Safety Goggles
- Medical Science Stream Shirt

REGISTER NOW

All equipment including microscopes, lab coats and other resources are for students to take home.

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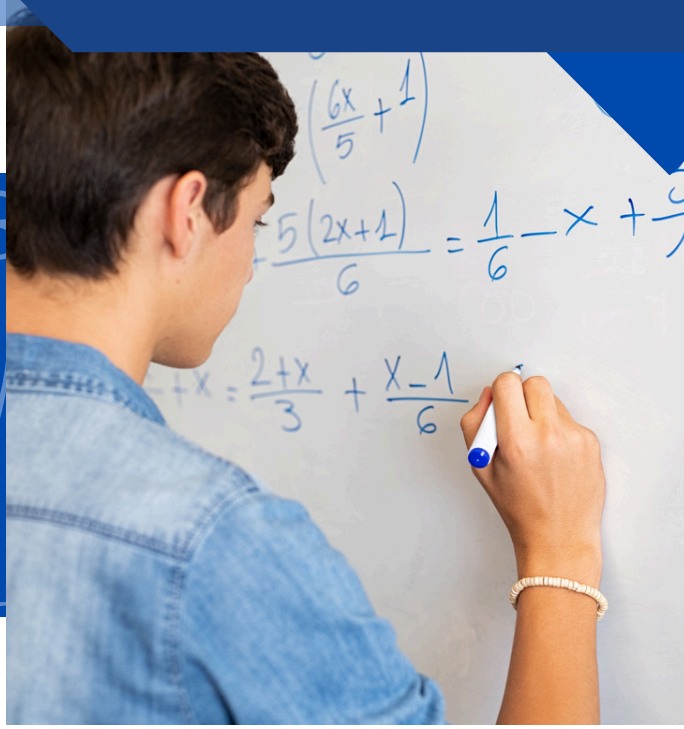
MATHEMATICS & DATA SCIENCE

The Math program introduces students to more advanced math topics at a younger age, allowing them to gain an early understanding and potentially stimulate interest in pursuing further studies in fields that require advanced mathematical skills.

Pre-University STEM Innovation Summer Program



EARLY EXPOSURE TO ADVANCED MATH

Mastery in Mathematical Concepts: Students will be able to demonstrate understanding of key mathematical concepts including algebra, trigonometry, and calculus.

Understanding of Physics Principles: Students will be able to explain and apply fundamental principles of physics, including forces, motion, energy, and the properties of matter.

Proficiency in Calculus: Students solve complex problems using principles of calculus, including differentiation and integration.

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Command of Trigonometry: Students will apply trigonometric principles and equations to solve problems, particularly those involving angles and lengths in triangles.

Competence in Algebra: Students will solve equations and inequalities, manipulate algebraic expressions, and understand the concept of functions.

Data Science Skills: Students will collect, analyze, and interpret data, use statistical methods, and understand the principles of machine learning and predictive modeling.

Logical Thinking, Problem-Solving and Critical Thinking: Students will work to demonstrate the ability to think logically and critically, using mathematical reasoning and data analysis to make informed decisions. Students will apply the mathematical and scientific knowledge learned to solve complex real-world problems.

Quantitative Literacy and Modelling: Students will interpret and create arguments supported by empirical evidence, and to clearly communicate those arguments in a variety of formats. Students will construct, analyze, and interpret mathematical models, and apply these models to real-world scenarios.

Data Visualization: Students will effectively visualize data, understanding how to best represent data sets and statistical analyses for clear communication.

Foundation Building: The program provides a strong foundational understanding of key mathematical concepts, including algebra, trigonometry, and calculus. These concepts are integral to many fields, including engineering, physics, economics, and computer science.

COURSES

- Physics
- Algebra
- Advanced Functions
- Calculus / Sohcahtoa
- Trigonometry
- Data Science

RESOURCES PROVIDED

- Math Set
- Scientific Calculator
- Stationary
- Math Resources
- Math Stream Shirt

REGISTER NOW

All equipment including and other personal resources are for students to take home.

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TECHNOLOGY 1: ROBOTICS & ARTIFICIAL INTELLIGENCE

Explore robotics and its subfields of design, construction, operation, and application of robots, as well as computer systems for their control, sensory feedback, and information processing.

Pre-University STEM Innovation Summer Program

EARLY EXPOSURE TO ROBOTICS & AI

As advancements in AI and robotics evolve, the two fields are progressively merging, creating a cooperative dynamic that is expanding the capabilities of intelligence and smart machines. The synergy of AI and robotics is fostering a new breed of intelligent machinery that possesses the ability to learn, adjust, and engage with their environment.

Hands-on Laboratory Experience & In-depth Scientific Knowledge

Students taking this tech stream will dive into the subfields of artificial intelligence and robotics including:

- Machine Learning
- Deep Learning
- Neural Networks
- Natural Language Processing
- Genetic Algorithms
- Operator Interface
- Mobility or Locomotion
- Manipulators & Effectors
- Programming
- Sensing & Perception

Understanding Core Concepts and Hands on Experience

An AI and robotics program provides a comprehensive understanding of core concepts in both fields, such as machine learning algorithms, robotic kinematics, and natural language processing and offers practical projects where students can design and program robots or develop AI models.

Problem-Solving Skills:

AI and robotics involve addressing complex problems, often requiring innovative solutions. Students will enhance their problem-solving abilities, which are applicable in any technological or scientific field.

Exposure to Cutting-Edge Technology:

AI and robotics are at the forefront of technological innovation. Students will get exposure to the latest technologies, techniques, and trends, preparing them for future developments in these rapidly evolving fields.

COURSES

- Robotics
- Algorithms & Analytics
- AI & Machine Learning
- Automation

RESOURCES PROVIDED

- Robotics Kits
- Robotics Resources
- Stationary
- Robotics Stream Shirt

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TECHNOLOGY STREAM 2: 3D ANIMATION, 3D PRINTING VIRTUAL REALITY

Understanding of Emerging Technologies: Students will gain a broad understanding of emerging technologies in the fields of 3D animation, 3D printing, VR, AR, and 360 video and demonstrate the ability to create innovative and engaging content.

Pre-University STEM Innovation Summer Program

EARLY EXPOSURE TO VR AND 3D TECHNOLOGY

The Virtual Reality and 3D Technology Program will help students to understand the fundamental principles of 3D animation, 3D printing, 360 video, Virtual Reality, and Augmented Reality where they will learn and apply the software and technical skills required for 3D animation, 3D printing, 360 video production, and creating VR and AR experiences. Students will gain knowledge of design principles specific to these mediums, including animation principles, spatial design, user experience, and interactivity to develop innovative ideas and projects.

Virtual Reality Understanding: Students will develop VR experiences, demonstrating an understanding of VR technology, interaction design for VR, and the software tools used to create VR content.

Augmented Reality Development: The program will touch on AR applications, and how AR technology works, how to design AR experiences, and how to use AR development software.

3D Animation Skills: Creation of 3D models and animations using industry-standard software will be introduced, resulting in the understanding of the principles of animation, character design, and environmental modeling.

3D Printing Capabilities: Students will learn the principles of 3D printing, including the ability to design 3D models for printing, prepare them for the printing process, and operate a 3D printer.

360 Video Production: Creation of immersive 360 videos, understanding the principles of 360 filming and the technical aspects of producing and editing 360 content will be explored.

Design Thinking & Technical Proficiency: This program will enable students to apply design thinking to create compelling and user-friendly experiences in 3D animation, VR, and AR. They will become proficient in the use of various software tools used in these fields, including 3D modeling software, VR and AR development tools, and 360 video editing software.

COURSES

- Augmented Reality
- Virtual Reality
- 3D Animation
- 3D Printing
- 360 Video

RESOURCES PROVIDED

- Virtual Reality Headset
- 3D Printing Resources
- Stationary
- Virtual Reality Stream Shirt

REGISTER NOW

All individual course resources including VR goggles are for students to take home.

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ENGINEERING

Students will explore the innovative side of engineering, stimulating their creativity and enhance their comprehension and technical skills within engineering and its interdisciplinary approach.

Pre-University STEM Innovation Summer Program

EARLY EXPOSURE TO ENGINEERING

This Pre-University STEM Innovation Summer Program offers an enriching platform for young engineers aged 10 - 17 to delve deep into the field of engineering. Designed to explore engineering as a whole and specific disciplines like Aerospace, Mechanical, Chemical, Biomedical, and Electrical Engineering, this program equips learners with a comprehensive understanding and invaluable practical experience.

Aerospace Engineering: Learn about the design, development, testing, and production of aircraft and spacecraft. Explore concepts like aerodynamics, propulsion, avionics and designing the next generation of satellites or interstellar probes.

Mechanical Engineering: Get hands-on experience with the principles of mechanics, kinematics, thermodynamics, and energy. Students will discover how to design everything from small individual parts and devices, like microscale sensors, to large systems like spacecraft.

Chemical Engineering: Understand the transformation of raw materials into usable products, such as gasoline, plastic, and pharmaceuticals. Learn about process design, reaction engineering, and environmental regulation, setting a path to revolutionizing industries from energy to healthcare.

Biomedical Engineering: Delve into the application of engineering principles and design concepts to medicine and biology. Learn about bioinstrumentation, biomaterials, and biomechanics, which could lead to developing new medical equipment or innovative patient treatment methods.

Electrical Engineering: Students will study electronics, electromagnetism, electricity, circuit design, power systems, and signal processing. The knowledge gained here might spark the creation of smarter AI or more efficient power grids.

Hands-On Experience, Real World Impact & Global Perspective: Students will engage in hands-on learning experiences and labs, getting a sense of what it's like to work on real engineering projects. Students will learn about engineering fields that have worldwide significance, to gain a global perspective and open their minds to international issues and potential solutions, creating globally conscious and competitive future engineers.

Critical Thinking & Problem-Solving Skills: Engineering is all about problem-solving. Students will develop their critical thinking skills, and apply engineering principles to solve real-world problems.

COURSES

- Electrical Engineering
- Chemical Engineering
- Computer Engineering
- Mechanical Engineering
- Biomedical Engineering
- Aerospace Engineering

RESOURCES PROVIDED

- Engineering Kits
- Engineering Lab Resources
- Stationary
- Engineering Stream Shirt

REGISTER NOW

All equipment including and other personal resources are for students to take home.

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COMPUTER SCIENCE

Explore daily access to the computer labs, and explore python, C programming, java, html coding, and computer science theory through the computer science stream of the Pre-University STEM Innovation Summer Program Ages 10 - 17.

Pre-University STEM Innovation Summer Program

EARLY EXPOSURE TO COMPUTER SCIENCE

This Pre-University STEM Innovation Summer Program is an excellent way to introduce a comprehensive understanding of core computer science principles including algorithms, data structures, databases, networks, and artificial intelligence. The program teaches various programming languages such as Python, Java, and C++. Aspiring coders will gain proficiency in coding, an essential skill in the field of computer science. Students will gain an understanding of how computer science is applied in various industries and how it's shaping the world.

Early Exposure to Computer Science & Understanding Programming Languages: Through this program, students will dive into the world of computer science and learn the basics of some of the most popular and widely used programming languages like Java, Python, and C., which are fundamental in many areas of computer science and technology.

Hands-On Coding Experience: The program will provide hands-on experience with coding in the university lab to help students better understand the concepts they learn, retain coding skills more effectively, and apply them in real-world situations.

Introduction to Computational Thinking: Students will gain an understanding of computational thinking, which includes problem-solving methods and algorithms that are central to computer science. This knowledge can be applied in various fields, from data analysis to artificial intelligence.

Comprehensive Knowledge of Computer Science & Digital Literacy: In today's digital age, understanding how software works, even at a basic level, is an essential skill. This program promotes digital literacy, preparing students for a world where technology is integral to many aspects of life and the world.

Career Exploration, Preparedness and Competitive Advantage: The program will expose students to potential career paths in computer science and prepares students for university-level coursework in computer science. Having experience with multiple programming languages at such a young age gives students a competitive advantage for the future.

Developing Problem-Solving Skills: Computer science, particularly coding, significantly enhances problem-solving skills by encouraging logical thinking and the ability to devise solutions, skills that are applicable beyond computer science.

COURSES

- Computer Science
- Java
- Python
- C, C++
- HTML

RESOURCES PROVIDED

- University Computer Lab Use
- All Class Resources
- Computer Science Stream Shirt

REGISTER NOW

All equipment including and other personal resources are for students to take home.

STEM CANADA

Flexible
Residential (Overnight)
Program Options

PRE-UNIVERSITY STEM
INNOVATION PROGRAM

STAY OVERNIGHT
IN RESIDENCE
5 DAYS AND 4 NIGHTS

1 Week **$1,699**

- 1 STEM Stream
- 1 Week of Programming
- On Campus Stay
- Awards Gala & STREAM
- Certificate
- All Class Resources
- Food, Snacks & Activities

**** Staying multiple weeks? Add a weekend stay for $ 350.**

Do you wish to attend multiple weeks or plan to attend with a friend or sibling?
Contact us for a multi-week discount code: preustem@stemcanada.ca.

RAISE YOUR FEE AND COME FOR FREE - Ask Us!

Residential Stream Program Packages

STEM CANADA

Flexible Day Program Options

PRE-UNIVERSITY STEM INNOVATION PROGRAM

COMMUTER DAY PROGRAM 9AM - 4PM

1 Week

$1,299

- 1 STEM Stream
- 1 Week of Programming
- Day Program 9 am-4 pm
- Awards Gala & STREAM
- Certificate
- All Class Resources
- Lunch, Snacks

Do you wish to attend multiple weeks or plan to attend with a friend or sibling? Contact us for a multi-week discount code: preustem@stemcanada.ca.

RAISE YOUR FEE AND COME FOR FREE - Ask Us!

Day Stream Program Packages

Day Stream Weekly Program Run from 9:00 am - 4:00 pm Daily

APPLY NOW

STEM CANADA

PREPARE FOR YOUR FUTURE!

Connect with us or register today. Don't miss the opportunity to experience university.

For Students Aged 10 - 17 | Grades 5 - 11

Program Locations:

- University of Toronto
- University of Calgary
- University of Waterloo
- McMaster University
- Simon Fraser University

Contact Us: preustem@stemcanada.ca (877) 822-0080

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