CHITKARA UNIVERSITY | YORK UNIVERSITÉ UNIVERSITY

Global Pathway Program in academic mentorship with York University

B.E. in Computer Engineering

CHITKARA UNIVERSITY

YORK UNIVERSITÉ UNIVERSITY

Bachelor of Engineering (B.E.) in Computer Engineering

in Academic Mentorship with York University, Canada

Ranked #9 in Canada and among the Top 300 globally for Computer Science & Engineering (Shanghai Ranking 2024), York University offers an exceptional academic environment that blends innovation, technology, research and real-world application.

Our Global Pathway Program in Engineering enables students to complete the first two years at Chitkara University and then seamlessly transfer to York University, Canada, to earn their final degree after completing the third and fourth years at the York campus.

CHITKARA UNIVERSITY

CHITKARA UNIVERSITY PUNJAB

Chitkara University is a UGC recognised University with the right to confer degrees as per the Sections 2(f) and 22(1) of the UGC Act, 1956 and is established by the Punjab State Legislature under, "The Chitkara University Act".

CHITKARA UNIVERSITY HIMACHAL PRADESH

Chitkara University is a UGC recognised University with the right to confer degrees as per the Sections 2(f) and 22(1) of the UGC Act, 1956 and is established by the Himachal Pradesh State Legislature under "The Chitkara University Act".

RECOGNISED FOR EXCELLENCE

Chitkara University has been awarded an **A+ rating by the National Assessment and Accreditation Council (NAAC),** placing us in the Top 5% of Higher Education Institutions in India.

Our programs are recognised among the **Nation's Best in the NIRF Rankings, securing a prestigious position within the Top 100 in the University category.**

We take pride in being listed among the **World's Leading Universities in the QS World University Rankings.**

The University consistently features among the **Top 15 institutions in India & Top 500 Globally,** highlighting its strong commitment to advancing **the Sustainable Development Goals.**

Chitkara University is **Ranked 1st in the Country** for **Research Quality** and stands among the **Top 800 Globally.**

We are acknowledged as one of **India's Top Institutions (Under The Process Pillar),** and also ranked among the **Top 200 Globally.**

Year after year, Chitkara University recognised among the **Top 10 Universities** in India for filing the maximum number of patents.

Consistently ranked high by:

EXPLORE YOUR POTENTIAL WITH CHITKARAU.

CHITKARA EDUCATION BRINGS WITH IT A REPUTATION FOR EXCELLENCE AND INNOVATION THAT HAS BEEN EARNED THROUGH YEARS OF SERVING THE CAREER-NEEDS OF THE STUDENT COMMUNITY.



STRONG ACADEMIC HERITAGE

Chitkara University has been established and managed by passionate academicians with the sole mission of making each and every student "industry-ready".

BEST LOCATION

With a high quality of living and vibrant student mix, Chandigarh, also known as City Beautiful, has rightfully earned its place as one of the safest and most livable cities in the country.

TOP 20 RANKING

Chitkara University has been consistently ranked among the top 20 Private Universities of the country.

MODERN FACILITIES

Chitkara University has made huge investments in developing student facilities and giving our students access to world-class labs, design studios, libraries, sporting and social facilities.

LEADING INNOVATION

Chitkara Innovation Incubator helps turn students' business ideas into reality. Student ventures with scalable, commercial potential are given access to high tech, a collaborative office space, and are paired with industry mentors to develop scalable business plans and market testable products and services.

Since inception, Chitkara University has had a path breaking recruitment record for graduates from various academic programs. Some of our prominent recruiters on campus are:

accenture | adani | Adobe | amazon | Deloitte.
EY Shape the future with confidence | GE | Google | HDFC BANK | HONDA The Power of Dreams
hp | IBM | Infosys | Kellogg's | KPMG
L&T | mahindra Rise | MARRIOTT | Microsoft | pepsico
Pfizer | Reliance | SAMSUNG | TATA | ZARA

Canada: A Home Away from Home

Canada is a leading study destination that welcomes international students and supports them in building skills to create a successful, rewarding future.

Fast Facts about Canada

7th best country to study abroad
(2023 Best Countries Rankings, U.S. News & World Report)

3rd in the world for best quality of life
(U.S. News & World Report, 2023)

Canada's population includes over 450 ethnic and cultural groups

Build Your Career in Canada

With Canada's Post-Graduation Work Permit (PGWP) program, you may be eligible to work in Canada for up to three years after you complete your university degree. Learn more about work and immigration at go.yorku.ca/work-eligibility-intl.

Did YU Know?

York University alumni have been hired by globally recognized employers, such as:

- **Apple**
- **Deloitte**
- **Google**
- **NASA**
- **Sanofi**
- **Tesla**
- **Amazon**
- **TikTok**

York University is the third largest university in Canada

and is located in the city of Toronto, about a 15-minute drive to the international airport and connected directly to the downtown core by our convenient transit system.

Vibrant Campuses in a Diverse City

York University is located in Toronto, Canada, one of the most welcoming, safe and livable cities in the world. Study, work and thrive in Canada's business and financial capital with access to global employers, entertainment, community services and attractions. With two subway stations on our Keele Campus and access to the city's vast network of buses and public transit, you can easily explore Toronto's diverse neighbourhoods, restaurants, festivals, sporting events and concerts.

Toronto: a City to Love

2nd
in North America for student cities
(QS Best Student City Rankings, 2025)

2nd
largest financial hub in North America

Safest city in North America
(The Economist, 2024)

1,500+
parks and 500+ music venues

York University is thrilled to be the official university partner of the Toronto Raptors basketball team!

With this partnership, York students will have access to exclusive networking opportunities with the Toronto Raptors, one-of-a-kind experiences and other engagements.

LASSONDE SCHOOL OF ENGINEERING | YORK UNIVERSITÉ UNIVERSITY

 # 9 in Canada

 # 201-300 in the World

Computer Science & Engineering

(Shanghai Ranking 2024 of Academic Subjects)

LASSONDE SCHOOL OF ENGINEERING | YORK UNIVERSITÉ UNIVERSITY

York University, with over 54,500 students, including approx. 30% who are first-generation in their family to attend postsecondary education, is dedicated to making high-quality education accessible. Celebrating a decade of rapid growth with nearly 6,000 students, York's Lassonde School of Engineering is breaking down systemic barriers to foster meaningful change in STEM education. Specialising in Engineering, Computer Science and related fields, Lassonde addresses critical skill shortfalls in ICT, ranking in the Top 200 for Computer Science globally (Times Higher Education, 2023) and remains committed to evolving education to meet societal and economic shifts.

Our Story

Between now and 2050 we face great challenges: climate change, clean water, energy, cybersecurity, to name a few. The opportunities are even greater: big data, driverless cars, 3D printing, artificial intelligence and much more.

What do all these questions have in common? They are complex, they are borderless and they transcend traditional divides. To solve these big problems and to seize these enormous possibilities, the world needs engineers and scientists who are more than just technical experts. The world needs a different kind of engineer, employers want a different kind of engineer and students expect a different kind of engineering education to prepare them for the next 50 years.

At YorkU, we are shaping the next generation of creators who will tackle the world's biggest challenges and find creative solutions to global problems through interdisciplinary learning opportunities.

How are we different?

We are creating a different kind of learning experience. With zero lecture halls, YorkU is flipping the classroom so that students can learn in creative spaces, watch lectures online anywhere, anytime and come to class to solve problems together. We are committed to nurturing a community that is diverse, equal and inclusive. Our goal is to help create real systemic change within STEM by challenging the current systems in place.

To this end, we are connected through a global network of curriculum industry partnerships, enabling our community to impact globally through work-integrated learning programs and interdisciplinary research. Our goal is to make a real-world impact with our research, education and initiatives that will help solve some of the world's greatest challenges.

Experiential Learning

- Co-op opportunities built into all of our program
- The BEST entrepreneurship certificate, empowering future tech leaders
- Internationally recognised and accredited engineering programs
- Dev Degree, a work-integrated learning program for Computer Science students, offered in partnership with Shopify, where you can work and study at the same time
- Student opportunities to do research alongside world-class professors

Our goal is to make a real-world impact with our research, education and initiatives that will help solve some of the world's greatest challenges.

LASSONDE SCHOOL OF ENGINEERING | YORK UNIVERSITÉ UNIVERSITY

A school for people who want to create a better world.

Engineers and scientists are creators who turn ideas into reality. At the Lassonde School of Engineering, we are committed to creating positive change for our students, our communities and the world around us by empowering creators to put ideas into action that pushes the world forward.

Located in the heart of the multicultural Greater Toronto Area, York University is home to engineers, scientists and entrepreneurs, representing a diverse community of students, faculty, staff, alumni and partners.

Computer Science at York University

Working to address our technological future!

York University's Computer Science department is dedicated to shaping Canada's technological landscape. We're pioneers in cutting-edge research and comprehensive programs that span the entire spectrum of computing technologies.

From groundbreaking advancements in medical assistive technologies to leading the charge in artificial intelligence, cyber security, computer vision, networks, big data, and human-computer interaction, we've got it all covered.

Join us in shaping the world of tomorrow, where technology meets innovation!

11,200+
Alumni

5,000+
Students from 100+ countries

145
Full-time faculty members

2,193
Co-op/internship job postings

137
Undergraduate research positions

780
Students participated in experiential BEST activities

Co-op Timeline: As a Lassande co-op student at York University, you'll typically alternate between four months in school and four months as a full-time employee of the organisation you're working for. Students can apply to the co-op program during their fifth semester at York, upon transfer from Chitkara University (approximately September 2028). Job applications typically begin in January 2029, with most students starting their co-op placements in the Summer of 2029. The strength of our co-op program is reflected in our distinguished employer partners, including-Apple, Facebook, Toyota, Microsoft, IBM, Uber, Tesla, NASA, the Canadian Space Agency, RBC, CIBC, and Scotiabank.

Computer Science students earn an average co-op salary of $25.60 CAD per hour.

coop canada.

Co-op Education: Earn while You Learn

Lassonde's reputation for outstanding education is not only built on rigorous academics but also on its commitment to practical, career- oriented learning. This is best exemplified in its co-op programs – structured courses that blend classroom learning with hands-on work experience. Such courses are especially popular among international students, offering a direct path to employability and industry integration.

Key Features of Co-op Programs in Canada

Earn While You Learn
Co-op students receive paid work placements that not only provide valuable income to help cover tuition and living costs but also reduce financial strain on international students. This financial support enables students to focus more on both their studies and gaining meaningful work experience without the pressure of unpaid internships.

Career Development
Work placements in actual Canadian companies or organisations allow students to apply theoretical knowledge in real-world scenarios. This hands-on experience builds critical professional skills such as time management, problem-solving, communication, and teamwork. It also helps students develop workplace confidence and a stronger understanding of industry expectations.

Industry Networking
Co-op programs facilitate connections with a wide network of employers and professionals. These relationships often extend beyond the term, creating mentorship opportunities and potential references for future jobs. Networking during co-op placements can open doors to full-time employment, graduate positions, or even entrepreneurial collaborations.

Enhanced Employability
Graduating with several months or even years of paid, relevant Canadian work experience sets co-op students apart in a competitive global job market. Employers highly value candidates who have demonstrated their ability to navigate workplace cultures and contribute effectively from day one. Co-op credentials often lead to faster job placements, better starting salaries, and accelerated career advancement.

Professional Skill Certification
Many Canadian co-op programs offer workshops, career counselling, and skill-building sessions that complement the work term. These include resume writing, interview preparation, workplace etiquette and sometimes industry-specific certifications, ensuring students develop a well-rounded profile beyond on-the-job experience.

Cultural and Workplace Integration
For international students, co-op placements are an excellent way to assimilate into Canadian workplace culture, laws and organisational practices. This cultural acclimation improves communication skills and helps students better understand employer expectations, making the transition from student to professional smoother.

Pathway to Permanent Residence
Work experience gained during mandatory co-op terms often qualifies as valid Canadian work experience for immigration processes, boosting eligibility for post-study work permits and increasing points for permanent residence applications. The Canadian government recognises that graduates with co-op experience have integrated professionally into the country, which supports smoother pathways to long-term residency and potential citizenship. This practical advantage is vital as many international students seek Canada as a permanent home.

Hands-on Practical Skills
Co-op students gain direct exposure to industry-specific tools, technologies, processes, and workplace expectations well before graduation. This practical skill development goes beyond theoretical learning to include problem-solving, project management, teamwork, and professional communication. As a result, graduates enter the workforce with a solid portfolio of real-world accomplishments and experiences that make them immediately productive and reduce on-boarding time for employers.

Academic and Practical Balance Co-op programs carefully balance academic course work with work experience, allowing students to reflect on and integrate practical insights back into their studies. This cyclical learning eventually helps in deeper comprehension and specialisation in their field.

B.E. in Computer Engineering

4-YEAR B.E. IN COMPUTER ENGINEERING AT CHITKARA UNIVERSITY, INDIA IS MAPPED TO THE CURRICULUM OF 4-YEAR BSC IN COMPUTER SCIENCE AT YORK UNIVERSITY, CANADA.

The B.E. in Computer Engineering at Chitkara University offers students a unique international pathway designed to prepare them for success in the fast-evolving global technology landscape.

This four-year program combines rigorous technical training in India with academic mentorship from York University, Canada—one of North America's leading institutions and ranked #9 in Canada and among the Top 300 globally for Computer Science & Engineering (Shanghai Ranking 2024). Students build strong foundations in computer science, software engineering, data management, artificial intelligence, and emerging technologies, guided by faculty who ensure industry relevance and global academic standards.

A distinctive feature of the program is its credit transfer pathway, which allows eligible students to seamlessly transfer 100% of their course credits to York University in the third year and graduate with York's 4-Year BSc in Computer Science. York's Department of Computer Science is at the forefront of shaping Canada's technological future—leading research in artificial intelligence, cybersecurity, computer vision big data, and human-computer interaction.

By beginning their journey at Chitkara University, students benefit from affordable, high-quality education closer to home. Completing the first two years in India allows them to save substantially on tuition, boarding, and lodging costs, making an international degree far more accessible.

Co-op Opportunities at York University

Students transferring to York can apply for the Co-op Program, which offers paid work placements with leading employers such as Apple, Microsoft, Tesla, and the Canadian Space Agency. These placements provide valuable industry experience, financial independence, and a strong professional network—helping students graduate with both a degree and real-world expertise.

Program Structure

PROGRAM FRAMEWORK AT CHITKARA UNIVERSITY
Year 1 & Year 2
During the first two years of the B.E. in Computer Engineering program, students study a wide range of foundational and applied courses, including:

- Differential Equations and Transformations
- Problem Solving Using Python Programming
- Modern and Computational Physics
- Disaster Management
- Integral Calculus with Applications
- Object-Oriented Programming
- Discrete Structures
- Linux Shell Scripting
- Data Analytics
- Computer Organisation and Architecture

PROGRAM FRAMEWORK AT YORK UNIVERSITY
Year 3 & Year 4
After completing the first two years at Chitkara University, India, students transfer to York University, Canada, to complete the third and fourth years and earn a BSc in Computer Science from York University.

At York, students can choose from two specialisation tracks:
Cybersecurity | Data Science

Cybersecurity
Some of the courses offered in the third and fourth years for students opting for the Cybersecurity track include:

- Introduction to Logic for Computer Science
- Professional Practice in Computing
- Design and Analysis of Algorithms
- Software Design
- Embedded Systems
- Computer Network Protocols and Applications
- Network Security and Forensics
- Information Networks
- Malware Analysis
- Building e-Commerce Systems
- Mathematics of Cryptography

Data Science
Some of the courses offered in the third and fourth years for students opting for the Data Science track include:

- Design and Analysis of Algorithms
- Software Design
- Introduction to Artificial Intelligence and Logic Programming
- User Interfaces
- Fundamentals of Machine Learning
- Advanced Data Structures
- Information Networks
- Big Data Systems
- Database Management Systems
- Data Mining

Eligibility Conditions

- Successful completion of Class XII with Physics, Chemistry & Mathematics with a minimum 65% aggregate and 65% in Mathematics
- A minimum of 65% in English in Class XII OR
- Achievement of a minimum score of 6.5 bands on the IELTS English proficiency test with no band less than 6 OR TOEFL iBT score of 88 internet-based test, taken in a testing centre with no section below 20).
- Mandatory Personal Interview with our Academic Team.

Learning Outcomes

Graduates of this program will:

- Acquire a comprehensive foundation in both theoretical and applied computer science, spanning core areas such as programming, algorithms, software engineering and system design.
- Build proficiency in emerging technologies including Artificial Intelligence, Machine Learning, Robotics, Data Mining and User Interface Design.
- Develop the ability to create efficient, accurate and ethical software through hands-on lab work, project-based learning and collaborative problem-solving.
- Integrate interdisciplinary perspectives by engaging with complementary fields from the natural sciences and liberal arts, fostering a well-rounded global outlook.
- Strengthen analytical, research, and problem-solving capabilities essential for addressing real-world technological and societal challenges.
- Embrace diversity, equality, and inclusion as core values, preparing to contribute responsibly and ethically to global STEM communities.

Career Opportunities

Graduates of this globally oriented program are equipped to take on high-impact roles across technology and innovation sectors. Potential career paths include:

Software Developer | Data Scientist | AI and Robotics Specialist | Cybersecurity Analyst | UI/UX Designer
Database Administrator | Embedded Systems Engineer | Systems Analyst or IT Consultant
IT Project Manager | Research & Development Specialist | Tech Entrepreneur

Additionally, students who pursue the international transfer to York University will gain access to:

- Advanced research opportunities and global internships
- Multinational tech firms and cutting-edge innovation hubs
- Leadership roles in diverse industries including healthcare, finance, smart technology, and telecommunications
- Higher academic pursuits such as Master's or PhD programs in computing or interdisciplinary fields

Employer Partners

ALSTOM | BMO | dayforce | ONTARIO POWER GENERATION | QUANSER INNOVATE · EDUCATE | shopify

Transfer To Canada

You have an option to apply for transfer to Lassonde School of Engineering at York University in Canada after studying and demonstrating academic success (with a requisite CGPA) and other statutory requirements while studying two years of B.E. in Computer Engineering at Chitkara University. You will be eligible to transfer into the third year of B.Sc degree in Computer Science at the Lassonde School of Engineering at York University with all transfer credits of prior learning from the first two years of your study at Chitkara University where you will spend another two years of study to get a 4-Year B.Sc in Computer Science from Lassonde School of Engineering at York University in Canada. You will also be eligible to apply for a three year post study work permit after successful completion of your program.

However, apart from demonstrating academic success in the first two years at Chitkara University, you have to secure a study permit from Immigration, Refugees and Citizenship Canada or IRCC, the only Canadian government visa granting authority.

Other conditions include but not limited to:

- Valid IELTS Score of 6.5 cumulative with no band less than 6.0
- No prior refusal of any visa for Canada on your passport
- Have demonstrated academic success while studying first two years of your bachelors degree education at Chitkara University and secured minimum CGPA.

Please note that IRCC has the sole right to grant or refuse any kind of visa to Canada and no external factor or entity has any say, control or influence on their decision. For more information visit cic.gc.ca/English/study/work.asp

Work in Canada

International Student Permit Information
Initial Study Permit
www.cic.gc.ca/english/study/study.asp

Study Permit Extension
www.cic.gc.ca/english/study/study-extend.asp

Study Permit Amendment
www.cic.gc.ca/English/study/work.asp

Working On-Campus
www.cic.gc.ca/english/study/work-oncampus.asp

Working off-Campus
www.cic.gc.ca/english/study/work-offcampus.asp

Post-Graduation Work Permit
www.canada.ca/en/immigration-refugees-citizenship/services/study-canada/work/after-graduation.html

Temporary Resident Visa (with valid status—study or work permit)
www.cic.gc.ca/english/visit/cpp-o-apply.asp

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LASSONDE SCHOOL OF ENGINEERING | YORK UNIVERSITÉ UNIVERSITY

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Punjab-140 401 | India

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