COMPUTER SCIENCE (HBSc)

Department of Mathematical & Computational Sciences

Computer science is concerned in the broadest sense with the study of computation and applications of computing. Its development has been stimulated by collaborations with many disciplines including engineering, the physical and life sciences, mathematics and statistics and commerce. However, computer science is much more than a set of techniques used in these application areas.

Computer science as a discipline encompasses a wide range of research areas including human-computer interaction, robotics, software engineering, numerical analysis, machine learning, and cryptography.

MAKE THE MOST OF YOUR TIME AT UTM!

We want to help you maximize your university experience, so we've pulled together information and interesting suggestions to get you started, although there are many more! As you review the chart on the inside pages, note that many of the suggestions need not be restricted to the year they are mentioned. In fact, activities such as joining an academic society, engaging with faculty and seeking opportunities to gain experience should occur in each year of your study at UTM. Read through the chart and create your own plan using **My Program Plan** found at **www.utm.utoronto.ca/program-plans**

Programs of Study (POSt)

- Specialist Program ERSPE1038 Information Security (Science)
- Specialist Program ERSPE1688 Computer Science (Science)
- Major Program ERMAJ1688 Computer Science (Science)
- Minor Program ERMIN1688 Computer Science (Science)

Check out...

Why not try machine learning? In CSC311H5 and CSC413H5, you can investigate how machines "learn" to classify situations with or without supervision (training data).

Robots! How do they move? How do they carry out plans? How do they autonomously operate? You can learn all about robotics from our world-class robotics instructors who are designing new courses that are the first of their kind.

What can I do with my degree?

The career you choose will depend on your experience and interests. Visit the Career Centre to explore your career options.

Careers for graduates: Data scientist; Software developer; Web/app developer; Software tester; Computer systems analyst; Systems architect; Network administrator; Database administrator; Business analyst; Computer architect.

Workplaces: Computer/telecommunication companies; Government; Banks; Insurance; Engineering firms; Test development companies.

UNIVERSITY OF TORONTO MISSISSAUGA

COMPUTER SCIENCE
MAJOR Program Plan

HOW TO USE THIS PROGRAM PLAN

Read through each year. Investigate what appeals to you here and in any other Program Plans that apply to you.

Visit **www.utm.utoronto.ca/program-plans** to create your own plan using **My Program Plan**. Update your plan yearly.

UNIVERSITY OF TORONTO MISSISSAUGA

	1ST YEAR	2ND YEAR	3RD YEAR	4TH OR FINAL YEAR
PLAN YOUR ACADEMICS*	Enrol in courses CSC108H5, 148H5; ISP100H5; MAT102H5, (MAT132H5,MAT134H5)/ (MAT135H5,MAT136H5)/MAT134Y5/ MAT135Y5/ MAT137Y5/ MAT157Y5. Choose a program of study (Subject POSt) once you complete 4.0 credits. Use the **Degree Explorer** and the **Academic Calendar** to plan your degree. Develop foundational academic skills and strategies by enrolling in a **utmONE** course. Build community and gain academic support through **LAUNCH**. Join a RGASC **Peer Facilitated Study Group**.	Enrol in courses CSC207H5, 236H5; MAT223H5/ 240H5; two of (CSC209H5, 258H5, 263H5) and STA246H5/ 256H5. Review your **Degree Explorer** plan and the **Academic Calendar** to ensure you take the prerequisites you need for upper year courses. Consider applying for **Research Opportunity Program (ROP)** courses CSC299Y, CSC399Y and CSC499Y. Visit the EEU website for **ROP Course Prerequisites**. Attend the RGASC's **PART** to enhance your research skills.	Attain four half courses from any 300/400 level UTM CSC courses (including at least 0.5 credit from a 400-level course). Throughout your undergraduate degree: • use the **Degree Explorer** to ensure you complete your degree and program requirements. • see the **Office of the Registrar** and the **Academic Advisor & Undergraduate Program Administrator (CSC)**.	What is **Experiential Education**? It means learn by doing! Speak to the **Academic Advisor & Undergraduate Program Administrator (CSC)** about the workshop-based courses CSC318H5 (The Design of Interactive Computational Media) and CSC490H5 (Capstone Design). Log on to ACORN and request graduation.
BUILD SKILLS	Use the **Co-Curricular Record (CCR)**. Search for opportunities beyond the classroom, and keep track of your accomplishments. Attend the **Get Hired Fair** through the Career Centre (CC) to learn about on- and off-campus opportunities. Attend the **Experiential Education Fair.**	Consider a professional work-integrated learning opportunity through **UTM Co-op Internship Program (UTMCIP)**. Speak to the **Academic Advisor & Undergraduate Program Administrator (CSC).**	Use the **Career & Co-Curricular Learning Network (CLNx)** to find postings for on- and off-campus work and volunteer opportunities. Work on-campus through the **Work-Study program**. View position descriptions on the CLNx.	Conduct a research project under the supervision of a faculty member through CSC392H5, CSC393H5, CSC492H5 and CSC493H5. Speak to the **Academic Advisor & Undergraduate Program Administrator (CSC)** for advice and details.
BUILD A NETWORK	Networking simply means talking to people and developing relationships with them. Start by joining the **Mathematical and Computational Sciences Society (MCSS)**. Follow them @utmmcss. Get to know your TA. View the Math Learning Centre Schedule on the MCS departmental website. Visit the UTM Library **Reference Desk**.	Do you have a professor you want to connect with? Ask them a question during office hours. Discuss an assignment. Go over lecture material. Don't be shy! Learn **Tips On How to Approach a Professor** available through the Experiential Education Unit (EEU).	Establish a professional presence on social media (e.g., LinkedIn). Attend the UofT Electrical & Computer Engineering department's **Distinguished Lectures Series**. Thinking about life after UTM? Connect with a UTM alumnus through the CSE's **Alumni Mentorship Program**!	Join a professional association. Check out the **Association for Computing Machinery, Canadian Information Processing Society** (headquartered in Mississauga) or the **Canadian Artificial Intelligence Association**. Go to the **Connect IT Conference** or the **Grace Hopper celebration** which works to bridge the gap between students and the industry.
BUILD A GLOBAL MINDSET	Engage with the many programs offered by the **International Education Centre (IEC)**, whether you are an international or domestic student. Consider joining the **Canada Eh?** day trips or **English Language Conversation Circles** to deepen your global mindset. First-year international students can also take advantage of **THRIVE'IN**, a one-day conference dedicated to helping you start your UTM journey successfully.	Participate in **International Education Week** and engage in programs like **Global and Intercultural Fluency Training Series (GIFTS)** to build on your leadership and communication skills in global citizenship. Learn about and prepare for a future **UTM Abroad Experience** through the IEC to strengthen and enhance your intercultural skill set, and learn about other cultures while sharing your own!	Expanding your intercultural awareness and developing intercultural skills will help you in your academics, personal growth and are highly sought out by employers. **Earn credits overseas!** Apply to study for a summer, term or year at one of 170+ universities. The MCS department has identified partners which are most relevant to our students. Speak to the IEC for details about **Course Based Exchange**, funding and travel safety. Also attend Global Learning Week to learn more.	Engage in programs like **ISTEP** and **THRIVE** to support your transition out of the University!
PLAN FOR YOUR FUTURE	Attend the **Program Selection & Career Options** workshop offered by the Office of the Registrar and the CC. Check out **Careers by Major** at the CC to see potential career options.	Explore careers through the CC's **Job Shadow Program**. Considering **further education**? Attend the CC's **Graduate & Professional Schools Fair.** Talk to professors – they are potential mentors and references.	What's your next step after undergrad? Entering the workforce? Evaluate your career options through a CC **Career Counselling appointment**. Create a job search strategy — book a CC **Employment Strategies appointment**. Considering further education? Research application requirements, prepare for admission tests (LSAT, GMAT) and research funding options (OGS, NSERC)	Market your skills to employers. Get your **resume critiqued** at the CC. Attend the CC workshop **Now That I'm Graduating What's Next?** Write a strong application for further education. Attend the CC's **Mastering the Personal Statement workshop**. Ready to transition from the classroom to the workplace? Check out the **Recent Graduate Opportunities Program (RGOP).**

*Consult the Academic Calendar for greater detail on course requirements, program notes and degree requirements.

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Visit **www.utm.utoronto.ca/program-plans** for the online version and links.

COMPUTER SCIENCE

Skills developed in Computer Science

To be competitive in the job market, it is essential that you can explain your skills to an employer. Visit the Career Centre to learn how to articulate and market the following skills:

Research: analyze and evaluate information; develop innovative systems; and develop ideas for presentation at a conference or in a journal.

Technical: write, debug, and test programs and research, design and develop computer systems (e.g., new computer languages, simulations, system analysis, etc.).

Problem-solving: conceptualize models; formulate, model, and solve problems from diverse areas; and collect, organize, analyze, and interpret results.

Communication: articulate, explain, and teach technical information to others, as well as question and probe to diagnose computer problems.

Organizational: manage time effectively and organize and maintain stored data.

Get involved

Check out the 100+ student organizations on campus. Here are a few:

- Mathematical and Computational Sciences Society (MCSS)
- UTM Student Union (UTMSU)
- UTM Athletics Council (UTMAC)

For a listing of clubs on campus visit the **Student Group and Societies Directory** or **MCS Department Student Organizations**

Services that support you

- **Accessibility Services (AS)**
- **Career Centre (CC)**
- **Centre for Student Engagement (CSE)**
- **Equity, Diversity & Inclusion Office (EDIO)**
- **Experiential Education Unit (EEU)**
- **Health & Counselling Centre (HCC)**
- **Indigenous Centre (IC)**
- **International Education Centre (IEC)**
- **Office of the Registrar (OR)**
- **Recreation, Athletics and Wellness Centre (RAWC)**
- **Robert Gillespie Academic Skills Centre (RGASC)**
- **The Math Learning Centre (MLC)**
- **UTM Library, Hazel McCallion Academic Learning Centre (HMALC)**

Department of Mathematical & Computational Sciences

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