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. 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.

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; Graphic design firms; Engineering firms; Test development companies.

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 areas 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, software engineering, systems, numerical analysis, cryptography and theory.

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 CSC321 and CSC411, you can investigate how machines "learn" to classify situations with or without supervision (training data). Other courses introduce related topics: natural language understanding, reasoning, planning (CSC384), and neural networks (CSC321 and CSC411).

What can I do with my degree?

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Workplaces: Computer/telecommunication companies; Government; Banks; Insurance; Graphic design firms; Engineering firms; Test development companies.
**COMPUTER SCIENCE MAJOR** Program Plan

**PLAN YOUR ACADEMICS***

**1ST YEAR**
- Choose a program of study (Subject POSt) once you complete 4.0 credits. Use the Degree Explorer Planner and the Academic Calendar to plan your degree.
- Start strong and get informed with utmONE and LAUNCH through the Office of Student Transition. Join a RGASC Peer Facilitated Study Group.

**2ND YEAR**
- Enrol in courses CSC207H5, 236H5; MAT223H5/240H5; two of (CSC299Y5, CSC399Y5, CSC499Y5), and STA256H5.
- 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 CSC299Y5, CSC399Y5 and CSC499Y5. Visit the EEO website for ROP Course Prerequisites. Attend the RGASC's P.A.R.T. to enhance your research skills.

**3RD YEAR**
- 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 MCS Undergraduate Counsellor.

**4TH OR FINAL YEAR**
- What is Experiential Education? It means learn by doing! Speak to the MCS Undergraduate Counsellor 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**

**1ST YEAR**
- Use the Co-Curricular Record (CCR). Search for opportunities beyond the classroom, and keep track of your accomplishments.
- Attend the Get Experience Fair through the Career Centre (CC) to learn about on- and off-campus opportunities.

**2ND YEAR**
- Consider a practical work-based experience through UofT's Professional Experience Year - Canada's largest undergraduate paid internship program that offers 12- to 16-month work placements. Speak to the MCS Undergraduate Counsellor.
- Attend the UTM Across Canada workshop.

**BUILD A NETWORK**

**1ST YEAR**
- Networking simply means talking to people and developing relationships with them. Start by joining the Mathematical and Computational Sciences Society (MCSS). Follow them @utmccss.
- Get to know your TA. View the Math Help Room Schedule on the MCS departmental website. Visit the UTM Library Reference Desk.

**2ND YEAR**
- Do you have a professor you really like or 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 Office (EEO).

**BUILD A GLOBAL MINDSET**

**1ST YEAR**
- Attend events held by the International Education Centre (IEC) to explore different cultures through food, music, and sport or through sight-seeing around the GTA.
- Embark on a UTM Abroad Co-Curricular Experience through the IEC. Take advantage of this opportunity to travel with a faculty member and learn about a topic of interest in a unique location.
- Prefer traveling in Canada? Check out the IEC's UTM Across Canada program.

**2ND YEAR**
- Earn credits overseas! Study for a summer, term or year at one of 120 universities. The MCS department’s topic pick is Lund University (Sweden). Speak to the IEC for details about Course Based Exchange and funding.
- Why not work abroad? Read up on worldwide employment trends and industry outlooks through GoinGlobal. Attend the Go Global Expo. See if you are eligible for International Experience Canada.

**PLAN FOR YOUR FUTURE**

**1ST YEAR**
- 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.

**2ND YEAR**
- Explore careers through the CC’s Extern Job Shadowing Program.
- Considering further education? Attend the CC’s Graduate and Professionals School Fair. Talk to professors – they are potential mentors and references.

**3RD YEAR**
- What’s your next step after undergrad?
  - Considering further education? Research application requirements, prepare for admission tests (LSAT, GMAT) and research funding options (OGS, SSHRC)

**4TH OR FINAL YEAR**
- 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.

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

**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.

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

Revised on: 07/28/17
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; research, design and develop computer systems; and develop programs (e.g., new computer languages, simulations, systems analysis).

**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 solve computer problems.

**Organizational:** manage time effectively and organize and maintain data that is stored.

Get involved

Check out 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 www.utm.utoronto.ca/clubs.

Services that support you

- AccessAbility Resource Centre (AARC)
- Career Centre (CC)
- Centre for Student Engagement (CSE)
- Experiential Education Office (EEO)
- Hazel McCallion Academic Learning Centre (HMALC)
- Health & Counselling Centre (HCC)
- Indigenous Centre (IC)
- International Education Centre (IEC)
- Office of Student Transition (OST)
- Office of the Registrar (OR)
- Recreation, Athletics and Wellness Centre (RAWC)
- Robert Gillespie Academic Skills Centre (RGASC)

Department of Mathematical & Computational Sciences

Deerfield Hall, Room 3018
University of Toronto Mississauga
3359 Mississauga Rd
Mississauga ON Canada L5L 1C6

905-828-3801
ugmcs.utm@utoronto.ca
www.utm.utoronto.ca/math-cs-stats/

FUTURE STUDENTS

Admission to UTM

All program areas require an Ontario Secondary School Diploma, or equivalent, with six Grade 12 U/M courses, or equivalent, including English. The admission average is calculated with English plus the next best five courses. The Grade 12 prerequisites for this program are Advanced Functions and Calculus. The approximate average required for admission is high-70s. More information is available at utm.utoronto.ca/viewbook.

NOTE: During the application process, applicants will select the Computer Science, Mathematics & Statistics admissions category but will not officially be admitted to a formal program of study (Specialist, Major, and/or Minor) until after first year.

Sneak Peek

The first two years of the program are an introduction to broadly applicable tools and ideas. You’ll learn computing languages including Python (CSC108H5) and Java (CSC207H5) as well as mathematical techniques (CSC236H5) and data structures (CSC148H5 and CSC263H5).

Our computing facilities are excellent. We have over 400 Linux PC’s, Windows PC’s and Apple Macs. Course offerings are intended to serve a wide variety of student interests ranging from information processing to applying computers to other fields. Our faculty enjoy a strong world-wide reputation in varied fields of research: human-computer interaction, computer vision, machine learning and computing education.

Student Recruitment & Admissions

Innovation Complex, Room 1270
University of Toronto Mississauga
3359 Mississauga Rd
Mississauga ON Canada L5L 1C6

905-828-5400
www.utm.utoronto.ca/prospective