Mathematical Sciences teaches one to think analytically and creatively. It is a foundation for advanced careers in a knowledge-based economy. The past century has been a remarkable one for discovery in mathematics. Problems in computer science, physics, biology, and economics have opened new fields of mathematical inquiry, and discoveries at the most abstract level, for example in number theory, have led to breakthroughs in applied areas.

Our award-winning faculty bring knowledge and experience from a variety of backgrounds. Your time in this program will be enriched with independent study courses and Research Opportunity Program (ROP) courses, as well as small group projects and thesis courses with the faculty.

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

Programs of Study (POSt)

- Specialist Program ERSPE2511 Mathematical Sciences (Science)
- Major Program ERMAJ2511 Mathematical Sciences (Science)
- Minor Program ERMIN2511 Mathematical Sciences (Science)

Check out...

What’s a strange attractor? Take MAT332H5 to learn about bifurcation theory, chaos and fractals. Discover the beauty of proofs in MAT309H5! Study the nature of axioms, proofs and consistency as well as the theory of recursive functions.

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: Market research analyst; Mathematical technician; Purchaser; Actuary; Secondary school teacher; Numerical analyst; Operations research analyst; Budget analyst; Insurance underwriter; Logistics specialist; Risk analyst; Supply chain system analyst.

Workplaces: Government; Banks; Investment firms; Insurance; Retail; Research and development firms.
### Mathematics Sciences

**MAJOR Program Plan**

<table>
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<tr>
<th>1st YEAR</th>
<th>2nd YEAR</th>
<th>3rd YEAR</th>
<th>4th OR FINAL YEAR</th>
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<tbody>
<tr>
<td>Enrol in courses MAT120H5, 134Y5/135Y5/137Y5/157Y5 and 223H5/240H5. Choose a program of study (Subject POS) once you complete 4.0 credits. Use the Degree Explorer Planner and the Academic Calendar to plan your degree.</td>
<td>Enrol in courses MAT202H5, 232H5/233H5/257Y5, 224H5/247H5 and 244H5. Consider applying for the Research Opportunity Program (ROP) course MAT299Y. Visit the EEO website for ROP Course Prerequisites. Attend the RGASC’s Program for Accessing Research Training (P.A.R.T.) to enhance your research skills.</td>
<td>Enrol in courses MAT301H5, 334H5, 378H5/392H5/405H5, 402H5, 236H5/311H5/332H5 and 302H5/315H5/344H5. Enrol in STA206H5 or attain 0.5 MAT credits at the 300+ level. 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. Consider a practical work-based experience through UofT’s Professional Experience Year — Canada’s largest undergraduate paid internship program that offers 12-16 month work placements. Speak to the MCS Undergraduate Counsellor.</td>
<td>Enrol in an independent Study Course to expand your knowledge beyond the regular courses and work closely with a faculty member. Apply to become a mathematics teaching assistant. Polish your communication and presentation skills, and help first and second year students with their math courses. Lag on to ACORN and request graduation.</td>
</tr>
</tbody>
</table>

**Plan Your Academics**

- **1st YEAR**
  - Enrol in courses MAT120H5, 134Y5/135Y5/137Y5/157Y5 and 223H5/240H5. Choose a program of study (Subject POS) 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**
  - 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.

- **3rd YEAR**
  - Networking simply means talking to people and developing relationships with them. Start by joining the Mathematical and Computational Sciences Society (MCSS). Follow them on Twitter.
  - Get to know your TA. View the Math Help Room Schedule on the MCS departmental website. Visit the UTM Library.

- **4th OR FINAL YEAR**
  - Enrol in an independent Study Course to expand your knowledge beyond the regular courses and work closely with a faculty member.

**Build Skills**

- **1st YEAR**
  - Use the Career Learning Network (CLN) 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 CLN.

- **2nd YEAR**
  - Use the Career Learning Network (CLN) 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 CLN.

**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 on Twitter.
  - Get to know your TA. View the Math Help Room Schedule on the MCS departmental website. Visit the UTM Library Reference Desk.

- **2nd YEAR**
  - Networking simply means talking to people and developing relationships with them. Start by joining the Mathematical and Computational Sciences Society (MCSS). Follow them on Twitter.
  - Attend events held by the International Education Centre (IEC) to develop cross-cultural experiences through food, music, and sport or through sight-seeing around the GTA.

**Build A Global Mindset**

- **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**
  - 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.

**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**
  - 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.

**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: 09/08/2017

*Consult the Academic Calendar for greater detail on course requirements, program notes and degree requirements.*
Skills developed in Mathematical Sciences

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:

**Critical thinking & interpersonal:** construct sound arguments and expose illogical ones; collaborate with others; and effectively communicate ideas and abstract concepts.

**Problem solving:** approach problems from different angles to identify key issues and apply a range of mathematical skills to different situations.

**Technical:** understand mathematical concepts and the rules of logic, as well as solve problems using specialized software.

**Investigative & organizational:** analyze large quantities of numerical data; find patterns and draw conclusions, as well as present mathematical arguments with accuracy.

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 Services (AS)
- Career Centre (CC)
- Centre for Student Engagement (CSE)
- Experiential Education Office (EEO)
- 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)
- UTM Library, Hazel McCallion Academic Learning Centre (HMALC)

Department of Mathematical & Computational Sciences

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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**

Where does Mathematics derive its great power from? Find out in MAT202H5 – a course that looks at abstraction and its power through a study of topics from discrete mathematics. Dive in to Linear Algebra in MAT240H5! Topics include Vector spaces over arbitrary fields, linear equations and matrices, bases and linear independence, diagonalization, the characteristic and minimal polynomials as well as the Cayley-Hamilton theorem.

Student Recruitment & Admissions

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University of Toronto Mississauga
3359 Mississauga Rd
Mississauga ON Canada L5L 1C6

905-828-5400
www.utm.utoronto.ca/future-students