Numbers are all around us. From the thickness of the ozone layer to infant mortality rates, from the cost of beer to the chances of contracting AIDS, the world is permeated with quantity. Most of the quantitative information we have is incomplete, or an estimate, or an average, or the result of inexact measurement. This does not mean the information is useless. What it means is that to consider ourselves well educated, we must be able to extract knowledge from numerical data that are subject to random error.

Statisticians do things as diverse as setting insurance rates, testing new drugs, estimating levels of air and water pollution, monitoring the quality of industrial products, and predicting the outcomes of national elections.

**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](http://www.utm.utoronto.ca/program-plans).

**Programs of Study (POSt)**

- Specialist Program ERSPE1540 Statistics, Applied (Science)
- Major Program ERMAJ1540 Statistics, Applied (Science)
- Minor Program ERMIN1540 Statistics, Applied (Science)

**Check out...**

Get excited about surveys, sampling and observational data! Take STA304H5 and learn about several techniques for obtaining information about a large population at relatively small cost. Want to study multivariate data! Enroll in STA437H5 to learn about fundamental methods of data reduction and hypothesis testing for multivariate means and variances.

**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:** Actuary; Budget analyst; Insurance underwriter; Logistics specialist; Market research analyst; Mathematical technician; Numerical analyst; Operations research analyst; Statistician; Systems operation analyst; Data entry clerk; Epidemiologist.

**Workplaces:** Government Agencies; Banks; Investment firms; Insurance companies; Research and development firms.
**STATISTICS, APPLIED SPECIALIST Program Plan**

### 1ST YEAR

**Enrol in courses**
- Choose a program of study (Subject P09) once you complete 4.0 credits. Use the Degree Explorer to plan your degree.

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

**Build a Global Mindset**

- Attend events held by the International Education Centre (IEC), whether you are an international or domestic student. Explore your culture and other cultures through weekly/regular conversations, Language Conversation Circles, debates, and activities to enhance your global and intercultural mindset.

**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.

### 2ND YEAR

**Enrol in courses**
- 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.

**Build Skills**

- 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

**Enrol in courses**
- STA302H5, 304H5, 305H5 and 348H5. For 3rd year and higher, attain 2.0 credits from (STA312H5, 313H5/ 360H5, 314H5, 315H5, 413H5, 431H5, 437H5, 441H5, 457H5); 2.0 credits from (CSC322H5, 411H5; MAT302H5, 311H5, 329H5, 334H5, 344H5, 337H5/378H5); 1.0 additional credit make up of any other STA courses

**Build Skills**

- 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 Educational Experience Unit (EEU).

**Build a Network**

- Engage in programs like the Global and Intercultural Fluency Training Series (GIFTS) or 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.

### 4TH OR FINAL YEAR

**Enrol in courses**
- STA302H5, 304H5, 305H5 and 348H5. For 3rd year and higher, attain 2.0 credits from (STA312H5, 313H5/ 360H5, 314H5, 315H5, 413H5, 431H5, 437H5, 441H5, 457H5); 2.0 credits from (CSC322H5, 411H5; MAT302H5, 311H5, 329H5, 334H5, 344H5, 337H5/378H5); 1.0 additional credit make up of any other STA courses

**Build Skills**

- Establish a professional presence on social media (e.g., LinkedIn).
- Attend the UofT Statistical Sciences department’s Seminar Series.
- Thinking about life after UTM? Contact with a UTM alumnus through the CSE’s Alumni Mentorship Program!

**Build a Network**

- Earn credits overseas! Apply to study for a summer, term or year at one of 140+ 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.

**Plan for Your Future**

- 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)

**Visit**

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

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**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 for the online version and links.

Revised on: 10/27/2021
Skills developed in Statistics, Applied

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:** design projects, experiments and other studies; analyze, summarize, make inferences and interpret the information collected; and write effective technical reports.

**Technical:** understand statistical concepts and the rules of logic, as well as use a range of specialized software to analyze large quantities of numerical data.

**Problem-solving:** approach problems from different angles to identify key issues and apply statistical theories and methods to solve problems.

**Critical thinking & communication:** effectively communicate ideas and abstract concepts and construct sound arguments.

Services that support you

- Accessibility Services (AS)
- Career Centre (CC)
- Centre for Student Engagement (CSE)
- 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)

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 www.utm.utoronto.ca/clubs.

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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 low to mid 80s. 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

What is statistical modeling? In STA256H5, you’ll learn about probability distributions, expectation, continuous and discrete random variables and vectors, distribution functions and probability’s role in statistical modeling. Why not learn some bootstrapping? Enrol in STA258H5 and learn about statistical methodology with emphasis on the relationship between data analysis and probability theory.

Student Recruitment & Admissions

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3359 Mississauga Rd
Mississauga ON Canada L5L 1C6

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