

# FORENSIC CHEMISTRY (HBSc)

## Forensic Science Program

**Forensic Science** is the study of physical evidence in a modern legal context. It is best defined as “science in service to the courts.” UTM’s Forensic Science program, the first of its kind in Canada, is designed to provide the student with an understanding of scientific analyses, theories, laboratory skills, applications, and field techniques — while allowing the student to emphasize one particular area in greater detail.

We have developed well-established partnerships with organizations such as the Centre of Forensic Sciences, the Office of the Chief Coroner for the Province of Ontario, the Ontario Provincial Police, the RCMP, and numerous other police services and agencies worldwide.

## 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 ERSPE1009 Forensic Chemistry (Science)
- Major Program ERMAJ0205 Forensic Science (Science)
- Minor Program ERMINO205 Forensic Science

### Check out...

How is analytical chemistry used for the analysis of physical evidence? Take FSC311H5 to learn about chemical and instrumental techniques used for analysis of drugs and alcohol, gunshot residue, explosives and paint.

### What can I do with my degree?

**Careers for Graduates:** Forensic laboratory analyst; Hazardous waste management technologist; Criminologist; Quality controller; Biochemistry technologist; Coroner; Medical lab technologist; Toxicologist; Ballistics analyst; Regulatory / government affairs specialist; Medico-legal investigator.

**Workplaces:** Government; Forensic laboratories; Medical examiners/coroner offices; Toxicology laboratories; Police agencies; Pharmaceutical companies; Scientific R&D companies.



# FORENSIC CHEMISTRY

## SPECIALIST 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](http://www.utm.utoronto.ca/program-plans) to create your own plan using [My Program Plan](#). Update your plan yearly.



	1 <sup>ST</sup> YEAR	2 <sup>ND</sup> YEAR
PLAN YOUR ACADEMICS*	<p>Enrol in CHM110H5, 120H5; BIO152H5, FSC239Y5; (MAT132H5, 134H5)/(135H5, 136H5)/134Y5/135Y5/137Y5/157Y5; PHY136H5, 137H5.</p> <p>Choose a program of study (Subject POST) once you complete 4.0 credits. Use the <b>Degree Explorer</b> and the <b>Academic Calendar</b> to plan your degree.</p> <p>Start strong and get informed with <b>utmONE</b> and <b>LAUNCH</b> through the Centre for Student Engagement (CSE). Join a RGASC <b>Peer Facilitated Study Group</b>.</p>	<p>Enrol in courses BIO200H5; JCP221H5; CHM211H5, 231H5, 242H5, 243H5; FSC271H5; STA220H5.</p> <p>Consider applying for <b>Research Opportunity Program (ROP)</b> courses CHM299Y5, FSC399Y and CHM399Y5. Visit the EEU website for <b>ROP Course Prerequisites</b>. Attend the RGASC's <b>P.A.R.T.</b> to enhance your research skills.</p>
BUILD SKILLS	<p>Use the <b>Co-Curricular Record (CCR)</b>. Search for opportunities beyond the classroom, and keep track of your accomplishments.</p> <p>Attend the <b>Get Experience Fair</b> through the Career Centre (CC) to learn about on- and off-campus opportunities.</p>	<p>Use the <b>Career Learning Network (CLNx)</b> to find postings for on- and off-campus work and volunteer opportunities.</p> <p>Work on-campus through the <b>Work-Study program</b>. View position descriptions on the CLNx.</p>
BUILD A NETWORK	<p>Networking simply means talking to people and developing relationships with them. Start by joining the <b>UTM Forensics Society (IVNVI)</b>. Find them on Facebook and follow them @utmforensics on Twitter. Go to IVNVI's <b>Meet the Prof Night</b>.</p> <p>Visit the UTM Library <b>Reference Desk</b>.</p>	<p>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 <b>Tips On How to Approach a Professor</b> available through the Experiential Education Unit (EEU).</p>
BUILD A GLOBAL MINDSET	<p><b>Attend events held by the International Education Centre (IEC)</b>, whether you are an international or domestic student. Explore your culture and other cultures through weekly/regular conversations, <b>Language Conversation Circles</b>, debates, and activities to enhance your global and intercultural mindset.</p>	<p>Engage in programs like the <b>Global and Intercultural Fluency Training Series (GIFTS)</b> or learn about and prepare for a future <b>UTM Abroad Experience</b> through the IEC to strengthen and enhance your intercultural skill set, and learn about other cultures while sharing your own!</p>
PLAN FOR YOUR FUTURE	<p>Attend the <b>Program Selection &amp; Career Options</b> workshop offered by the Office of the Registrar and the CC.</p> <p>Check out <b>Careers by Major</b> at the CC to see potential career options.</p>	<p>Explore careers through the CC's <b>Job Shadowing Program</b>.</p> <p>Considering <b>further education</b>? Attend the CC's <b>Graduate and Professional Schools Fair</b>. Talk to professors – they are potential mentors and references.</p>

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

3 <sup>RD</sup> YEAR	4 <sup>TH</sup> OR FINAL YEAR
<p>Enrol in courses CHM311H5, 331H5/333H5, 361H5, CHM396H5, 397H5; (FSC300H5, 302H5)/(210H5/370H5, 303H5), 311H5, 330H5, 340H5, 360H5.</p> <p>Throughout your undergraduate degree:</p> <ul style="list-style-type: none"> <li>use the <b>Degree Explorer</b> to ensure you complete your degree and program requirements.</li> <li>see the <b>Office of the Registrar</b> and the <b>Forensic Science Academic Advisor</b> for assistance.</li> </ul>	<p>Enrol in courses CHM414H5, 416H5; FSC402H5, 403H5, FSC481Y5/(FSC482H5,FSC483H5).</p> <p>Choose how you would like to apply your skills: conduct an individual internship research project under the supervision of a professional mentor through FSC481Y5, or work as a collaborative team to investigate an internship research project under the supervision of a faculty member through FSC483H5.</p> <p>Log on to ACORN and request graduation.</p>
<p>Become a volunteer in the <b>Forensic Science Outreach Program</b>, and teach the community about your unique and highly specialized skills through student led workshops.</p> <p>Explore your interests. Why not pass on your passion for science? Be a <b>UTM Let's Talk Science Outreach</b> volunteer to support educators and help youth form positive attitudes towards the role that STEM plays in their lives and futures.</p>	<p>Skills are transferrable to any job regardless of where you develop them. Learn techniques forensic scientists use in the field! Collect, process, and analyze evidence found at a "crime scene" through FSC407H5. Speak to the <b>Forensic Science Academic Advisor</b>.</p>
<p>Establish a professional presence on social media (e.g., LinkedIn).</p> <p>Attend the <b>E.A. Robinson Science Education Lectureship</b> through the CPS department.</p> <p>Thinking about life after UTM? Connect with a UTM alumnus through the CSE's <b>Alumni Mentorship Program!</b></p>	<p>Join a professional association. Check out the <b>Canadian Society of Forensic Science</b>.</p> <p>Attend the <b>Southern Ontario Undergraduate Student Chemistry Conference</b> or the <b>Forensic Training Conference</b>.</p>
<p><b>Earn credits overseas!</b> Apply to study for a summer, term or year at one of 140+ universities. The Forensic Science department has identified partners which are most relevant to our students. Speak to the IEC for details about <b>Course Based Exchange</b>, funding and travel safety.</p>	<p>Learn about working abroad. Read up on worldwide employment trends and industry outlooks through <b>GoInGlobal</b>. Attend the <b>Go Global Expo</b> to learn about opportunities. See if you are eligible for <b>International Experience Canada</b>.</p>
<p>What's your next step after undergrad?</p> <p>Entering the workforce? Evaluate your career options through a CC <b>Career Counselling appointment</b>. Create a job search strategy - book a CC <b>Employment Strategies appointment</b>.</p> <p>Considering further education? Research application requirements, prepare for admission tests (LSAT, MCAT), and research funding options (OGS, SSHRC)</p>	<p>Market your skills to employers. Get your <b>resume critiqued</b> at the CC. Attend the CC workshop <b>Now That I'm Graduating What's Next?</b></p> <p>Write a strong application for further education. Attend the CC's <b>Mastering the Personal Statement workshop</b>.</p>

Revised on: 6/8/2020

Visit [www.utm.utoronto.ca/program-plans](http://www.utm.utoronto.ca/program-plans) for the online version and links.

# FORENSIC CHEMISTRY

## Skills developed in Forensic Chemistry

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:

**Technical:** toxicology methods; chemical processing; make and record accurate measurements; make observations, draw diagrams and take photographs; crime scene investigation; and use statistical tests.

**Communication:** report writing; verbal testimony; understanding of cultural diversity; translate scientific evidence; and analyze and present data.

**Organizational:** casework; teamwork; and understanding legal issues related to evidence.

**Problem-solving:** identify alternative solutions and interpret lab findings.

**Research:** draw conclusions based on the evidence obtained and communicate results of investigative work through proper channels based on the conclusions drawn.

## Get involved

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

- UTM Forensics Society (IVNVI)
- Erindale Chemical and Physical Sciences Society (ECPS)
- UTM Student Union (UTMSU)
- UTM Athletics Council (UTMAC)

For a listing of clubs on campus visit [www.utm.utoronto.ca/clubs](http://www.utm.utoronto.ca/clubs).

## 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)
- UTM Library, Hazel McCallion Academic Learning Centre (HMALC)

## Forensic Science Program

Terrence Donnelly Health Sciences Complex, 4th Floor  
University of Toronto Mississauga  
3359 Mississauga Rd  
Mississauga ON Canada L5L 1C6

416-705-5876

[www.utm.utoronto.ca/forensic](http://www.utm.utoronto.ca/forensic)

## 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, Biology, Chemistry and Physics. The approximate average required for admission is mid- to high-70s. More information is available at [utm.utoronto.ca/viewbook](http://utm.utoronto.ca/viewbook).

**NOTE:** During the application process, applicants will select the Forensic Science 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

Curious about pharmacology? Take BIO200H5 to learn about the absorption and calculation of dosages as well as the variability in drug response and adverse drug reactions. What is the role of a coroner? Enrol in FSC239Y to find out about crime scene investigation, forensic chemistry and toxicology. Get excited for FSC481Y5! You'll spend 200 hours collaborating with a professional forensic specialist on an original project.

Our courses provide students the opportunity to learn about all aspects of forensic science in the classroom and to apply their knowledge to practical assignments using state-of-the-art technology and instruments. Courses are taught by professionals who bring their own expertise and unique field experience to the classroom.

### 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/future-students](http://www.utm.utoronto.ca/future-students)

