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: Acoustic emissions technician; Astrophysicist; Laser fusion scientist; Material scientist; Medical physicist; Nuclear medical technologist; Optical technician; Planetarium guide; Quality controller; Radiation safety technician; Science journalist; Seismic analyst; Sound engineer.

Workplaces: Aerospace; Energy development; Government; Renewable energy; Research laboratories; Manufacturing; Observatories; Planetariums; Research centres; Space industry.

Programs of Study (POST)

- Specialist Program ERSPE1944 Biomedical Physics
  Specialist (Science)
- Major Program ERMAJ1944 Physics (Science)
- Minor Program ERMIN1944 Physics (Science)

Check out...

Have a soft spot for quantum mechanics? Check out JCP321H5. Curious about lasers and radiation? Then get excited for PHY451H5! Topics include electromagnetism, light metal interactions, multipole radiation and simple models of optical dispersion.

What can I do with my degree?

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Workplaces: Aerospace; Energy development; Government; Renewable energy; Research laboratories; Manufacturing; Observatories; Planetariums; Research centres; Space industry.
### PLAN YOUR ACADEMICS

**1ST YEAR**
- Enrol in courses PHY136H5, 137H5; [146H5,147H5]; and MAT134Y5/157Y5/137Y5.
- 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 PHY241H5, 242H5, 245H5 and JCP221H5.
- Consider applying for Research Opportunity Program (ROP) courses PHY299Y and PHY399Y. Visit the EEO for ROP Course Prerequisites. Attend the RGASC's P.A.R.T. to enhance your research 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 PHY324H5, 325H5, 347H5, 451H5, JCP321H5 and 421H5. To complete the Physics major, you need to acquire 3.0 additional 300/400 level PHY/JCP credits.
- 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 CPS Academic Counsellor.

**4TH OR FINAL YEAR**
- Senior students complete a research project. Speak to the CPS Academic Counsellor to discover available opportunities such as Independent Study Courses PHY473H5 (Supervised Reading) and PHY489Y5 (Introduction to Research in Physics).
- 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 Experience Fair through the Career Centre (CC) to learn about on- and off-campus opportunities.
- Attend events held by the International Education Centre (IEC) to explore different cultures through food, music, sport or sight-seeing around the GTA.

**BUILD A NETWORK**

- Networking simply means talking to people and developing relationships with them. Start by joining the UTM Physics Club. Go to the Erindale Chemical & Physical Sciences Society’s Meet the Prof Night.
- Visit the UTM Library Reference Desk.
- 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.

**BUILD A GLOBAL MINDSET**

- 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**

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

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

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**Tips On How to Approach a Professor**

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).

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**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.**

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**Market your skills to employers. Get your resume critiqued at the CC.**

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**What’s your next step after undergrad?**

- Considering further education? Research application requirements, prepare for admission tests (LSAT, MCAT), and research funding options (OGS, NSERC) for graduate studies.
Skills developed in Physics

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: strong emphasis on lab work using state-of-the-art technology as well as advanced instrumentation and numerical computation.

Written & oral communication: explain complex concepts and theories to others, as well as clearly explain scientific research and write reports.

Research: define a problem; establish hypotheses; apply and integrate fundamental scientific principles; gather scientific data; and review scientific literature.

Problem-solving: see relationships among factors; analyze data; and interpret observations.

Get involved

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

- UTM Physics Club
- 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.

Services that support you

- AccessAbility Resource Centre (AARC)
- Career Centre (CC)
- Centre for Student Engagement (CSE)
- Academic Counsellor, Department of Chemical & Physical Sciences
- 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 Chemical & Physical Sciences

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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. Your admission average is calculated using English plus your next best five courses. The Grade 12 prerequisites for Physics are Advanced Functions, Physics and Chemistry. The approximate average required for admission is mid- to high-70s. More information is available at utm.utoronto.ca/viewbook.

Note: During the application process, applicants will select the Chemical & Physical Sciences 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

Want to learn about the mysteries of Schrodinger’s cat and other quantum phenomena? Take JCP321 and then go even deeper with JCP421. You’ll never see the world the same way again!

Our students have access to new, state-of-the-art teaching laboratories and are involved in cutting-edge research projects in our research labs. Our physics equipment ranges from basic mechanic setups all the way to an atomic force microscope (AFM) that can achieve single atom resolution. We have an active undergraduate student club - the UTM Physics Club – to provide students with an opportunity for fun physics-based activities. To date, the main focus has been building a Tesla coil that will play music.

Student Recruitment & Admissions

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