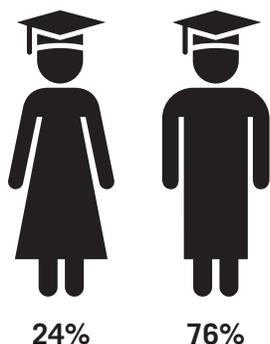


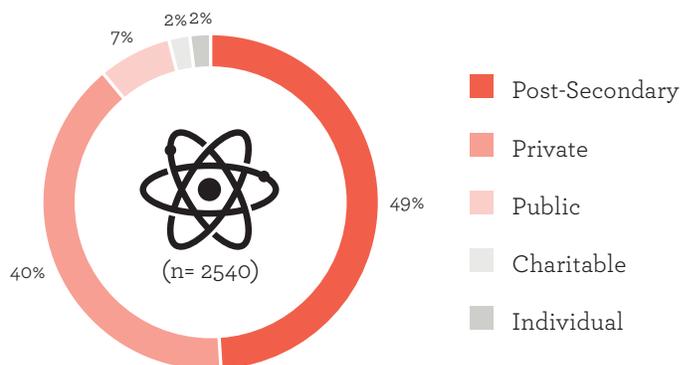
careerOUTLOOK: PHYSICAL SCIENCES

Aerospace Studies / Astronomy and Astrophysics / Biomaterials and Biomedical Engineering / Chemical Engineering and Applied Chemistry / Chemistry / Civil Engineering / Computer Science / Earth Sciences / Electrical and Computer Engineering / Geology / Materials Science and Engineering / Mathematics / Mechanical and Industrial Engineering / Physical and Environmental Sciences / Physics / Statistical Sciences

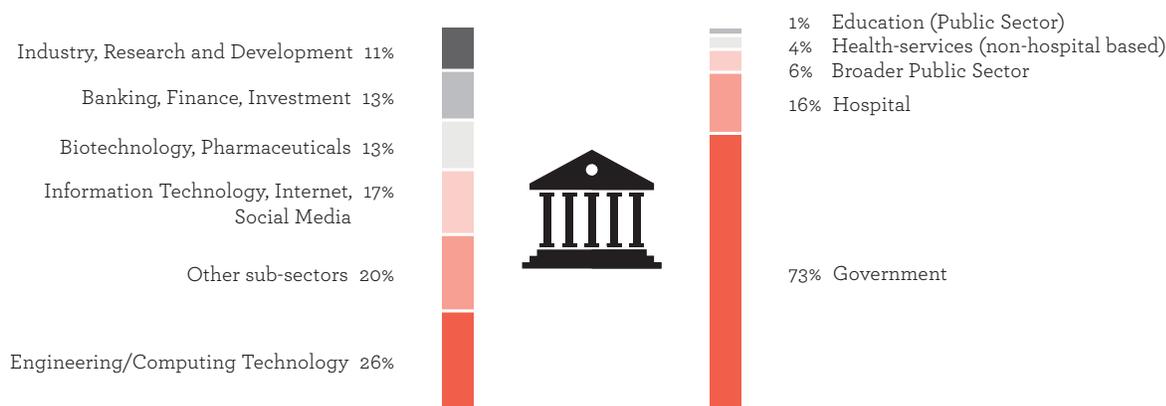
GENDER OF PhD GRADUATES



EMPLOYMENT SECTOR BREAKDOWN



PRIVATE AND PUBLIC SECTOR BREAKDOWNS



Looking for data specific to a department or graduate unit?

Wondering how the employment sectors are defined?

Explore the interactive 10,000 PhDs dashboard on the SGS website: uoft.me/10KPhDs

Employment data exclude the 12% of all found PhD graduates for whom an employment sector was unknown.

Departments listed under Physical Sciences reflect the status as of 2016. Gender identification for all PhDs in this study was determined by 2000-2015 data reported in University of Toronto Web Services (ROSI) records.



UNIVERSITY OF TORONTO
SCHOOL OF GRADUATE STUDIES

10K PHDS PROJECT

PHYSICAL SCIENCES PhDs AND THE 10,000 PhDs PROJECT: COMMONLY ASKED QUESTIONS

Where have Physical Sciences PhDs found employment?

The 10,000 PhDs Project affirms that employers in a broad range of employment sectors understand the value of a PhD in the Physical Sciences. As of 2016, **49% of the Physical Sciences PhDs** located by the 10,000 PhDs Project **found employment in Post-Secondary Education (PSE)**. Of the graduates who found employment in PSE, 53% held tenure or tenure-stream positions. Top university employers include the University of Toronto, York University, the University of Waterloo, and the University of British Columbia.

Forty percent of all found PhDs entered the Private Sector, where they were variously employed in many fields, including Banking/Finance/Investment, Pharmaceuticals, Computing Technology, R&D, Information Technology/Internet/Social Media, and Manufacturing. When comparing the employment outcomes of different cohorts, it can be observed that those who graduated between 2012 and 2015 were more likely to enter the private sector than their predecessors.

Just over 70% of PhDs who entered the Public Sector worked in Government as of 2016. Of those who entered the **Charitable Sector**, an equal number found employment in Research & Public Policy and in jobs related to the Environment.

Should I pursue a postdoctoral fellowship?

In the most recent cohorts of Physical Sciences PhDs (2012–2015), **24% of found graduates chose to pursue a postdoctoral fellowship**. Postdoctoral fellowships serve a very specific and critical

WHAT IS THE 10,000 PhDs PROJECT AT THE UNIVERSITY OF TORONTO?

The 10,000 PhDs Project, an initiative of the School of Graduate Studies at the University of Toronto, used Internet searches of open-access data sources such as official university and company websites to determine the current and/or first (2016) employment status of the 10,886 PhDs who graduated from U of T between 2000 and 2015 in all disciplines. The study successfully located 88% of PhD graduates.



“**I would say the take away for me would be that networking and making good acquaintances in desired industries will greatly improve a student’s chances of landing a job.”**

– U of T Alumnus (Physical Sciences PhD)

function in preparing for a career in academia. They give PhD graduates additional experience applying for grants, an opportunity to hone or expand research interests and skills, and time to author and publish papers. However, some recent research indicates that different work experiences might be more advantageous for those considering a non-academic career path.¹ For instance, PhD graduates interested in careers in industry may find greater benefits from internships or direct entry-level positions. These positions develop skills that may hold greater value in industry. They enable PhD graduates to explore a broader range of job options, determining a position’s “fit” before focusing on that career path. They may also offer higher salaries than postdoctoral fellowships.

What is in a job title?

In many cases, the work involved with each job title depends on the employer rather than upon a widely recognized standard. The best way to ensure that a particular title matches your career goals is to ask your advisor, talk to other faculty members, reach out to alumni working for the employer, and search career websites such as LinkedIn. Conducting informational interviews in a variety of job settings is also extremely useful during your career exploration stage, enabling you to understand more broadly how and where titles may vary.

¹ See H. Sauermann and M. Roach, “Why pursue the postdoc path?” *Science* 352, issue 6286 (2016): 663–664; S. Kahn and D. Ginther, “The impact of postdoctoral training on early careers in biomedicine.” *Nature Biotechnology* 35, no. 1 (2017): 90–94; Melanie V. Sinche, *Next Gen PhD: A Guide to Career Paths in Science* (Cambridge, MA: Harvard University Press, 2016).

YOUR INFORMATIONAL INTERVIEW: WHAT TO ASK?

- What career path did you take to get to this position?
- What are the most important skills you use in your work? How did you develop these?
- What do you wish you had learned that would be useful in your position today?
- What possibilities are there for advancing in this company/field/industry?
- How is your work-life balance?

TIP: On the day of your interview, follow up your meeting with a thank-you email. Include a LinkedIn invitation and ask any further questions.

“ PhD candidates/graduates should undertake interviews at as many diverse places as possible; what they find might surprise them.”

– U of T Alumna (Physical Sciences PhD)

BUILD YOUR PROFESSIONAL SKILLS

Graduate Centre for Academic Communication (GCAC) uoft.me/GCAC

Graduate Professional Skills Program (GPS) uoft.me/GPS

Career Exploration & Education studentlife.utoronto.ca/cc/grad-students

Milestones & Pathways Program teaching.artsci.utoronto.ca/fundingopportunities/mp/

START YOUR CAREER SEARCH

PhD Career Stories phdcareerstories.com

Chronicle of Higher Education chronicle.com

Insight Data Science Fellows Program insightdatascience.com

U of T Engineering Connect uoftengineeringconnect.ca

Troost Institute for Leadership Education in Engineering ilead.engineering.utoronto.ca

Troost iLEAD OPTIONS Program
gradstudies.engineering.utoronto.ca/research-degrees/theoptionsprogram

Graduate Engineering Career Fair
gradstudies.engineering.utoronto.ca/graduate-engineering-career-fair

Skule™ Alumni Outreach alumni.skule.ca

U of T CompSci Connect uoftcompsciconnect.ca

U of T Startup Accelerators entrepreneurs.utoronto.ca

BOOST YOUR CAREER POTENTIAL

- Connect with upper-year grad students to learn how they started their job search.
- Recognize and build upon your transferable skills (e.g. writing, data analysis, critical thinking, presentation, teaching). Register for GPS courses/workshops at uoft.me/GPS.
- Share your CV with your supervisor and peers to gather constructive feedback.
- Create a LinkedIn profile and get feedback from mentors and peers.
- Explore salary ranges and career trajectories from databases such as payscale.com or salary.com.