

Graduate Program in Biochemistry at McMaster University



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Why McMaster?



McMaster University

One of the top 3 Medical Universities in Canada

Consistently ranked 1st in research intensity in Canada

One of 4 Canadian Universities consistently ranked among the Top 100 World Universities

Mid-size university with a **strong critical mass** and **international presence**

Research infrastructure unique in Canada, competitive with many international centres of excellence

Campus is surrounded by green space, conservation land, outdoor activities

Why Biochemistry & Biomedical Sciences?



Excellent investment in research: over \$10 million annual research funding;
high success rate for student scholarships (more on this later...)

Strong in multiple areas of life sciences research (something for everyone)

Over \$60 million in infrastructure investments to faculty over the past 6 years

120 graduate students (50% PhD), great camaraderie, social network for all stages

Strong leadership, outstanding research, top-notch mentorship with oversight

National and International respect and reputation (great for career progression)

Outstanding success rate for external scholarships and fellowships

Research Centres and Institutes

Michael G. DeGroote Institute for Infectious Disease Research

Stem Cell and Cancer Research Institute

Farncombe Family Digestive Health Research Institute

- ranked #1 in Canada

McMaster Biophotonics Facility

- microscopy, high-content screening, cell sorting, fluorimetry

High Throughput Screening Laboratory

Centre for Microbial Chemical Biology

- \$20 million CFI investment, High-throughput screening, Informatics, Natural products chemistry, protein biochemistry, structural work

Canadian Centre for Electron Microscopy (CCEM)

-7 cutting-edge electron microscopes for structural biology

Program Information

M.Sc.

- Generally 2 years
- Laboratory-based research, working with faculty member
- 2 half-courses at the graduate level (tailored curriculum, generally 6-8 weeks)
- Committee meetings with graduate supervisory committee every 6 months
- Write and defend a thesis or take Transfer exam to reclassify to PhD program
- No TA responsibilities

Ph.D.

- Generally 4 years
- Lab-based research
- No course requirements
- Teaching experience through TAships
- Committee meetings every 12 months
- Comprehensive exam at 18-months into program
- Write and defend a thesis

Admission Information

Minimum requirement is B+ (8.5/12) in final 2 years of undergraduate study

Rotations versus direct entry to a specific lab: *what's right for you?*

Most of our students start in the Masters program

The Transfer exam is a way to fast-track the completion of your PhD

- transfer exam can be taken any time between 12-24 months after first enrollment
- allows for entry into the PhD program without completion of MSc

Direct-entry to the PhD program is an option

- reserved for students who already hold an MSc
- exceptional circumstances for outstanding candidates

Stipends and Scholarships

All students are guaranteed a stipend in graduate school

Currently: \$20,300 for MSc; \$23,500 for PhD

Outstanding support from external scholarships

(CIHR, NSERC, OGS, and private agencies CBC, CCFF, CCFC)

43% of our PhD students hold external scholarships

26% of our MSc students hold external scholarships

Total per annum: ~\$900,000



In-program Awards

Entrance bonuses:

First-class honours	\$2,500
OGS scholarship	\$4,000
CIHR or NSERC scholarship	\$6,500

In-program Awards:

Impact Awards:	\$3,000
	\$2,000
	\$1,000

Queen Elizabeth Scholarship: \$10,000

Karl Freeman Prize: \$500



BIOCHEMISTRY & BIOMEDICAL SCIENCES

2011-2012 GRADUATE STIPEND RATES

	½ TA 130 hrs	Dept Support	Visa Support	Faculty Top-Up	Faculty Support	AWARD	Total
MSc Base		\$5,000			\$15,300		\$20,300
PhD Base	\$5,122				\$18,378		\$23,500
MSc Visa		\$5,000	\$7,256		\$15,796		\$28,052
PhD Visa	\$5,122		\$7,256		\$18,874		\$31,252
MSc Overtime					\$15,300		\$15,300
PhD Overtime					\$18,378		\$18,378
MSc (Ontario Graduate Scholarship)		\$5,000		\$2,000	\$300	\$15,000	\$22,300
PhD (Ontario Graduate Scholarship)	\$5,122			\$2,000	\$3,378	\$15,000	\$25,500
MSc (NSERC)		\$2,800		\$2,000		\$17,500	\$22,300
PhD (NSERC)	\$5,122			\$2,000		\$21,000	\$28,122
PhD NCIC	\$5,122			\$2,000		\$21,500	\$28,622
PhD \$25,000+	\$5,122			\$2,000		\$25,000+	\$32,122+

Application Tips

1. **Get informed.** Talk to graduate students in the program you are interested in. Don't just talk to the professors. Ask the students how they feel about the program, graduate life, and the culture of their department or Institute.
2. **Work hard.** Grades count when you're applying to grad schools. Most outstanding grad programs accept only about 10-20% of applicants. Although most programs focus on your last 2 years of undergrad marks, they do look at your entire transcript and they're looking for consistency and upward momentum as you progress through your undergrad degree.
3. **Get the skills.** Don't shy away from the hard senior thesis courses. Many undergraduate programs require a lab-based senior thesis as a program requirement, but some don't. Your senior thesis is where you can distinguish yourself as a serious player in the field in the things that matter in grad school – hands-on research.

Application Tips (part 2)

4. **Get three outstanding letters of reference.** All graduate programs will require reference letters to accompany your application. It takes time to nurture a relationship with a potential referee and so start planning this early. The best letters come from people who can give an authoritative commentary on your skills and attributes and back it up with examples.
5. **Write a killer personal statement.** Almost all graduate applications require you to write a one-page personal statement or statement of interest. These statements not only inform the Admissions Committee about who you are and why you're applying, but its also a writing sample, so make sure you nail it. Being a great writer is an essential skill in scientific research – bad writers don't get scholarships, grants or their manuscripts reviewed. Spend a lot of time on the personal statement, making sure it truly reflects who you are and accurately depicts your intellectual plan and scientific interests. Philosophical musings, cute quotes by your favorite celebrity and sentences that start with "Ever since I was 6 years old..." should generally be avoided.

Contact information



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