

# Biochemistry Graduate Student Orientation 2021



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# Welcome!!!



# The Department of Biochemistry and Biomedical Sciences

- 27 full-time faculty members
- 20 associate members
- 8 joint members
- **~140 graduate students!**

**BBS Website:**

<https://healthsci.mcmaster.ca/biochem>

**Biochemistry Graduate Program Website:**

<https://biochemgraduateprogram.ca/>



**Dr. Brian Coombes**  
Chair



**Dr. Deborah Sloboda**  
Associate Chair,  
Research



**Dr. Caitlin Mullarkey**  
Associate Chair,  
Undergraduate Education



**Dr. Matthew S Miller**  
Associate Chair  
Assistant Dean  
Graduate Education



**Ms. Lisa Kush**  
Graduate Officer

**Ms. Nadia Butt**  
Graduate Administrative  
Assistant



# The Department of Biochemistry and Biomedical Sciences

The road to success in grad school starts **TODAY**

## First weeks

- Schedule a meeting with your supervisor to **discuss expectations** – yours and theirs!
- Get a clear idea of your project and do a deep dive into the literature – you need to quickly become the **world's leading expert** in your area
- Develop relationships with your colleagues (lab-mates, and other graduate students). You will need a strong support network



# Discussing Expectations with Your Supervisor

- **Failure to explicitly communicate expectations is the BIGGEST source of conflict in grad school**
  - Don't make assumptions about what your supervisor expects of you, and don't force your supervisor to make assumptions about your expectations for them

## Topics to Discuss

- Working hours
- Frequency of meetings
- Expectations around progress updates
- Policies on authorship/intellectual property
- Conference attendance
- Holidays/vacations
- Lab safety issues
- Lab mentorship structure
- Career/academic aspirations
- Course recommendations
- Supervisory committee members

## WHEN TO MEET WITH YOUR ADVISOR Is there ever a good time?

### Beginning of the week

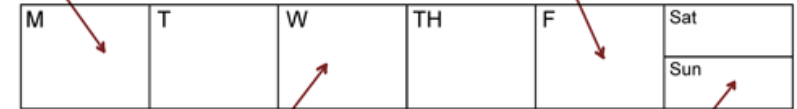
**Pro:** Get it over with quickly

**Con:** You have a guaranteed date with work on Sundays

### End of the week

**Pro:** You might actually have something to show by then.

**Con:** You might not (!)



### Mid-week

**Pro:** Good balance. Gives you time to work on feedback

**Con:** Your advisor will probably not show up (actually, this might be a pro)

### Saturday/Sunday

**Pro:** There is no "pro".

**Con:** Your advisor is a workaholic maniac. Good luck with that.

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# Discussing Expectations with Your Supervisor

## GETTING THE SUPERVISORY RELATIONSHIP OFF TO A GOOD START

▼  
A Template to Address Expectations for Graduate Students and their Supervisors

The School of Graduate Studies encourages open communication between the Supervisor and Student and has created this document to facilitate a discussion of expectations and responsibilities to help avoid conflicts. This document is designed to be completed by both the Student and the Supervisor at the beginning of the Student's graduate program. It can be jointly revised at any time, particularly when there are relevant changes to the Student's program, such as a new industry partnership or a change in scope, direction, or project funding.

### NOTES

- This document was modeled after policies and guidelines in use at other Canadian universities and based upon McMaster's Graduate Calendar, particularly section 2.7.1, Graduate Work Supervision Guidelines for Faculty and Students, which provides an important framework for understanding Supervisor and Student expectations and responsibilities.
- If the Student is co-supervised, all three parties should complete this document.

- The Student can typically expect a response from the Supervisor within:

*(time period, e.a., 1 week) for*



GRADUATE STUDIES

## Meetings and Communication

There are many types of meetings that Students and Supervisors might attend together (e.g., one-on-one, group, committee, etc.) and various modes of communication they might utilize (e.g., email, phone, face-to-face). This section refers specifically to one-on-one meetings focused on the Student's research and/or progress within their graduate program.

### The Supervisor and Student will arrange and attend regular meetings.

- The frequency and format of the meetings may vary, but typically meetings will be held:

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*(e.g., once a week, twice a month, etc.)*

- Generally, the length of meetings can be expected to be approximately \_\_\_\_\_ **minutes / hours** *(circle)*.
- The **Student / Supervisor / both** *(circle)* will be primarily responsible for recording notes (aka. meeting minutes) on topics and timelines discussed, as well as feedback given, at each meeting. <sup>1</sup>

Typically, the Supervisor's preferred method of regular communication is:

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*(e.g., face-to-face, email, etc.)*

*(type of work, e.a., emailed question)*

[https://gs.mcmaster.ca/app/uploads/2020/02/supervisory\\_relationshipjuly\\_222016.pdf](https://gs.mcmaster.ca/app/uploads/2020/02/supervisory_relationshipjuly_222016.pdf)



# The Department of Biochemistry and Biomedical Sciences

The road to success in grad school starts **TODAY**

## First months

- Select a **\*supervisory committee\*** (with input from your supervisor)
  - The members of this committee should be your **primary sources of support and advice** throughout your studies
  - First meeting must happen **within first 6 months** of enrollment
- Get momentum going on your project. **Revisit key literature regularly** as the depth of your knowledge increases. You will pick things up that you missed previously.



# Committee Meetings: What is Expected?

## Committee Meeting Report

- Due **at least 1 week** before meeting
- ~12-15 pages, double-spaced
- **Start early** – build in time for your supervisor to give you feedback
- Ask to see reports from senior members of the lab who have a history of success (supervisor can provide advice)

### FIRST REPORT

- Focus on background/rationale and research plan
- Outline early progress – show that you are building momentum
- Your committee reports will evolve as your progress through your studies. Later reports will be much more “data heavy”

**\*\*\*Write EXCELLENT reports. These should serve as a backbone for your thesis/publications. Great reports will save you TONS of time/energy later\*\*\***

## Committee Meeting

- Prepare 20-30 minute presentation that highlights key areas of report
- Highlight key issues for discussion
- **Your committee members are your allies** – the goal of these meetings should be to get excellent feedback to advance your project





# Your First Year

- Become the undisputed world's leading expert in your area of research
- Build a “data foundation”. By this stage your project should be on solid footing with clearly-defined future objectives
- Decide whether to defend MSc, or Transfer to PhD (by 18 months, at the latest)



# Courses

- Two 700-level courses required for MSc students
- At least 1 must be a Biochemistry course
- Good idea to plan 1 course/year
- No course requirements for PhD candidates

## **NEW 4 course core curriculum**

BIOCHEM 720: Scientific Communication (2<sup>nd</sup> year)

BIOCHEM 732: Writing for Science

BIOCHEM 733: Biomedical Commercialization and Entrepreneurship

BIOCHEM 734: Modern Techniques in the Biomedical Sciences (\*Anticipated 2022/23)



# MSc → PhD Transfer Process

- Transfer from MSc to PhD can be requested at 2<sup>nd</sup> (or 3<sup>rd</sup>) committee meeting
- Must receive unanimous approval from supervisory committee

## General Requirements

- Good/Excellent ratings on all committee meetings
- Must have convincingly demonstrated research excellence and capacity to succeed in PhD program
- Requires final approval by Assistant Dean – Biochemistry Graduate Program



# Department Seminars

## Biochemistry Graduate Student Seminar Series

*Mondays: 11:30-12:30*

## Biochemistry Departmental Seminar Series

*Tuesdays: 11:30-12:30*

I consider these seminar **MANDATORY** for graduate students (except in occasional exceptional circumstances).

**My most innovative science has come from attending seminars that have no obvious relationship to my area of research!**



# PhD Candidacy Exam

- Generally takes place 12 months after enrollment in the PhD program
- 10-page “CIHR-style” grant proposal focused on your PhD project
- This is meant to be a very difficult exercise. It will require extensive thought, editing and revision.
- **Get an example from you supervisor (and perhaps senior lab members who have done exceptionally well)**
- Get feedback on drafts from colleagues, supervisor
- BUT – must be YOUR original intellectual material
  
- ~15 minute presentation, followed by ~1.5h oral defense
- Supervisory committee + Chair (member of Graduate Curriculum Committee)
- Can ask about anything directly or peripherally-related to your proposal



# Managing Disappointment/Failure

- **Science is hard** – most of what you do will not work!
- Requires persistence and a positive attitude
- Develop “side projects”
- Surround yourself with positive people
- Remember that criticism is an essential part of science, but it is meant to make science better – **it is not personal!**



# Research/Academic Integrity

Above all else, science is concerned with the pursuit of truth.

Do not lose sight of this fact in the face of other pressures

Take time NOW to familiarize yourself with academic and research integrity policies:

Academic Integrity: <https://www.mcmaster.ca/academicintegrity/>

Research Integrity: <https://secretariat.mcmaster.ca/app/uploads/Research-Integrity-Policy.pdf>



# Important Resources

**Student Wellness:** <https://wellness.mcmaster.ca/>

Conselling and Medical Services: Student Centre (MUSC) B101

Wellness Education: MUSC B118

905-525-9140 x27700

- Counselling/Crisis Support/Wellness Education/Medical Care, etc.

**Student Accessibility Services:** <https://sas.mcmaster.ca/>

Student Centre (MUSC) B107

905-525-9140 x28652

- Academic accommodations for students with disabilities





# Important Resources

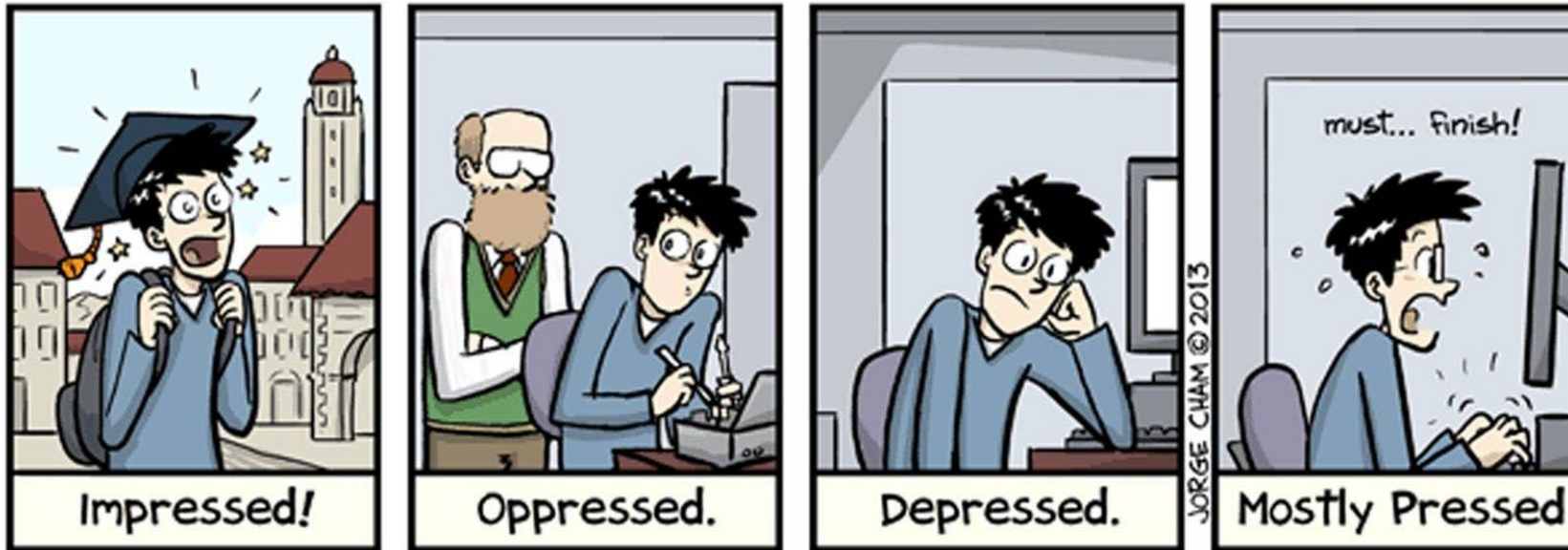
## Biochemistry Graduate Program Handbook

<https://biochemgraduateprogram.ca/wp-content/uploads/2021/08/BBS-Handbook-Final-Copy-.pdf>



# Have fun, work hard, do great things!!!

## Grad School:



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Department of Biochemistry  
& Biomedical Sciences