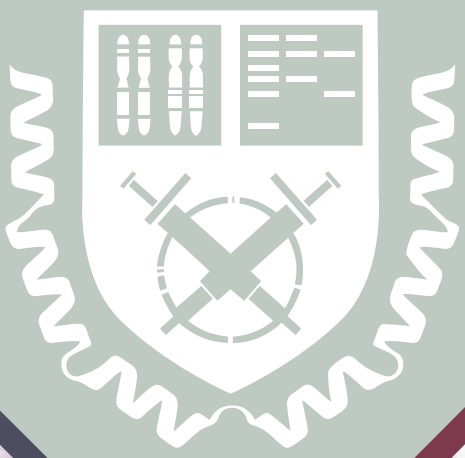
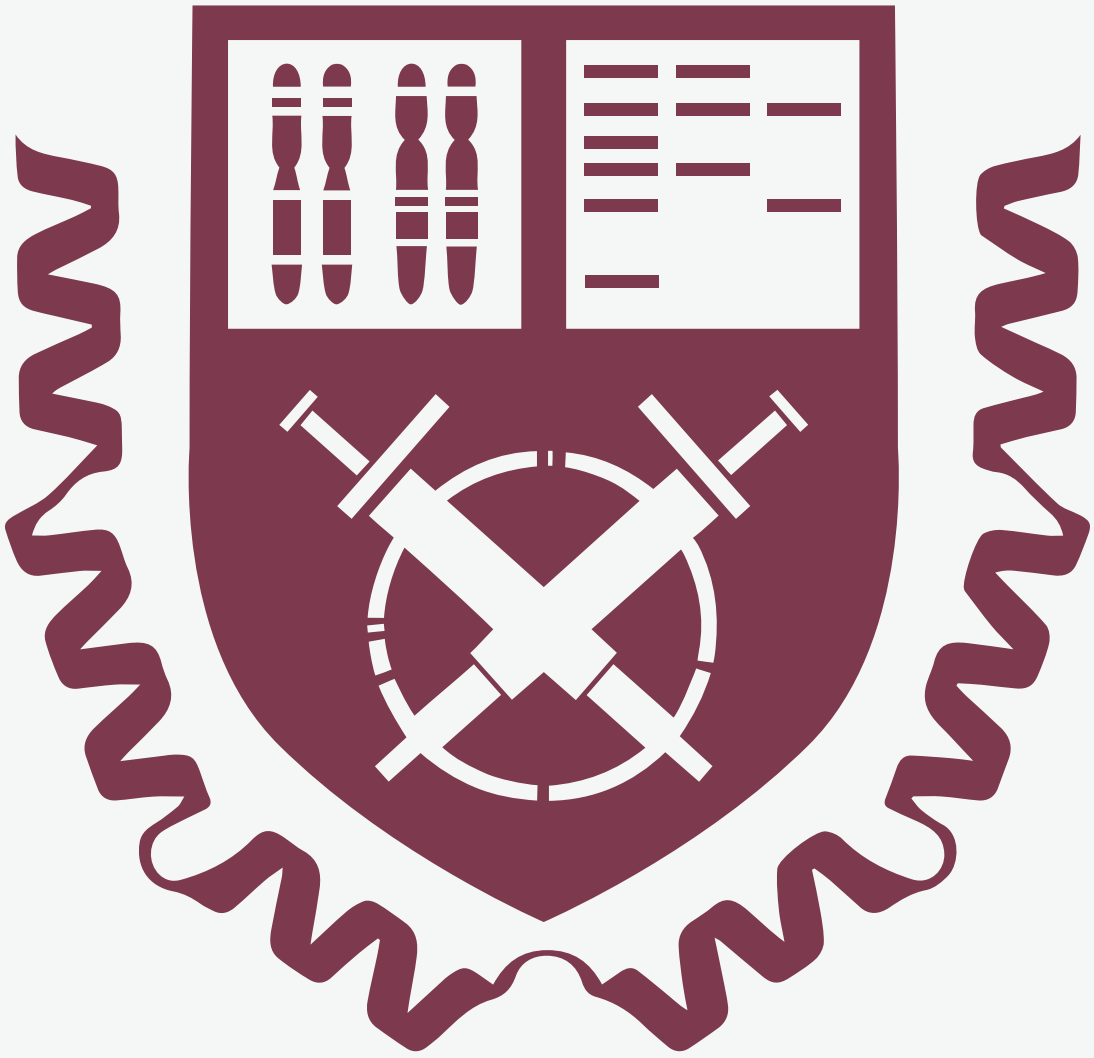
SECOND YEAR SURVIVAL GUIDE

2018 - 2019



McMASTER BIOCHEMISTRY & BIOMEDICAL SCIENCES SOCIETY



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Letter from VP Academics

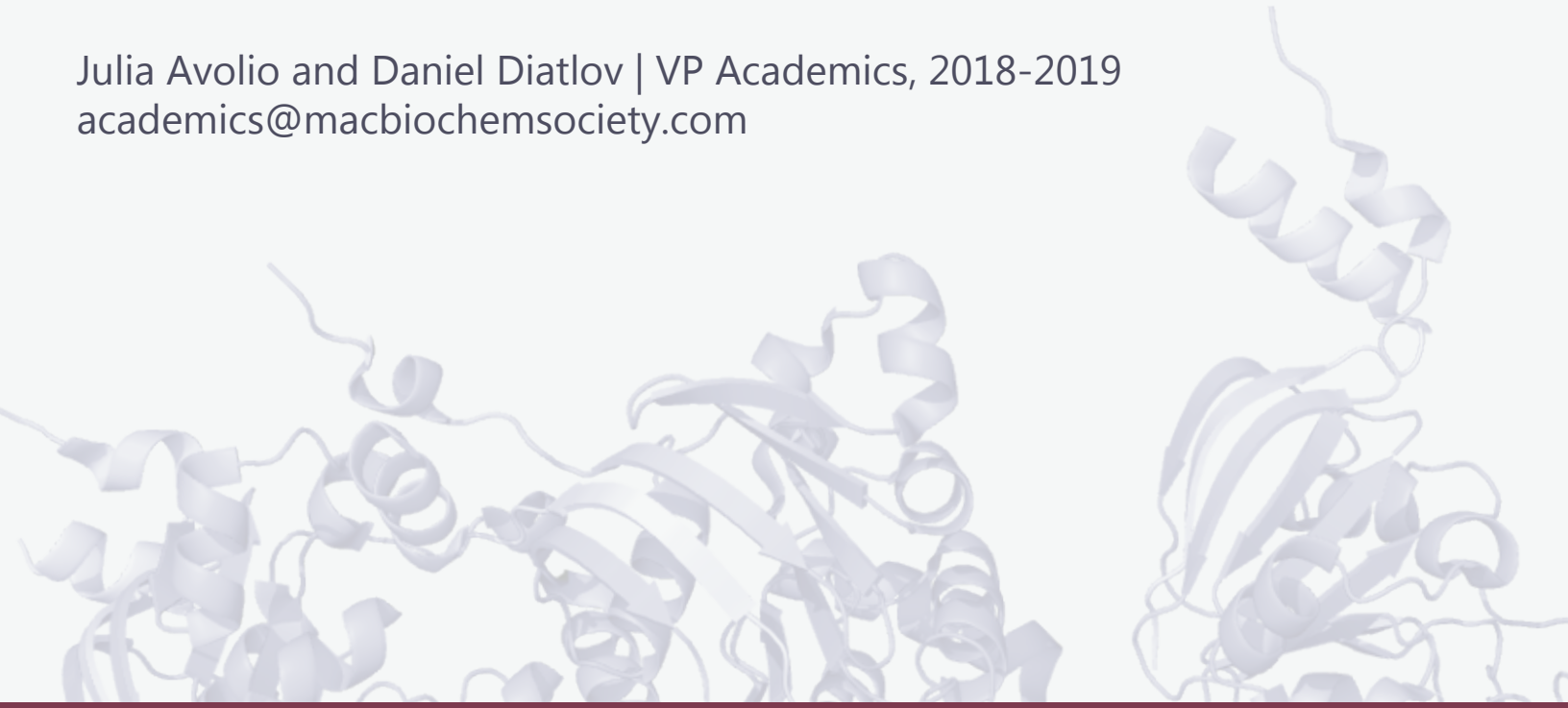
Dear incoming Biochemists,

Hello and welcome to the wonderful world of Biochemistry and Biomedical Sciences! We are your VP Academics, Julia and Daniel, and we are so excited to help guide you through the program this year. Entering into a new program can be scary, stressful and challenging. But not to worry, we have compiled for you your very own Survival Guide to help ease you into the program. This includes things like a list of events BBSS has planned for you, quotes from our upper year friends and research opportunities in Biochemistry!

We are committed to providing you with a safe and welcoming learning environment to help you reach your full potential. This upcoming school year will present you with challenges and opportunities for growth. We are here for you every step of the way and can't wait to watch you all achieve both your academic and personal goals.

Here's to a great year!

Julia Avolio and Daniel Diatlov | VP Academics, 2018-2019
academics@macbiochemsociety.com



Keep in touch!

Website: macbiochemsociety.com

Facebook: macBBSS

Instagram: macBBSS

Snapchat: macBBSS

Email: academics@macbiochemistry.com

BBSS Events

The following are events that the Biochemistry & Biomedical Sciences Society Plans to host throughout the 2018-2019 school year. This is by no means a comprehensive list, and we don't want to give away too much just yet, but here's a sneak peak:

Keeping Up with the BBS Department

Undergrad and Graduate Students will be updating various social media platforms with all the news and events from within the BBS department (see previous page for links).

Biochem Social - Billiards and Pizza

This is the first social of the year to get you started on an amazing Biochem journey! Drop by to catch up with old friends and make some new ones while playing billiards and eating pizza (because who doesn't like pizza)!

Brotein Campfire

A great event to release some stress and get to know your fellow mentees / mentors and other Biochemistry students (with all the joys of the outdoors and controlled fires)!

Annual BBSS Clothing Sale

Want to get decked out in the coolest BBSS merch? We've got you covered! With all the different selections we're sure that you'll find something you'll love.

Meet the Profs Night

This important event features various professors that are part of the BBS Department and is the perfect opportunity to network with professors who might become your research supervisors.

BBSS Events

Graduate Program Information Night

Looking into pursuing graduate school after undergrad? Attend the BBS Department graduate program information night to learn more about what graduate school entails and whether this is an option you are interested in pursuing!

Careers Night

Want to learn more about where your degree can take you? Come to careers night and listen to what some amazing people did with their biomedical sciences degree!

Thesis Information Night

This event is focused on learning more about the process of applying for a thesis and what supervisors are looking for. If you're interested in a volunteer position, summer job, project, or a thesis course involving biomedical science research this night is perfect for you!

Biochemistry 2nd Year Social

Having a support system is extremely helpful and important. Come out to our 2nd year social to have fun while meeting like-minded individuals in your year!

Biochem Formal

Get dressed up and dance until your bonds dissociate at our annual Biochem Formal! The theme will be announced later during the year so keep an eye out for more information!

Keep up with our events by liking our Facebook page and visiting our website!

facebook.com/macBBSS
macbiochemsociety.com

Course Tips

BIOCHEM 2L06: Inquiry in Biomedical Techniques

Your lab group can become really close over the year - don't hesitate to spend time together outside of lab! Pay attention in lecture, as Felicia often discusses changes to the procedure or important information that could show up on quizzes. Do not be afraid to ask for help - the 2L06 staff are more than willing to assist you with almost any inquiry. If you are struggling with your workload for a good reason (ex: multiple midterms that week) and may need an extension, talk to Felicia - she is your professor, but is a truly understanding mentor.

Lab/Assignment/Tutorial Tips:

- Read the courseware before your first lab.
- Be familiar with the experiment prep and expected results prior to attending your lab section.
- Plan to complete presentations one to two weeks before your scheduled presentation date. Practice presenting as a group as much as possible.
- Arrive on time to labs to hear a quick breakdown of the lab, which recaps the key points from the manual and any changes to the protocol.
- Use your TA, they are one of your greatest assets.

Study Tips:

- Ask for additional feedback on assignments and take this into consideration when completing follow-up assignments.
- Consider studying in groups to discuss difficult concepts.

Course Tips

BIOCHEM 2B03: Nucleic Acid Structure and Function

The PowerPoint notes are sufficient and detailed, the textbook is not necessary but can be used for further clarification as needed.

Lab/Assignment/Tutorial Tips:

- Ensure that all group members have a good understanding of the paper prior to writing the report.
- Come prepared to your meetings with the TA to take advantage of their advice.

Study Tips

- Use mnemonics to help study, as this is a memorization-heavy course.
- Study for the midterms 2-2.5 weeks in advance.

BIOCHEM 2BB3: Protein Structure and Enzyme Function

Study the textbook and the notes before the weekly quizzes. Go over old quizzes as practice.

Lab/Assignment/Tutorial Tips:

- Do a quick review of concepts from the last few classes before each in-class quiz.
- Assignment marking can vary widely between TAs - ask your TA about what they are looking for and come prepared for TA meetings.
- Presentations require a lot of effort and cooperation, start early and meet with your group regularly.

Study Tips:

- Make sure to understand concepts prior to weekly quizzes, do not simply memorize content.
- Complete practice problems.

Course Tips

CHEM 2OA3 and 2OB3: Organic Chemistry I and II

Very content heavy course. Heavy use of the textbook (reading and completing practice questions) is considered key to doing well in this course. The textbook is very well written and contains helpful summaries of reactions and diagrams. Practice as many questions as possible and do not fall behind, as it is difficult to catch up.

Lab/Assignment/Tutorial Tips:

- Read the lab manual prior to lab to understand the main techniques you will be performing (i.e. general reactions and steps).
- Tutorials are optional, but worth going to for specific questions.
- Arrive on time for labs to hear what your TA is looking for in the lab report (if you miss it, the TA usually writes something down on the whiteboard).
- Work on the prelab questions and assignments with friends to understand the general concepts.

Study Tips:

- Try to skim each chapter before it is covered in class.
- Understanding a mechanism is better than memorizing it.
- Arrow pushing is a must-know skill.
- Textbook practice problems and integrated problems are incredibly helpful.
- Complete all tutorial problems, assignments, and old midterms as they are most indicative of midterm content and excellent practice.

Course Tips

BIOLOGY 2B03: Cell Biology

Take special notes of key proteins and their functions within the system. Application questions often test your knowledge of cell component relationships. Class notes and modules are suffcient to cover all tested information.

Lab/Assignment/Tutorial Tips:

- Make note of which tutorials are mandatory, but complete all assignments as they are often straightforward.
- Pace yourself while writing the essay (literature review).

Study Tips:

- Take concise notes of the online lecture modules - they're often convoluted and repetitive but can be simplified.

BIOLOGY 2C03: Genetics

Taking concise class notes throughout the course is worth the time, as they will help you prepare better for the midterm and exam.

Lab/Assignment/Tutorial Tips:

- Do a quick review of concepts from the last tutorial prior to each tutorial quiz.
- Tutorial assignment marking can vary widely between TAs - ask your TA about what they are looking for.
- Participate in tutorials.

Study Tips:

- Study well in advance for midterms and exams, make sure to understand practice problems from the lectures and tutorials as they may come up.

Course Tips

BIOCHEM 3R06 and BIOCHEM 3A03: Biochemical Research Practice

Although BIOCHEM 3R06 and 3A03 are third year courses, it is important to start thinking about whether you want to take these courses and to begin looking for a supervisor in second year. BIOCHEM 3R06 and BIOCHEM 3A03 are optional courses that give students the opportunity to obtain first-hand research experience by conducting a research project in a laboratory of a member of the Department of Biochemistry and Biomedical Sciences during the fall/winter or summer term. Note that as part of your degree in Biochemistry at McMaster, you are required to complete one of the following research courses: BIOCHEM 3A03, 3R06, 4C03, 4F09, 4R12, 4T15; however if you wish to complete research in your third year, we suggest that you contact professors whose work interests you in January or February.

BIOCHEM 3R06 spans two semesters and BIOCHEM 3A03 is one semester. For more information on BIOCHEM 3R06 and 3A03, refer to the undergraduate course calendar.

Explore more about the courses available in the BBS program!

Research Positions

Looking for a way to channel your biochemistry interests into hands-on experience or looking for a Biochem 3R06/3A03 supervisor? The Department of Biochemistry and Biomedical Sciences at McMaster has plenty of unique labs, with lots of opportunity for volunteer, thesis, and job positions. Here are some tips to keep in mind when you are setting out to live your dreams.

General Tips

Start early. Looking for a summer position? Start your search in early Winter semester. Whether you are interested in a research career or not, lab work (wet or dry) is a great learning opportunity.

Keep an open mind! Labs are more than meets the eye. You may have your eye set on a specific lab, but researching professors on the faculty webpage can direct you to others studying similar concepts.

Communicate with upper years. Contact past and/or current students from the labs you are interested in - most students won't mind sharing some tips to help you prepare for your interview (i.e. verify whether it is a dry or wet lab and explain what a typical day in the respective lab consists of).

Remember that a lab position is an opportunity. Respect your professors and your peers!

Don't limit yourself to just Biochemistry labs. There is lots of exciting work that goes on across the university!

Research Positions

The Email

Do's and Don'ts

DO introduce yourself. "I am a McMaster Biochemistry student entering year/Level ___". Explain the purpose of your email - are you inquiring about class? Looking for a specific position?
DON'T be intimidated, DO be honest. Remember that professors are people too. Try putting yourself into their position to gauge what they are looking for in a trainee or student position.
DO your research! Look for answers to some of your questions on the professor's lab website, for example.
DO check your spelling and grammar. Spellcheck over and over!

Why You're interested

Don't fake it! A nice sounding email might snag you an interview with a prof, but fake enthusiasm is always obvious. Professors care about sincerity - be concise, but don't be afraid to explain your interests!

Be sure to look into recent or current projects in the lab. Even if you don't bring them up in an email, it's good background knowledge.

Qualifications

Attach your CV. It doesn't have to be fancy - what matters is that you're displaying any prior relevant experience or qualifications. With that in mind, don't be afraid to seek out opportunities even if you don't have experience - curiosity and a drive to learn is often just as appealing to a professor.

Attach an unoffcial transcript. If you think it will strengthen your email, then go for it. If not, don't sweat it!

Research Positions

Further Correspondence

Don't hesitate to visit the professor in person. Try to schedule or plan this in advance. A sit down meeting for 15 minutes can often be more productive than a week of emailing!

Be persistent but not pesky! See above: professors are people too!

Don't get discouraged by non-replies or even rejection. You don't have to talk to just one prof or all of them - just the ones that interest you.

The Interview

Be calm

Don't be nervous! If a professor agreed to meet with you in person, they think you're worth their time. Some say getting the interview is the hardest part, so don't stress.

Don't be afraid to show your enthusiasm. Don't be a robot. Professors have put their blood, sweat and tears into their career, but it's because they love what they do and they want to see your passion too.

Be Respectful

Be polite! Address professors as "Dr. _____". You think your undergraduate degree is hard? Try doing a PhD. They worked hard for that title, so use it unless they tell you not to. Make sure you thank them for their time before you leave. Common courtesy.

Know Yourself

Be ready to learn. As an undergraduate student, learning is your greatest skill. Explain why you're excited for the opportunity!

Don't teach the teacher. You're not the expert; listening is just as important as talking.

Research Positions

With this information we hope that you're prepared to get out there and start your research in labs that interest you. If you have any lingering questions or just want to talk, don't hesitate to contact us (your VP Academics) at
academics@macbiochemsociety.com

Words of Wisdom

The following section of the guide includes anonymous tidbits of advice from upper year students in Biochemistry and Biomedical Sciences programs. While it is important to keep in mind that they reflect unique personal experiences and might not account for every situation, they do contain some wise words!

“Prior to entering Biochemistry, I didn’t know how such a program could prepare students for professional schools, industry, and research. Initially, I had no interest in the latter until September of second year, but am so glad to currently be working in a lab. So ... Explore! Research some of the professors at Mac and see what work makes you inspired.”
- Fourth Year Honours Biochemistry Student

“Biochemistry is research intensive but don’t fall into the trap of research stereotypes. Not all labs do the same work. Research in the Department of Biochemistry and Biomedical Sciences can be anything from bacterial models to X-ray crystallography, or from bioinformatics to stem cell biology - find labs that suit your interests!”
- Fourth Year Honours Biochemistry Student

“Don’t be intimidated or afraid to reach out to your peers in the program. Having a strong group of friends to study and do work with will be a great way to keep yourself accountable and effcient at getting through the workload. Also, don’t be afraid to reach out to upper years in the program for help if need be and remember to take time for yourself.”
- Third year Biomedical Discovery & Commercialization Student

“Don't be afraid to ask questions in 2L06, its very important to understand everything both for the course and for possible future courses.”
- Third year Biomedical Discovery & Commercialization Student

Words of Wisdom

“Your research supervisor does not have to be in Biochemistry & Biomedical Sciences; there are some researchers in other departments (Chemistry and Chemical Biology, Physics and Astronomy, etc.) that carry out interesting work.”
- Honours Biochemistry Biomedical Research Specialization Co-op Alumnus

“Start your summer job search early and know that co-op is a great opportunity that you should look into if interested.”
- Honours Biochemistry Biomedical Research Specialization Co-op Alumnus

“Be open to criticism and ask for help. Get feedback and have your friends keep you focused. Compartmentalize your work and overlap different course information so you can remember it better.”
- Third year Biomedical Discovery & Commercialization Student

“In comparison to first year (personally from Life Sciences), second year in Honours Biochemistry definitely came with a heavier workload. Through changing your mindset on how you approach problems and stress is one of the most liberating experiences you will encounter in second year. When things get tough, tell that voice that you can, instead of you can’t. Sometimes a change in perspective is all you need to get through your road-blocks.”
- Fourth Year Honours Biochemistry Student

“Think about what you are interested in, and then email, email, email! It’s definitely not as scary as you think. I didn’t think I wanted lab work until it was very late, but it’s never too early or too late to email professors about volunteer or 3R06 positions!!”
- Fourth Year Honours Biochemistry - Biomedical Research Specialization Student

Words of Wisdom

“UTILIZE YOUR BROTEIN! They are there to support you throughout the year. Also, working with groups of other biochem students is the key.”
- Fourth Year Biomedical Discovery & Commercialization Student

“’You miss 100% of the shots you don’t take’. I think second year students should understand the importance of working in a team. Courses in Biochem, like BIOCHEM 2L06, really emphasize group work and knowing how to work in a group is critical.”
- Biomedical Discovery & Commercialization Alumnus

“Don’t limit yourself to just Biochem, just one extra-curricular, or just one anything! You are powerful in many aspects and imprisoning yourself into studying will make you burn out!”
- Bachelor of Health Sciences - Biomedical Science Specialization Alumnus

“Do not panic at the beginning - it’s not as scary as it seems.”
- Fourth Year Biomedical Discovery and Commercialization Student

“Mentality makes all the difference. Build confidence in yourself, and it will be contagious. Failures are to be learned from and the worst case scenario most likely won’t be the end of the world.”
- Fourth Year Biomedical Discovery and Commercialization Student

“Take everything one step at a time. When you enter second year all the courses seem to hit you at once, but if you take things as they come, it’s not so scary.”
- Biomedical Discovery and Commercialization Alumnus

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