



ABEL Survival Guide

This document is intended to provide current students with information and explain to prospective students more about ABEL and the things we get up to. The document was inspired by a similar document created by the Dalziel-Weir Lab at Saint Mary's University.

Supervisor Responsibilities - You can expect me to:

- Provide a safe and respectful environment that welcomes scientists from all backgrounds, genders, and sexual orientations. Please talk to me if there are any issues.
- Provide you with the key tools and materials needed to complete your research successfully (i.e. equipment, consumable supplies, and training).
- Provide constructive feedback on all written documents for your thesis, presentations, and other scientific skills. I will normally try hard to turn around documents in less than a week, but in busy teaching times this may take longer. Most scientific writing goes through MANY drafts prior to submission, so plan accordingly.
- **I am always happy to meet up.** I expect to spend lots of one-on-one time helping you with your research directly (e.g. talking about data collection, analysis, teaching you a technique, talking about your writing or presentations). I normally have much more time for research in the summer, and much less from September to April due to teaching responsibilities. We have weekly lab meetings for the whole group in which you can update us on progress, ask questions, and troubleshoot problems. I will also meet individually with my students sometimes weekly, but also sometimes less often. Meeting frequency depends on your stage in your degree/project (lots at the beginning and end and less in the middle). Please please, please, provide me with whatever you need me to think about or read well BEFORE our individual meetings.
- I am eager to help your career move forward through the creation of reference letters about your excellent lab work habits and assist in applying for awards, graduate programs, etc. Please make sure you give me enough time (at least 2 weeks) in order to write the best reference letter for you!

Student Responsibilities - What we expect from you:

- Attend and participate in weekly lab meetings. Everyone is expected to present at a lab meeting once a semester, and this may involve activities such as presenting a research proposal or brainstorming about an experimental design, sharing and discussing recent results, practicing a talk, or getting feedback on a paper.
- Keep us up to date on your project, both the successes and the setbacks! Weekly lab meetings provide an excellent opportunity for you to update the lab on your progress, goals, and ask for assistance.
- Treat others in the lab with respect, consideration and kindness. Be a good colleague/lab member. This includes cleaning up after yourself in the lab and in the fish rooms, helping others in the lab learn techniques, providing feedback on your peer's written work or presentations when they request it, attending seminars and journal clubs and lending a hand with sampling and other people's research if you possibly can.
- Take care of your mental health! Ensure that you are eating well, drinking water, and taking breaks as needed. It is essential that all lab members take the time to rest and recharge to avoid burnout. Don't be afraid to ask for help if you are feeling overwhelmed and overworked as everyone in the lab is eager to help you succeed.
- Be proactive. Completing a thesis/project or a graduate degree is very different from completing an undergraduate course, as you are expected to be self-directed. We are here to mentor, but it is your project to complete. This includes reading papers on your research topic to further educate yourself on the subject. Your co-mentors or I will provide a list of papers to get you started but it is also your responsibility to use these as gateway papers and keep up with the scientific literature.
- Be a good communicator. If you don't ask us, we won't be able to help. Communicating with me and your lab-mates is especially important when it comes to fish care; if you are not able to perform your scheduled tasks, make sure to ask someone to fill in for you and let me and the lab manager know you won't be in. If you need help with a new procedure, or equipment you have never used before please ask! As well, make sure you are checking your email at least once a day as this is the main way we keep in touch and a way to keep everyone in the loop.
- Work on your project every week! Time management is essential. Successfully completing a grad degree requires at least 40 productive hours a week and an Honours project often requires at least 15-20 hours per week. Academic science is not a strictly 9-5 job, so there is some flexibility on when and where you work; this also means you often need to read papers, write and think outside of typical work hours. Try to follow through on self imposed deadlines and try not to do tasks at the last moment. Always try your best to be prepared for meetings and lab duties, including showing up on time.

- A few special timing things to keep in mind
 - Field Season – during the field season (April - October) you might need to work longer hours. For example, if you need to collect/experiment with reproductive round goby or plainfin midshipman these must be caught between May - August.
 - Please try not to plan your vacation time during the peak of the field season.
 - Please consult with me and the lab manager to ensure that your animals are well cared for during your vacation. Please know that we want you to take a vacation, as it is important to rest, relax and recharge the old batteries.
- ABELers represent the whole team wherever they go and you are expected to have professional and courteous manners with the public, with the scientific community, and with other lab members. All members of the lab are expected to dress appropriately and weather dependently for field work (eg. close toed shoes, rubber boots, life jackets, safety vests) and also business casual is recommended for professional meetings.
- All ABEL members are encouraged to work on their scientific communication skills through presentations, writing, and outreach programming. Thesis and grad students should attempt to go to a regional, national or international conference at least once a year.
- MSc/PhD students you should expect to write a project proposal in your first term. The goal of a proposal is to review the literature, find the ‘unknowns’ in the field, describe how your project addresses these unknowns and provide a realistic experimental plan about how you plan to conduct your research and answer the outstanding questions. Proposals often change throughout a degree and we often don’t accomplish all we originally set out to do. The proposal also often serves as the example of writing required for your first progress report (May 15th).
- If you are a graduate student, you will need to have a committee meeting at least once a year; but please meet and talk individually with your committee members often.
- Keep on track about what is required of you to graduate and do well in your classes. It is your job to plan committee meetings, fill out forms, pass them along to your supervisor etc. For more information visit:
https://wikis.mcmaster.ca/mediawiki/pnbgraduatehandbook/index.php?title=Main_Page
- Ask if you don’t know! This is critical for safety issues. For science questions, the best plan is to ask a fellow student for their advice, come up with a plan of what you’d propose to do, then ask me about this plan. Flex your troubleshooting muscles (a key thing you want to learn in graduate school).

Housekeeping – DATA:

- All electronic files including datasets, code, graphs and text as well as any other related work files should be backed up (regularly) and ideally in more than one location (eg. lab and home computer)! This can include Google Docs or Balshine Serve. There is nothing worse than losing your hard won data.
- Similarly all hard copies of data collected from videos, sound files photos, lab notebooks, or binders with datasheets need to remain in the lab after the student/trainee has left or the project is complete. Preserved samples should remain in the lab (or freezer) until the work is published.
- Upon the completion of your project or thesis all data, written files, figures, etc. must be uploaded to Balshine Serve with your name and year. This data is public domain and must be available.
 - A ReadMe file should always be included with instructions as to how to navigate your folder. An individual looking at your folder 10 years from now should have no issue understanding how to read your datasheets or where to find your writing.
- Be organized.
 - Clearly, and logically, label all lab boxes/tubes. Date, species, location and sample type must be noted so we can refer back to your lab book easily.
 - Ensure your lab book/files/code can be clearly read by someone else; a new student will likely need to continue your experiments/analyses and understand what you have done.
- We make our data available in data depositories such as DRYAD when we submit or publish (journal dependent). We strive to keep good records of all unpublished data including our analysis code and store this on Balshine Serve.