Weber Lab Guide

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(Very much adapted from Gina Baucom, Meg Duffy & others)

My general lab philosophy & some lab specifics

I am invested in your success. I define success as the ability to graduate or move to a new position; this broad definition indicates that I do not care what type of job or position you attain after spending time in my lab, simply that your time with me as an advisor or mentor has helped you advance your career.

I advise graduate students/post-docs/technicians/undergraduates slightly differently. The relative roles of each are somewhat different. Graduate students, for example, are in the graduate program, and need to make progress according to this program. Post-docs are working on (usually funded) aspects of the lab's work, and are responsible primarily for producing manuscripts and helping train grads/undergrads.

I want you to work hard while you are in the lab, but to most importantly to work efficiently. Try to hit the goals that we establish for your career without working more than 40 hours a week (more may be necessary if we are harvesting or doing an intense experiment). Have a life outside the lab, exercise, work on your happiness.

On the happiness front, everyone should take their vacation days during the year. Be sure to communicate with me when you would like to be gone for vacation and for how long, and give me at least 2 weeks notice for short trips (3-4 days) but a much longer head's up for longer trips (>4 days).

My mentorship/collaboration goals, i.e., what you can expect from me

In general, I see my job as one of advocacy -- I advocate on behalf of the graduate students within the department to ensure they can make progress. I write letters of reference for lab members. I help lab members get their work written up and published. I write grants to fund the lab. I clear the road so that you can get your work done.

I create a scientific atmosphere ripe for learning, but I won't teach you everything you need to know. This is because each project will need something slightly different, and I am not all-knowing, nor do I want to be an expert in everything. This is why you are in the lab!! If there is something you need to learn that is not in my wheelhouse, I will point you in the right direction so that you can get there on your own.

I try to meet with everyone doing an independent project individually *each week* for 30 mins to an hour to catch up on scientific progress. This isn't always possible when I'm teaching a new or large course, and for those weeks you may have to be resourceful in my absence. Other ways to get feedback from me are during lab group meeting and via email, which I am generally good responding to (unless the issue is not super critical, and I am under the gun getting something else finished).

I will help you edit and prepare grants, dissertation chapters, posters, and talks. I generally return drafts of papers within 3-7 days. Unless I specifically say so, I will want to see everything before it is submitted, no matter how minor (conference abstract, poster, paper, grant, etc) -- this helps me maintain quality and helps ensure our success rate.

With regards to feedback: I will be direct with you when I find areas that need improvement. I tend to be pretty clear with my expectations. If you don't hear from me, it is because I think you are making progress. If I determine that there are performance issues, I will develop a performance improvement plan, and expect weekly and monthly improvements following this rather specific feedback. This is relatively uncommon however. On the other hand, I will tell you when you have done a good job on the big things -- for example, we celebrate when a paper or grant is submitted or accepted, someone gets a job, or graduates, etc.

How to determine if you are making progress in the lab

Given that I do not give people daily, weekly, or even monthly progress reports, how is one to know if they are making solid progress? Again it depends on your position in the lab. If you are a graduate student, it is fairly clear -- are you developing research ideas, applying for grants to enact these plans, taking courses, collecting data, analyzing it, and writing up your results? This of course means that each person has to be individually guided and resourceful. Get used to being in charge of your own calendar.

The importance of being professional

There are a couple of important considerations inherent to your success in the lab: first, I am equally committed to the success of everyone in the lab. This means that I make an effort to treat everyone equitably. I do not want some people to feel as if they are less appreciated than others, and further, I want to ensure that lab members do not harbor resentment toward one another -- such a scenario can hurt morale and collaboration within the lab. Second, I value a professional lab atmosphere, which I believe to be crucial to overall lab success. I don't mean to suggest we have to dress a particular way or make sure we never let an F-bomb slip. I mean we interact with one another in a professional manner -- no gossiping, especially the unkind sort; no projecting bad moods on one another; respect healthy colleague-colleague & mentor/boss-advisee/employee boundaries.

While I *do* want to know if you are dealing with a medical condition (physical or mental, or negotiating family problems), and may need to have time off to effectively get things under control, I do not overstep boundaries and pry into your private life. Further, while I care about your general overall health, I am not a trained psychologist or life-coach. My advice on these fronts will be flawed. If you are struggling with general malaise regarding getting your work done, or a mental/emotional block with regards to your work, then you likely need life coaching or counseling, and it is <u>your</u> responsibility to set up and follow through with this. I will happily point you to the appropriate university-related people that CAN help in this way.

Traits of the ideal lab member

Reprinted from the Baucom lab results, with permissions:

Communication	Professionalism	General qualities	General qual's, cont
Able to converse; don't bottle it up!	No victim-blaming others; figure it out, personal accountability	Efficient & organized	Confident
Good social sense!	Independence	Cleanliness	Work hard!
Bridge-builder	Ethics & integrity	Collaborative	Imp: Work smart!
Patient	Not bogged down by hurdles	Keep It Simple	
	Play well in sandbox	Enthusiastic!	
	Understand/respect boundaries	Resourceful	

How does the lab run day to day? A specific guide for Baucom lab members

General Lab Information:

We want everyone in the lab to be excited about their research project and to understand what we do and why we do it. If you're ever unsure about why something is being done (or why it's being done in a particular way), PLEASE ASK! Ideally, you should ask right away. But, if you realize later that you are confused, asking later is better than not asking at all. We have a great lab group, and people are always willing to help each other out and to answer questions.

If there is a true emergency (e.g., fire, serious injury, etc.), call 911, then call J Weber's cell phone if possible. If there is a lab emergency (e.g., the lab is unusually hot, there's a mysterious puddle on the floor, an environmental chamber is misbehaving), call or text J Weber. If it's an emergency, call at any time. But if it's not an emergency, please do not call or text between 9PM and 7AM!

Safety: There are signs on the lab doors that tell you about safety equipment and regulations. The lab also contains the Material Safety Data Sheets (MSDSs) for all the chemicals in the lab.

Lab Policies:

Data: (Thou shalt not be careless with thine data!)

- All data must be backed up.

- Data should be entered into Excel (and proofed) routinely (aim for daily).
  All computer files (e.g., Excel files, Word documents) should be backed up regularly (at least weekly). Backups should be stored in a location different than where the computer is (generally I have a hard drive for data-intensive projects, check with J Weber). When you use google docs, the spreadsheet is automatically backed up.

- Include metadata along with your datafiles. What is metadata? It is the data about the data. For example, it might be a text file explaining what data is contained in each of the csv files, and which R scripts go along with those data. For Excel, you can open a new tab and include info about each abbreviation, type of data, sources, etc. Basically ANYTHING that is not obvious to a new viewer.

Field work:

- Try to have a buddy when you go into the field! Be conscientious about your surroundings (for example, along roadsides); let me know where you are working each day.

- Wear sunscreen and dress appropriately. Don't forget to have plenty of water and food. If you are taking undergraduates out into the field, you are responsible for their safety!!

Lab notebooks:

- Lab notebooks (hard copy data/notes) must stay in the lab at all times (including after you finish working in the lab). Lab notebooks should never leave the lab! If you need a copy of information (e.g., to enter data at home), this is a great opportunity to scan it or take a photo of the relevant pages.

- Write details for everything you do, and keep things organized. Write lots of details — you can never have too many details and you will remember much less 6 months from now than you think you will! This will help you a lot when you work on your end-of-semester writeup. It will also help everyone later if we need to go back and figure out a specific detail regarding what was done. You should write enough information that we can reproduce what you did without needing to send you any emails. Always write more

information than you think you need to write! We've never looked back at an old lab notebook and thought, "Wow, I wish they'd written less." We have definitely looked back at an old lab notebook and thought, "Wow, I wish they'd written more."

- Never go back and change anything in your lab notebook at a later date.

- Don't leave blank spaces – if you accidentally skip a page, draw a cross through it.

- Staple attachments in to the lab notebook

- If you make a mistake (and we all do at some point!), please write details in the lab notebook and notify your mentor. We have all made mistakes. The most important thing is that we acknowledge them, so that we can take that into account when continuing with the study and when looking at the data.

- Related to the above: we all build on each other's data. That means that it is very important for you to collect data carefully and to record notes carefully, and to note when mistakes are made. If you have any concerns about data collection, procedures, or anything else, please ask! Keep an open mind when collecting data. If you see something you didn't expect, record the data and then tell someone else about it. These observations can lead to really cool projects!

End-of-semester information (mostly for undergraduates):

- All students working on an independent research project should write up a summary of their semester's work at the end of the semester. This should include a brief introduction to the project, a methods section describing what you did (please be detailed!), a results section, and a brief discussion/conclusions section. You must get a draft of this to your mentor at least two weeks before the end of the semester.

- IF you are doing a research project: please make sure you communicate with me well ahead of any deadlines. At a minimum, you must get a first draft of your research abstract to your mentor two weeks before it is due. You must also get a draft of your poster to your mentor two weeks before it is due. You must write your own first draft — this must be entirely your work! Your mentor will then help you with editing your abstract and poster. Expect to go back and forth several times — this is completely normal and an important part of developing scientific writing and presentation skills.

For Lab Members

(Adapted from Pat Schloss)

General expectations

- Effort
  - Hard to be successful treating this as a 40-hour week job with paid vacation and benefits
  - Being present 40 hours isn't the same as working 40 hours
  - If you are not passionate about what you are doing, we need to talk
  - Be your own worst critic
  - Seek to improve yourself without feeling the need to compete against your colleagues
- Research
  - I have a zero tolerance policy towards plagiarism and data fabrication
  - Give me updates on your effort, plans for project, and progress towards achieving long term goals
  - Consider presenting data at conferences
  - Search for potentially apply for funding that is available for research and travel
- Reading
  - Papers as assigned by me and independently as associated with your research project
- Writing
  - If you are doing a research project, it is never too early to start writing
  - Try starting with 300+ new words per day or week
  - Doesn't matter what the topic is, just write
- Citizenship
  - Share your "life hacks" with other members of the lab
  - Give information about career development opportunities as you learn of them
  - Provide support to colleagues in the lab by reading drafts, engaging in discussions, and being a positive influence
  - Acknowledge and build off the work of others in the lab
- Lab meetings
  - Research / chalk talk / journal club format
  - Papers for journal club should be sent out the Friday before lab meeting
  - All people are expected to read the paper before lab meeting.
- Seminars
  - Practice talk with me and lab
  - Practice talk with your colleagues

Specific expectations

Me

- I promise to give a damn
- Fight like hell to keep funding
- Review drafts within a timely manner
- Make room on my schedule to meet with you as needed; and will make room for a weekly meeting if needed.
- Give information about career development and funding opportunities as I learn of them
- Be your advocate
- Nominate you for awards as appropriate
- Support you to attend conferences as you have data and is logistically feasible (funding, etc)
- Direct you along a project that is capable of generating papers, and liberally offer authorship to research staff
- Be enthusiastic about your project
- Protect confidences and will not discuss you with any other students. I may seek mentoring advice from people I respect and will always do so with your best interest in mind
- Do my best to maintain a team of scientists that is demographically and scientifically diverse
- If you think that I have broken these promises, then you have the right to call me on it.

Graduate students

- Obtain at least a B in each of your courses
- Develop the concepts for your proposal with me, but write it independently of me
- Investigate and apply for appropriate funding opportunities.
- Look for opportunities to mentor undergraduates.
- By the time you defend, you should be the smartest person in the room on your topic
- You have my priority
- Communicate your career goals to me as they develop