Mentoring Philosophy - Patrick Holland

One of my main goals is to foster an environment in the research group where mentoring happens organically in all directions, with all group members supporting one another in various ways according to their capabilities and needs. We are a team, dependent on one another for our safety, support, and growth, which requires that we prioritize the needs of the group. At the same time, we are each striving toward achievement and taking ownership, which requires personal responsibility. This can cause a natural tension that we all negotiate through good communication and consistent feedback.

I put a high value on feedback. For example, I have one-on-one meetings with students after they present group meetings to go over presentation style, research progress, and long-term goals; in addition, I encourage all students to discuss their Individual Development Plan and career goals with me at least once per year. Each New Year’s, I give each student formal written feedback (typically 2 pages or so) on areas such as Lab Skills, Responsiveness, Curiosity, Presentations, Writing, Participation, Work Ethic, Teaching/Mentoring, Taking Charge of Project, Following Through on Plans, and Safety.

Feedback goes in the other direction too: each student fills out an annual survey whose results are anonymized and delivered to me as feedback. The goal of this anonymous survey is to empower my students to help me improve the group policies and to correct my own behavior. We also have "safety moments" and group business at the beginning of group meetings, where people can suggest improvements in how the lab works. Constant improvement is a central principle that I hope my students incorporate into their approach to science (and life in general).

What students can expect from me:
• I will treat you with respect, and model professional behavior. I will follow all guidelines in Yale's Guide to Advising Processes.
• I will not require you to do things that do not help your project, the group, or your professional development. Saying "no" to me is OK.
• When it comes to your career choice, I will support you in whatever direction you want to go, and help you to find resources that maximize your opportunities.
• I will do my best to minimize unfairness and bias. (We all have implicit bias, though, and so you can help me by calling out times that I exhibit bias.)
• I will keep out of your personal life. I care about you, but I am careful to respect your boundaries. If you do want life advice, I'm happy to discuss, but only if you initiate it.
• I will provide guidance in research methods and strategies, and direction of your project. This guidance is typically very detailed at the beginning, and becomes less specific as time goes on, and I encourage more independence.
  • I provide oral feedback in subgroup meetings, which occur every 2-3 weeks, and after your group meeting presentations (every 4 months or so). We also discuss your project 1-on-1 more frequently, at a pace of your preference.
• I provide written feedback once per year, as mentioned above. Other written feedback comes through emails, with a frequency depending on what's going on.
• I assign an in-lab mentor (senior grad student or postdoc) to beginning students, and/or facilitate the formation of a mentor team when this is more effective.
• If you have questions, it is usually best to contact me via email. I will make time to respond to your needs as rapidly as possible.
• For very urgent matters, you can call me any time of the day or night and I will make time for you. For other priority issues, I will respond within 1 day. For drafts of papers or complicated issues, it might take up to a week. Please bug me if I let something slide by accident, or if I need to move it up my priority list to meet your needs.
• I aim to support your growth, in terms of education, scientific independence, writing ability, and experiences. This will sometimes involve critiques that are tough, but I will treat you with respect (see above).
• I will provide feedback on papers, assignments, and presentations, and help you to set goals. Typically, you decide upon these goals, with assistance from me.
• I will recognize your contributions through co-authorship on papers where you have had intellectual input. I typically establish this by asking all contributors.
• I will submit publications in a timely fashion, so that you get recognition for your efforts.
• I will recognize your contributions when I give talks on your research or write press releases, emphasizing your creativity and hard work. This continues after you are in our lab, because I want to support your continued career success.
• I will help guide you through the graduate school requirements. You are responsible for meeting the requirements, but I can help to interpret and give advice.
• With each qualifying exam or other degree requirement that is required to be your own work, I will provide feedback once during the writing process to help you, but limit myself to one time (so that the result truly represents your own work, for fairness' sake).
• I lead a group meeting on ethics once per year, which sets the stage for consistent reinforcement of ethics standards.
• I will purchase supplies and equipment needed for your research progress, and facilitate your access to resources inside or outside Yale that are needed.
• I will strive to protect your physical safety in lab, through regular discussions of safety ("safety moments"), purchase of protective equipment, and seeking other resources.
• I will use lab funds to support your attendance in at least one conference per year, once you have sufficient results to present in a poster or oral presentation. I will introduce you to leaders in the field, and provide whatever help possible with networking.
• I will regularly provide information on intellectually stimulating opportunities.
• I will be your advocate. If you have a problem, come and talk with me. I will do my best to help you solve it.
• I will support your stipend as long as you are making progress toward your degree/research.
• I will provide mentoring, career advice and support (recommendation letters, etc.) throughout your career, including the time after you are in the group, with no exceptions.
• I will update this document at the beginning of every calendar year, after receiving student input.
What I expect from students:

**Attitude**
- You must treat others (in the group and elsewhere, at all levels) with respect. There is zero tolerance for harassment or physical/verbal hostility.
- You should show passion for your project. Dedication is demonstrated through "project ownership:" you should be driving your project, with me as "advisor" rather than "boss."
- You should strive to meet deadlines, as a way of managing and motivating your research progress. You should play the primary role with enforcing your progress; it is not acceptable if I have to be the one enforcing your productivity.
- You should be open to constructive criticism and advice. The feedback you get from me, your colleagues in the lab, faculty, and others is intended to improve your scientific work.
- All of us can feel overwhelmed at times; if so, let me know how I can help. I understand that life gets tough sometimes, and you can have the space you need for your mental health.
- We have no fixed number of vacation days, because different students have different needs. In general, 2-3 weeks per year is reasonable. I ask that you be clear to me (and your labmates) when you will be away, by telling me ahead of time, by leaving an easy-to-interpret note on your desk, and by making sure that your group jobs will be covered in your absence.
- I have no fixed expectation of number of hours in lab. Students often want guidance though:
  - I do not have formal restraints on specific times to be in lab - do what works for you. However, (a) you must not handle anything potentially hazardous in the lab without someone else around, for safety reasons, and (b) you must have some time overlap in the offices with other group members and with me, to enable informal conversations that are an integral part of your development.
  - How much time a student needs to spend in lab is dependent on efficiency and many other factors. However, it is difficult to reach an acceptable level of productivity without spending 6 days per week working on your research, and some evenings. I do not specifically monitor this, and there will be variations in the amount of time and whether it is in lab or at home. This level of effort is needed for the success of your research, and keeps you focused so you can come up with the ideas to make your project work.
  - Your mental health is important, and you should pursue leisure activities that help you to recharge. I will give you the latitude to find your own balance of work and rest.
  - You can do whatever you need for your health, and I will not ask about personal health information.
  - If you are sick or hurt, do not come in - take care of yourself!

**Project**
- You must be honest, and get the details right. Your lab records and lab notebooks must be complete and backed up, and you must follow ethics standards.
- You need to take charge of your own project and your own career; I am here to help, but you have to accept responsibility for your own success and seek guidance and assistance everywhere you can find it. I will help you to identify these resources.
- You must keep up with the literature on your project - it is your responsibility. Also, do your part on the literature survey and turn in abstracts on time.
• You should have high standards in terms of purity and data analysis, and your project is dependent on this.
• You should keep me updated about research progress, to help me to promote your chemistry and to fulfill my obligations to funding agencies. Do not cancel meetings if you feel you have not made enough progress; these might be the most critical times to meet with a mentor.

In the Lab
• You must comply with safety regulations at all times, and look out for others' safety.
• Cleanliness is a part of safety and also respect for your labmates' time, and therefore you must pick up after yourself. If you see something amiss in the lab, pick it up, clean it up, or inform someone, but don't just let it go.
• Be respectful of lab equipment and maintain it carefully. This extends particularly to equipment that is shared with other groups, belongs to the department, or to collaborators.
• Group members should keep me informed about problems in the lab. If you break something expensive, tell me. Mistakes happen! It will help everyone if you admit it and we can get it repaired/replaced more quickly.
• Avoid haphazard construction of reaction/workup/measurement/sample prep setups. If the manipulation is likely to be done regularly, you will save time overall by making an intelligent, rational, reproducible setup and documenting it carefully in your notebook and/or elsewhere.
• Your time is worth a lot, so don’t be shy about buying equipment/glassware that will make you more efficient and/or productive.

Group Interactions
• Be aware of what others are doing in the lab, and discuss your chemistry, their chemistry, and other topics with them. In these discussion, drawing is essential for clarity and for practicing your scientific skills.
• You must be an active participant in group meetings and seminars relevant to your research project. Take notes. Ask questions.
• All group members are assigned group jobs, which help the lab to work smoothly. You must put a priority on these items, because everyone is dependent on you.

Communication
• I am a relatively informal person, and it is ok to call me "Pat," and bring up any topic you like.
• If you need help, please ask for it! It is ok to be uncertain.
• Though I am not more important than you, I have obligations to many students like you (and colleagues throughout the world) who also need me. Thus, I ask you to utilize my administrative assistant when possible (e.g. changes to my schedule, getting reimbursements, or "red tape"). I really want to spend time talking with you though - talking with students is the fun part of my job - you are not wasting my time when I am helping you!
• Please respond to queries from me and other group members promptly (within 1-2 days).
• When you need something from me (e.g. recommendation letters, drafts of papers, please give me at least a week, because I receive many such requests. Please do not assume I can read materials within a day or two, especially when I am traveling.
• You should be open, honest, and effective in communications with collaborators, and treat their requests with priority (as you would hope they treat your requests). When sending materials to spectroscopy collaborators, do not sacrifice sample quality for speed, and inform them about any possible impurities or other issues.
• Discuss policies on authorship with me before beginning any projects with collaborators. I will almost always be fine with this, but it is necessary to approach these with thought toward appropriate assignment of credit, and potential conflict with other collaborations.

Core values of Holland Group (from group discussion)
• Showing respect for others (group members, collaborators, etc.)
• Appreciation of others and their contributions (including favors, group jobs, etc.)
• Integrity, rigor, and getting the details right
• Having an optimistic attitude, seeing the positive side of things
• Displaying curiosity, and allowing others to be curious without negative judgment
• Flexibility and adaptability, treating others with compassion
• Being inclusive and valuing diversity
• Being responsible, and thinking of the good of the whole group
• Being organized
• Openness and sharing - collaborative environment with good communication
• Humility and honesty - everyone can be wrong, and admit it; be willing to apologize
• Critical thinking, and the ability to respectfully question each other (including Pat)
• Recognizing that everyone has a personal life
• Supporting others through mentorship and collaboration
• Looking out for one another, including a safe laboratory environment

Steps that we can remember to take
• Apologizing sincerely but without being self-deprecating
• Compartmentalizing frustration about research so that it does not harm your personal relationships
• Visit other offices to keep free flow of ideas/relationships
• Involving everyone in scientific questions, including beginners
• Beware that questioning fundamental goals of another's project can seem threatening (be sensitive to not belittling others' research)
• Thank others when they help you and when they display core values
• Value all voices in the conversation - assume the best of others
• Take part in conversations - be engaged
• However, when you're an expert, leave room for others to engage and/or use Socratic method
• Be sensitive to beginners' feeling that their questions are "dumb" and encourage them to participate
• Clean shared equipment and glassware promptly, don't leave a mess
• Recognize that your answer might not be the only answer (humility)

Principles through which bystanders can help support a respectful environment
• recognizing problems or discomfort, even low-stakes (signs of disrespect)
• interrupting problematic behavior
• offering support/validation
• strengthening community