

Collaboration agreement for graduate students

TTU Plant Ecophysiology Lab

PI: Nick Smith

This document is meant to compliment the lab policies and code of conduct, which can be found at <https://github.com/SmithEcophysLab/Policies>.

Broad Goals of the lab

We study how plant ecophysiology mediates feedbacks between terrestrial ecosystems and the global climate system. We use a combination of controlled environment, observational, and modeling approaches to better understand how plants respond and feed back to global change and use this improved understanding to build more reliable models for predicting the rate and magnitude of global change.

The lab consists of a team of investigators from postdocs, technicians, graduate students and undergraduate students that work in collaboration with each other, Principle Investigator (PI) Nick Smith, and the rest of the EcoHealth lab group (PIs: Natasja van Gestel and Dylan Schwilk). The current TTU Plant Ecophysiology Lab members and their contact can be found at smithecophyslab.com/people.

PI Smith's job is to define the broad theme of the lab's research, write grant proposals to fund the lab's work, promote the lab's science to the scientific and broader public community and to help mentees grow and succeed as scientific professionals.

Goals of this document

You are invited to join the group as a graduate student researcher! As a graduate student there are certain responsibilities that you have to ensure both your own and our lab's success, and reciprocal responsibilities that I have towards you. The purpose of this document is to list these responsibilities so that our expectations of each other are clear and agreed upon.

Commitments of the graduate student

- **Meet regularly with Nick** to keep him updated about the progress of your research, course work, and professional and career development. You should talk with him about new ideas that you have about your work and challenges you are facing so that he can advise you and help you address any issues. The typical expectation is that you and Nick will have weekly one-on-one meetings, but this can be increased as needed.
- **Work with Nick to develop a thesis/dissertation project.** This will include establishing a timeline for each phase of your work and sticking to it as much as possible. You should meet with Nick regularly to discuss research results and any pitfalls and meet the established goals and deadlines. Your degree requires that you produce a coherent body of research representing a contribution to your scientific field. You should work with Nick to ensure your research is proceeding towards this goal.
- **Acknowledge that you have the primary responsibility for the successful completion of your degree.** You must maintain a high level of professionalism, self-motivation, initiative, engagement, scientific curiosity, and ethical standards. Be informed of the policies, deadlines, and requirements of the graduate program, the graduate school, and

the university. This includes working with Nick to select a thesis committee. You should meet with this committee at least two times per year to discuss your progress to date and present outlook and receive advice and feedback from these individuals.

- **Respond to advice and constructive feedback.** The feedback you get from your colleagues, your committee members, your course instructor, and me is intended to help you. The scientific and academic spheres are full of feedback from reviewers, mentors, peers, critics, students, etc. Processing and responding to feedback can be emotionally difficult. Managing these emotions and responding effectively is a skill that can be developed through discussions with me and your other mentors. This skill is critical for all future career paths and must be worked on to improve.
- **Be an active, participating member of the lab.** You should be present in the lab during reasonably predictable hours to enable positive, spontaneous interactions with your lab mates. These spontaneous interactions can be some of the most valuable ones we have, and we want to maintain a comfortable, active environment that fosters this support and innovation. Be prepared for and participate actively in all research team and lab meetings.
- **Contribute to an environment that is safe, equitable, and inclusive.** This includes being respectful of a working collegially with all lab members. You should be an active and contributing members to all team efforts and collaborations and respect individual contributions.
- **Be responsive to email communications.** When Nick or lab members send you emails you should read and respond as appropriate in a reasonable amount of time. Nick may send emails outside of work hours, but he does not expect you to respond outside of work hours. If we need to negotiate other methods of effective communication, then please discuss this with Nick.
- **Acknowledge that your work schedule may not follow a “normal” job.** Your work may sometimes require non-traditional hours and your training may take different forms (course work, field work, conferences, and training workshops). If you are a Teaching Assistant within the department, you are expected to spend ~20 hours per week on your teaching duties, leaving the remaining of your work week (~20 hours) for your own course work and research. To be successful in graduate school, you will need to meet your responsibilities, including making sufficient progress on your research and degree plan. This should be done in ~40 hours per week. Because there is a lot to be done, you will need to work efficiently to make this happen. If you are struggling to meet your responsibilities and make progress towards your degree, Nick will work with you to develop skills and strategies for meeting these goals (or adjusting them as needed).
- **Set boundaries and take time off as needed.** There is nothing more important than your physical and mental health. You should prioritize these so that you can have a full and healthy life, and also because working efficiently requires that you are mentally and physically well, present, and ready to engage in deep thoughtful work. If you burn yourself out or work so hard that you cannot care for your well-being, then the quality of your work will suffer, requiring you to work more hours and create further burn-out. This is a lose-lose situation. Instead, you should monitor your physical and mental well-being, learn about what you need to care for yourself, and do those things. If you find yourself becoming burnt out, please talk with Nick so that we can strategize about the problem and take some time off to allow yourself to recuperate. Vacation time is not formally assigned or tracked. The guiding principle is that you should take off as much time as you

need to be well and have a full life, but not so much that it interferes with your ability to meet your requirements. The amount of vacation time is typically ~2 weeks per year, but can be flexible to meet your needs. You should communicate with Nick about time off in advance so that we can strategize around deadlines and your commitments to others. You are encouraged to take time off around holidays, as needed for your physical and mental health.

- **Maintain the highest standards of research ethics and open science.** You should maintain detailed, organized, and accurate research records. All tangible research materials are, by institutional policy, owned by the university and original copies of all notes and data should be kept in the lab following the completion of your degree. You may be afforded the opportunity to continue working on projects after your project is over, as necessary. You will also be expected to publish all data and code associated with your projects to open, freely available repositories. Nick will work with you to help you do this.
- **Publish your work.** You will be expected to write up your projects as manuscripts and submit them to peer-reviewed journals. Typically, each major thesis chapter will be written as a manuscript that can be individually submitted for publication. This, therefore, does not require much work beyond what is expected for the thesis document. For a Master's student, there should be at least one journal article submitted. For a PhD student, there should be at least three journal articles submitted.
- **Apply for career-advancing external funding opportunities.** Together, we will explore external funding opportunities (as available) – such as fellowships, dissertation competition awards, travel and/or training awards, etc. – that are awarded specifically to you to support your research. This expectation is meant to be helpful to you because seeking external support will help you (1) secure funding to support yourself, in case Nick is unsuccessful in his attempts at securing funding, (2) practice your scientific communication, (3) clarify and refine your ideas and research plans, and (4) demonstrate to future job prospects your experience with, commitment to, and hopefully success with, pursuing external funding. Being successful in acquiring external support is not required or expected, but you should be working towards this goal and trying your best.

Commitment of the research advisor (i.e., Nick)

- **I will make time to be available to you.** I will always set aside at least an hour a week for one-on-one meetings with you in addition to lab meetings. I will have an open-door policy where you can drop in any time you need support. However, my calendar frequently fills up with meetings, so you may need to ask to schedule additional meeting times if you need support outside of our standing meetings. I will make time outside of our meetings to offer other kinds of support, such as reviewing writing or other aspects of your work and providing feedback. I will be responsive to you via email - I will strive to always respond to an email from you within a day.
- **I will be committed to your research project.** I will help you design an independent project within the scope of my lab's research. I will work with you to generate ideas, interpret your data and contextualize it within a broader context, and support you in presenting your ideas and results.
- **I will help guide you through your graduate program.** I will be knowledgeable of the requirements and deadlines of your program and help you navigate this process. I will

help you select a dissertation committee and ensure that this committee meets at least annually to discuss your progress and future directions.

- **I will be responsive to feedback from you.** I will do my best to be flexible in my mentoring to meet your needs. I will work to understand your unique situation, strengths, and areas for improvement and mentor you accordingly. Everyone comes from different backgrounds and has different goals and constraints, and I will work hard to help you balance your unique situation with the high expectations of your graduate program. If there are ways that you think I can better support your growth and progress, please discuss them with me. My goal is to see that you succeed.
- **I will foster a lab environment that is supportive, safe, equitable, and inclusive.** I will follow lab policies that support these goals and not tolerate any behaviors by any lab members that are not in line with this culture. I will be open to feedback from you and all lab members about when these goals are not being met and suggestions for how to improve. The lab policies and code of conduct can be found here: <https://github.com/SmithEcophysLab/Policies>. These exist as a living document that will be regularly discussed by the lab group and adjust as needed.
- **I will work hard to provide financial resources to support your research and professional development.** To the best of my ability, I will provide the resources that you need for your research and to attend conferences. I will attempt, as funding allows, to send you to a major conference every year when you have material to present. I will also help you to identify and apply for travel fellowships to help pay for attending these conferences. Depending on funding, I will attempt to provide you with some teaching relief over summers. I will also support you in trying to obtain external funding.

Authorship guidelines

In general, the goal and intention of every project we are working on is to have the work ultimately published in a peer-reviewed academic journal.

In all cases, you will be the first (lead) author on the lab research teams you are leading and you will take primary responsibility for all of these roles. In most cases, Nick will be the last (corresponding) author, and he will work with you on conceptualization, methodology, and writing – review & editing.

Everyone who contributes to the project (including undergraduate students) will be given the appropriate opportunity and support to contribute to the project sufficiently to earn authorship on the resulting publication. Undergraduate students may leave the lab before the project is concluded. If they contributed substantially to the conceptualization, methodology, investigation, and/or analysis while they were in the lab, they will be included as authors as long as they read, provide feedback on, and approve a final version of the manuscript before submission (i.e., contribute to writing – review & editing).

The above are general guidelines, and of course exceptions can be made depending on circumstances. Sometimes you begin with a particular plan, and things change. It may be necessary to discuss roles during the project, especially if they are changing in a way that affects authorship. If you have any questions about how authorship is developing on a certain

project or feel that the roles are deviating from this general expectation, please let Nick know as soon as possible so that we can discuss it.

****The above has been adapted from documents by Dr. Lisa Limeri, as adapted from Dr. Doug Woodhams.****