

My Mentoring Philosophy and Guidelines/Recommendations for Students

I am a geologist with expertise in Earthquake Geology, Geomorphology, Quaternary Geology, Urban Hydrology, Geologic Hazards, and Geologic Mapping. Generally, I am interested in earth science problems with relevance to society and how humans interact with and influence landscape processes. I am intrigued by ideas outside of these areas too, but these are the topics that really excite my intellectual curiosity and I am most interested in mentoring students who would like to learn more about them.

My mentoring philosophy has been shaped by my experiences in academia and my outlook on life in general. I realize that a formally written document may seem a bit awkward at the beginning of what I believe should be a fluid and dynamic relationship, but as a student I also know that what is expected can be unclear and it may be valuable to have something to refer to. In this document I outline what I expect from a mentoring relationship and ideas for how to be successful in academia and elsewhere.

Establishing a mentoring relationship:

A mentoring relationship is more than general advising about classes. As a mentor I should get to know your goals as a student, but also about your goals in life and I should be able to help you achieve those goals. Thus, I encourage you to determine if my interests and expertise overlap with yours. To do this you may want to look at my curriculum vitae (CV) and see what research I've been involved with and of course you can make an appointment or stop by my office to talk about your interests. It may take a few meetings to determine if our interests mesh well.

Our Meetings

I believe it is important to have **regularly scheduled meetings**. These may be weekly or semi-weekly. I encourage informal meetings and quick office chats as well, but probably would not schedule more than two meetings per week. I encourage you to prompt our meetings by **emailing** me questions or topics you want to discuss so I can be better prepared to meet your needs.

Come to meetings prepared to talk about your ideas. Make a list of discussion points. Update me on all of your progress between our meetings and make sure we address all of your questions so I can help keep you moving forward. It is important to remember that I will probably be working with several students and on multiple projects at once. So it will be your responsibility to keep us on task during the meetings.

Your TO-DO list (My Expectations)

Communication - You should make sure to **communicate your expectations** to me. What do you want to accomplish this semester? What are your research goals? Do you want to continue on in academia? Do you have a job in industry in mind? By communicating your expectations I can help direct you towards resources that will you enable you to meet them.

Explore your interests – at the beginning of your career as an undergraduate or graduate student it is important to spend time exploring your interests and developing a strong technical knowledgebase. Obtaining a graduate degree does not preclude you from taking a different direction after graduation, but I think it would be preferable to find a research topic that really excites your interests during graduate school. If you are uncertain about your professional passions, I would suggest beginning your graduate education with a Master's degree. A Ph.D. should be an interesting and exploratory time in your life, but it will represent a significant chunk of time. A Ph.D. in geosciences is necessary to obtain a professorship or to obtain a high level research position where you can be your own boss and perhaps the boss of others while studying what you like. However, Ph.D. level employment opportunities come with much responsibility and usually little additional pay relative to a Master's degree. The MS in geosciences is very helpful for obtaining the professional skills necessary to become a highly respected geoscientist in industry or government. The MS degree will give you high earnings potential and will put you in a position of responsibility over your career.

Read papers – As you begin a research project it is very important to understand how your research fits into the body of knowledge in your scientific field. Eventually, you must be able to articulate how your research may further the science questions you are tackling. I also believe it is important to think about how your research might be applied towards societal questions. As our research questions begin to form it is our responsibility to seek out literature that will help us turn our research questions into science questions. I will probably suggest starting points for readings, but you should be seeking out additional readings and get me to read them as well. I expect you to read the papers I suggest and you should expect me to read your suggested papers. You may not understand all of the technical parts of each paper at first, but keep them as you will find them useful later. Reading quantities will vary greatly, but it is a good idea to read at least 2 papers (in detail) outside of class-assigned readings each week and probably you will have skimmed several others in finding the two more interesting papers.

Attend seminars and talks – We are privileged to have free access to numerous intellectually stimulating seminars and presentations every week in academia. These are a great way to broaden our knowledge base and explore our intellectual curiosities. As a student you should make sure to attend a minimum of one talk per week that is not part of your course schedule. Academia is a community and you will learn how to conduct yourself within academia by attending seminars. You may learn interesting and relevant things at seminars, but sometimes you may find them boring. However, you should never feel like you are wasting your time because you can always learn about presentation

styles (what to and not to do) and you can spend time networking with students and other professors.

Writing and reflection – For me I find that writing allows me to articulate my ideas best. Writing allows you to form complete ideas and provides a means for self reflection which can lead to more interesting science questions! I encourage students to reflect on papers that you have read, interesting ideas that you encounter in seminars, and to reflect on your own work. Take notes! I suggest using either single sheets of paper or small notebooks that are easy to transport so you won't feel put out by carrying around big notebooks all the time. Keep these notes and periodically go through your notes and distill any ideas that you think might help you move forward in your endeavors.

A coursework plan – I encourage students to tailor their coursework to their interests. Some classes will be necessary to build technical skill sets, quantitative ability, and methodologies, but others will be taken for curiosity and broader knowledge. Keep the number of courses per semester under control. Graduate level courses are much more demanding than undergrad courses and will require significant research projects each semester. It is a good idea to try and relate these course projects to either your thesis work or another topic that you may want to follow up on later. It is generally not a good idea to take more than 3 full courses per semester and I think 2 is an ideal amount. Keeping this in mind, it is best to complete course requirements early, thus you will have to balance coursework with research as you are starting out. Later, while writing your thesis, try to avoid taking more than 1 course at a time as you will need to spend extensive time on research and writing. Remember that coursework is important, but your education extends beyond formal courses to seminars, collaboration in your research, teaching experiences, and your own readings.

Stay healthy – Most things in graduate school will be done at a higher level of commitment than undergrad, so budget your time wisely. Avoid over committing your time and realize your limitations. You should remember to keep time set aside for communicating with friends and family, taking care of your personal needs, exercising, and resting. You know yourself and what parts of your personal life give you joy. Make sure you can participate in several of these activities each week to keep yourself happy. You are a person, not a machine and I understand this. There will be times of high stress, but try to keep relaxed using non-academic activities. After all, you should be in this field because you enjoy it, so make sure you continue to do so.

Progress: I expect that you will start to settle on a research topic by the second semester of our relationship. This way you will have made progress on collecting data before entering your second year of grad school and you can have a product for presentation in your third semester. This will enable a M.S. student to finish within 2-2.5 years and a Ph.D. student to get their first paper out by the end of their second year. **Writing and editing your first paper** will be difficult, I will help you through this process with lots of red ink and also some writing tips and examples. I will help you **attend professional meetings** at least by your second year of graduate school so you can begin to network, present your work, and begin to progress beyond our mentoring relationship. Your work

will be relevant to society and to the science community. Moreover, it is likely paid for by society, so it should be published! We will try to **publish all of our outcomes**. I also encourage you to **make the results available** to a wider audience via web page creation or other **outreach activities**. Getting research done often requires funding, so we will work on research proposals during your time as a graduate student. As you progress I will make an effort to get your in put on my proposals and I may encourage you to take the lead on some parts of the **proposals** as well as applying for additional sources of student funding.

My TODO List:

I will help you transition to your next endeavor in life be that a job, continuing in academia, or something else. I will write recommendations for you; I will seek out ideas and opportunities for you or advise you on your ideas. I will help you find teaching opportunities, I will help provide funding for your research, and I will participate in your research. My goal is to bring you to the level of collaborator. You will become an expert in your research, probably surpassing my knowledge in many parts of the research. So I will make it my responsibility to learn from your experiences. Also, if aspects of our relationship are not ideal or meeting all of your needs, I can help you find a second mentor so you can move forward. My main goal will be to ensure your success and wellbeing as a student and colleague.

Sincerely,

A handwritten signature in blue ink that reads "Nathan A. Toké" with a horizontal line extending to the right.