Graduate Researcher Guidelines and Expectations

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Welcome to graduate school and our research team. Most new graduate students wonder what is expected of them, and what should they can expect from their adviser and research team members. First, please read the Graduate Student Handbook and know all of the deadlines and forms on the Graduate School's website. Please read the Code of Student Life. Please read the information below, which outlines various aspects of our work together, obligations to one another, and the funding agency obligation. Please plan to discuss this information together, which can be a fun and rewarding experience; hence, thing of questions and items for such discussions.

Your research advisor is to help you choose a topic that is of interest to you and your advisor. Your advisor provides general knowledge about the topic, direction, advice, and use their experience to guide you in working on the project. Providing project advice includes guidance on project design, background information, writing, and data collection, analysis, and interpretation. Your advisor also works with you to improve your written, verbal presentations, coding, data analysis, and other aspects of professional development. The objective is to guide you in learning how to do 'good science' by conducting the research project. Your advisor typically serves as the project manager for the research project that provides funding for Graduate Research Assistantship (GRA), which means they have the responsibility of making sure that the project is completed within budget and on time; hence, the advisor serves as your direct supervisor for a student having a GRA. Therefore, please treat your advisor similar to supervisor by discussing with them any times periods you expect to not be regularly around the office.

Research

Planning and regular effort must occur to successfully complete a research project in a reasonable amount of time. Setting up a task schedule at the beginning of each semester can help accomplish your research goals *and* have time to write. Additionally, students find it useful to set up a weekly plan that includes both research and class work. Hence, I strongly suggest setting up an online Calendar (for example, Google Calendar) that students share with their advisor. Such a calendar is useful to blocking out time to focus on certain tasks. Your advisor can help identify reasonable goals for you to complete each semester and periodically revisit and adjust associated tasks, as necessary. These goals will serve as a guide to your progress. It is typically more important to focus on the habit of working on tasks for a specific time period regularly than obtaining specific goals since research project have many unplanned issues. Students have the responsibility to stay committed, on track, and contribute to a positive, collaborative, and innovative working environment. Here are some suggestions for planning your work and promoting your success:

- Become familiar with the project's background literature and computing resources during the first semester.
- Graduate school a full-time job with 20 hours per week average for Teaching Assistants (TA) or Research Assistants (RA) tasks and 20 hours per week average for classes (with room for time off and overtime), which includes reading/writing related to the project Thesis. Some weeks may be more demanding than others. Typically, toward the project end, you will be taking research credits, or continuing enrollment credits, meaning that you will be working full-time on your research project, which includes writing tasks.

Please note that while salary pay typically lists 20 hours per week; however, graduate school is a full-time position; hence, it is expected to be your only job and RA/TA devote the expect time. Not devoting the expect time is equivalent of "stealing" since you take something without giving what is expected!

- The duration of your TA is from 15 August to 15 May and includes several weeks when there are no classes. Additionally, RA can have an "overload" that include the summer. It is expected that you are available during the full appointment during regular work hours, except if you have made previous arrangements.
- Keep track of the time necessary for various tasks to enable planning.
- You should discuss working from school office and working from home with your advisor. Note some tasks require lab or field work.
- Be productive and work on agreed-upon goals to avoid any last-minute panic.
- Take regular breaks each hour but beware of distractions. Do not allow people to incessantly bother you.
- Start writing early in small amounts (as opposed to binge writing at the end) and be expect extensive amount of revision. Writing is a process that improve with revisions.
- Conduct important items first. For example, focus on some writing first thing in the work day to ensure some writing is completed. It may help to start with shorter lengths of time and increase as more writing is required.

Funding for your research project, unless you are told otherwise, is being provided by my sponsored research grant; typically, by a government agency, company or non-profit. Choosing a project that is within the scope of the grant funding, pending availability, means you are being paid to work on research and obtain a tuition waiver while earning a thesis or dissertation. You may be asked to help the team members with other tasks related to the grant. The tuition waiver is typically a direct charge to the grant, which is a benefit provided in addition to your salary.

Quality documentation is required for your research experiments (or field notes), what you accomplished, and what is learned. Documentation is part of good scientific practice and standards. Wiki Web pages are a great tool for creating such documentation. Strive for precise, complete, accurate, and organized records. Computer code that you create is best stored in an online repository. Your advisor, and other research team members, may periodically review research notes and software. Please follow the all expected guidelines, such as a programming guide.

Preparedness for research varies among incoming graduate students and your acceptance at the University of North Dakota does not automatically mean you are prepared to contribute to the research team. Deficiencies in needed undergraduate-level mathematics or computing courses will require completion in those courses during your first year at your cost. Typically, you are expected to take part in a weekly check-in or team meetings. You are expected to be prepared with your notes (paper or computer) for substantive discussion about relevant literature, your progress, ideas and interpretations, and so forth. Additionally, or are expected to have completed agree upon tasks. Your oral progress report should consist of, when appropriate: 1.) at least one significant accomplishment that you're ready to show, 2.) at least one question, 3.) next week's tasks related to the overall project goals and any schedule adjustments. More is expected from upper-level students. Some team meetings have formal research presentations from all team members. Not being prepared, or having complete tasks, may result in for-going the meeting, which delays project process. Repeated failure to completing tasks and being prepared for meeting may result in lost of your salary support.

Progress in your research, as reflected by preparedness at these meetings and in your writing, is important for success and graduation. As long as you are making reasonable progress and staying on track, you should be fine. Excellent preparedness and progress reflects in your thesis or dissertation grade and any future recommendation letters that your advisor may write for you. Unprepared students who are consistently unable to meet deadlines, who violate ethical standards, or who misuse grant funds will have their funding discontinued and asked to leave the research team. We want you to succeed so please let your advisor know if there are issues that are interfering with you ability to devote time to tasks or in getting work done.

Ethical behavior is expected. Unethical behaviors include: compromising or altering data, fabricating results, plagiarizing, correspondence with outside entities without copying your advisor, or failing to acknowledge important contributions, people, co-authors, and grants that made the research possible within written documents or formal posters and presentations. Fund numbers and sponsors should be acknowledged on all documents. You should also not share our team's intellectual property (tangible products or ideas) with another researcher without consent so as not to violate any ongoing agreements with existing collaborators, and any non-disclosure agreements. Finally, while it is possible for you to take a project started here to another institution or invite new collaborators, you should only do so with prior permission and involvement. If you are ever in any doubt, don't be afraid to ask for advice. The University of North Dakota has its own consequences for ethics violations.

Professionalism is something that we want you to develop while at the University. This professionalism includes always treating others, and their scientific ideas with respect, and tolerance (even if you disagree), being able to provide and receive constructive criticism, taking responsibility for your own actions and duties, a willingness to ask questions when you don't know the answer, and, helping others with reasonable tasks when asked. The class grades (AtSC-596/598/998/999) that you earn for your research hours or thesis or dissertation hours are based on the way you conduct your research and the progress on the project.

Digital Backups are expected for all research data resources, images, and report documents using a high speed, high capacity external hard drive. Your original copy might be on your personal computer, a cloud server (ask about this option), or another hard drive. Be prepared for another team member to delete the complete digital copy of your work a month before you finished (this has happened!); hence, have a backup. Before graduation, you are expected to have all software used in your Thesis in an online repository, and all data used to create Thesis figures with a Data Collection at University of North Dakota's library. These are required before final grades are issued or signing the final approval on your thesis or dissertation.

Office, Computer and Safety

Your office may be shared with one or more graduate students. You will be provided a key to the building with your office, and any classrooms where you are also a Teaching Assistant (TA). Your office contains a computer for you to do your research; however, you are welcome to also use a personal laptop. Another team member may occasionally need to login or use your desktop computer. Only use your desktop computer for university-accepted activities and grant-funded computers may only be used for research work. Additional computers are available in computer labs and may be accessed with your office key. Keep computing equipment secure. Safety is of utmost importance. In case you accidentally get locked out after business hours, call campus security and be ready to show your ID. Become familiar with campus security policies and how to stay safe. Call the 24-Hour UND Safety Escort at (701)-777-2591 if you feel unsafe walking across campus.

Publication

Sponsored grants likely require that the research results be widely disseminated in the form of conference presentations and formal publication. Writing a thesis or dissertation is required to graduate but is not enough to ensure renewed funding, survival of the research team, or the ability for you to get a good job. It is expect at least one formal publication ready to submit from your master research prior to graduation and at least two submitted and one ready to submit (3 total) from your PhD. Conference presentations do not count in this publication total. The research team helps you to make publications happen. If your paper has already passed the scrutiny of our peers in the larger scientific community, you will certainly be able to defend your thesis or dissertation. Types of student authorship include lead/first author and co-author. Your career benefits most from lead authorship. Authorship will depend largely upon how the ideas originated, who funded it, and how much help you needed from others to accomplish the work.

Intellectual Property (IP) is the ownership of ideas. IP can be owned, given away, and easily stolen. Who owns IP depends upon who conceived and/or created it and who funded it. You are encouraged to have stimulating intellectual discussions about your research with other at the University. However, unless you are self-funded or until you formally publish, consider ideas from our work to be the IP of this research group under the protective umbrella of the University. Consult your advisor before sharing our data, models, ideas, and results with others at a conference or by email. Please see the section above on ethical behavior regarding the protection of IP. If you are unsure, please ask.

Conference presentations are a wonderful opportunity for graduate students and are strongly encouraged. Typically, Research Assistance can attend at least one conference while during their Master Thesis research project, which is subject to appropriate progression of your work. Please apply for travel grants when available. Because short abstracts are required well in advance of a conference and often before the research is finished, the authorship is based upon the status of the overall project at the time that the abstract is due. First authors making satisfactory progress should prepare to present the research. If they are not ready one week before the conference, another author may present or the presentation will be withdrawn. If there are questions about conference presentations, please ask! Tell people what you need to succeed. We can go over issues several times. Your questions allow improvements of this document for future students. Remember, you are ultimately responsible for the timely and successful completion of your thesis or dissertation, but trying to help you achieve this goal is our highest priority. We expect that you will do an excellent job and hope that this process is fun and intellectually challenging! Everyone on the research team wants to see you succeed.

Review Acknowledgment

Please acknowledge that you have reviewed this document by using the Docusign system to complete the below signature and send a copy to your advisor.

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Signature Date