



Undergraduate Research Contract

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Welcome to my research program! This document outlines general guidelines for conducting research in geochemistry and petrology at Appalachian State University. Please read this document carefully, and if you have any questions, please come and see me. Otherwise, sign and date it, keep a copy for your records, and return the original to me.

Time Management – Yours and Mine

The time commitment to research is one of the most important issues you will face as an undergraduate researcher. For each credit hour of research you are signed up for, I will expect a minimum of 3 hours per week of work. Depending on the equipment you're using, this may translate to more than 3 hours per week per credit hour. Don't sign up for more credit hours than you will realistically have time for. We will develop a schedule at the beginning of each semester that will outline the deadlines and overall expectations for your particular research project. We will have weekly meetings to assess your progress and to make sure you have the tools you need to move forward in your work. Be sure to bring your notes so we can discuss what you've done during the last week, and make specific plans about what your work for the coming week should entail.

I expect that you will be able to budget your research time reasonably and work independently. As long as you are completing tasks on schedule and meeting your deadlines, I will not pay much attention to how you spend your time. If you are consistently unable to honor your deadlines and commitments, however, I will ask you to leave my research program.

I have an open door policy and you can normally interrupt me with questions at any time. However, I too have deadlines to meet and classes to prepare, so please keep this in mind. If your question isn't urgent, and can wait until our scheduled weekly meeting, you'll have my undivided attention and you'll likely get a more coherent answer.

Equipment

Much of the research you will be doing in geochemistry and petrology will require you to use petrographic microscopes, the SEM, and the laser ablation ICP-OES in the Chemistry Department. I expect that you will use these instruments with the utmost care and let me know *as soon as possible* if any of the equipment is malfunctioning. You will be fully trained in their use, and I expect that you will (eventually) be able to work independently on them.

It is imperative that you keep detailed lab and field notes. This is an integral part of your independent research training. Although it may seem repetitive and unimportant at times, it will help you write up your research methods at the end of your project (trust me, you will NOT be able to remember what you did six months later unless you have detailed notes). It will also help me after you leave – I often refer to my own lab and field notes many years later.

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Ideas, Authorship, and Intellectual Property

You will be an author on a published paper or abstract if you have provided a substantial portion of the work involved.

- First authorship on a paper indicates that you have put in the majority of the intellectual and physical effort, and have completed the project (including the writing of your final paper).
- First authorship on an abstract indicates that you have put in the majority of the intellectual and physical effort, and that you are making satisfactory progress towards finishing your research project and writing up your results.

If you completed some – but not the majority – of the work required for the research topic, you will either retain co-authorship or be acknowledged in the Acknowledgements section of the publication. If you don't finish a project, it means you haven't played the leading role in it, and you are not qualified to defend the research in front of a scientific audience.

Questions

If you have any questions about these or other topics, please don't hesitate to ask. There are no dumb questions, and if you need something explained for the millionth time, it's my job to explain it to you, so just ask!

Student Name: _____ (print)

Student Signature: _____

Date: _____