



Geosciences Graduate Student Handbook 2019-2020

Geosciences Graduate
Student Handbook
2019-2020

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I. Introduction

Purpose and scope of this Handbook

This Handbook provides graduate students in the Department of Geosciences with information about departmental policies, academics, support, and resources. It supplements the official policies of the Graduate School that apply to all Virginia Tech graduate students, as outlined in the **Graduate School Policies and Procedures (GSPP)**: http://www.graduateschool.vt.edu/graduate_catalog/

Graduate students are responsible for knowing and observing the policies outlined in this Handbook and the GSPP. Successful completion of degree requirements is solely the responsibility of the student, and each student is advised to read these documents and verify how specific regulations may apply to their particular situation.

Graduate Program Governance

Graduate student policies and procedures are created and administered by the Department's Graduate Student Affairs Committee (GSAC) with supervision and approval by the Department Head. Questions about the policies described in this Handbook should be referred to the Chair of the GSAC, any member of the GSAC, or to the administrative contact and student coordinator. The graduate student Liaison Committee is another avenue of communication between the graduate student body and faculty and administration. This committee consists of ~5 graduate students that meet several times a year and routinely communicate issues to the GSAC chair. Relevant contacts for the 2019-2020 academic year are:

- Director of Graduate Studies and Chair of GSAC: Dr. James Spotila
- GSAC Administrative Contact and Graduate Coordinator: Ms. April Newcomer
- GSAC Members: Dr. Tina Dura, Dr. Ben Gill, Dr. Scott King, Dr. Marc Michel
- Graduate Student Liaison Committee:
 - Fluids/SedStrat: TBD
 - Geophysics: TBD
 - Metamorphic/structure/geomorph: TBD
 - Nano-Hydro: TBD
 - Paleontology: TBD
 - Geophysics/1070: TBD
- Faculty Meeting Graduate Student Representative: TBD
- Department Head: Dr. W. Steven Holbrook
- Associate Department Head: Dr. Madeline Schreiber

II. Academics

Start Date for Graduate Students

In fall 2019, new and returning students are expected to arrive on campus by August 19. All students on support (Graduate Teaching Assistant, or GTA and Graduate Research Assistantship, or GRA) are on payroll as of August 10. Students who are not on support are required to be on campus

for any orientations or meetings that have been scheduled. In spring 2020, new and returning students are expected to arrive by January 13.

There are special circumstances that may warrant a late start date; for example, if a student is on a GRA or fellowship and is conducting research abroad, accommodations can be made. The student must contact April Newcomer and the Chair of GSAC to request a late start date. **Vacations and other activities that are not related to a student's research do not fall under the category of special circumstances.** If a student is on a GTA, there is little flexibility with start date, as GTAs are expected to attend all necessary orientations and/or workshops. Under no circumstances are GTAs to return to campus after classes have started. This is a violation of policy and may incur a stop payment on salary.

The purpose in returning prior to the start of classes is so that students have time to get organized prior to classes starting. This is particularly important for GTAs, as there are many things to accomplish at the start of a new semester. By returning early, many logistical details can be accomplished so that you may jump right into classes, teaching, and research when the semester starts. There may also be important paperwork to complete or workshops held during the week before classes.

Numerous orientation activities occur prior to the start of classes in the fall semester. New students are required to attend the new graduate student orientation within the Department, as well as orientations presented by the Graduate School. All new graduate students are required to attend the GTA training both in the Graduate School and in the Department. The Department also has a general meeting required for continuing graduate students, usually held the Friday before school starts. A new student field trip is also run prior to the start of classes. Other useful information for new students may be obtained from the Graduate School's website at this link <http://graduateschool.vt.edu/>.

University Requirements for MS and PhD Degrees

The Graduate School course requirements summarized in the tables below are given in detail in the GSPP. Courses numbered 4000 or lower are undergraduate courses. Courses numbered 5000 or above are graduate-level courses. MS Research and Thesis-5994 and PhD Research and Dissertation-7994 carry no grade. A student on support must carry at least 12 credits (including research and dissertation) per semester during the academic year to be considered full time. An overall GPA of at least 3.0 is required for retaining graduate-student status.

Requirements for Master's Degree

Semester Credit Hours		
	Minimum	Maximum
Total Graduate Credits	30	—
Graded Credit Hours (i.e. from courses)	20	—
Courses numbered 5000 or higher	12	—
Research Credit Hours (5994)	6	10
Courses numbered 5974, 6974, 5984, and 6984	—	6

Requirements for PhD Degree

Semester Credit Hours		
	Minimum	Maximum
Total Graduate Credits	90	—
Research and Dissertation (7994)	30	—
Courses numbered 5000 or higher	27	—
Seminars (subject matter unstructured)	—	4
Courses numbered 5974, 6974, 5984, and 6984	—	18

Notes:

Students should sign up for a minimum of 12 credits per semester to maintain full-time status. If a large fraction of credits is coming from coursework (e.g. 2 or more courses), it is recommended to still sign up for adequate research credits (5994 or 7994) to cover what research is being completed during the term. In general, this is likely a minimum of 3 credits of research per semester, but if need be, a student may take more than 12 credits per semester to ensure that they adequately cover their research activities with credit.

Seminars may be taken on a pass/fail basis and may be used towards meeting the minimum requirements in courses numbered 5000 or higher (for PhD only).

Graduate students who were undergraduates at Virginia Tech can use 5000 level VT courses toward the graduate degree if, 1) it was taken while enrolled as a dual or BS/MS student and 2) it wasn't used to satisfy the undergraduate degree.

For information on transferring credit from other schools and/or from other degree programs at Virginia Tech see the GSPP.

Students interested in applying for a Start of Semester Defense Exception Request (SSDE), which requires one credit hour of enrollment, should discuss this with April Newcomer as soon as possible. SSDE is only available the first three weeks of each semester.

Continuous Enrollment Policy

Continuous enrollment means that any student working on his/her degree (including working with his/her advisor on the thesis, dissertation, or project and report) should be registered for the minimum of 3 credit hours/semester of the appropriate "research" course. Summer registration is not required unless the student is taking the preliminary exam or defense during a summer session. The advisor must insist on enrollment/registration at the beginning of any semester when s/he is actively working with the student.

If the student has completed the thesis/dissertation by the beginning of the fall or spring semester and is defending early (i.e. within the first three weeks of the semester), s/he can request Qualifying for Start of Semester Defense Exception (SSDE; 1 cr). SSDE enrollment can be used by students defending at any time during the summer sessions. Students must be enrolled during the semester in which they graduate. - See more at:

http://graduateschool.vt.edu/academics/pg/adds_withdrawals

Audits

Graduate students can audit graduate courses with approval from the instructor. Because each instructor may have different expectations for requirements of auditing students, it is the responsibility of the student to discuss the expectations (i.e., attendance, completion of homework and exams) at the beginning of the semester with the instructor, and to have written documentation of these expectations if they are not outlined in the syllabus.

Audit courses do not count on the plan of study.

Courses, Calendars, and Enrollment

Classes are selected and enrolled in via Hokie SPA. Existing students should register during the course request period; deadlines for this are made available each semester and provided in the academic calendar. **New students are automatically enrolled with 12 research credits prior to the beginning of semester, so that their payroll may start.** These credits may be dropped and replaced by classes in the first week of the semester by the posted deadline.

Departmental graduate courses offered in a given semester will vary depending on resources and demand. Many courses are offered every-other-year. Graduate courses are generally required to maintain enrollment of ~5 students. A lower enrollment may result in the course being canceled at the start of a semester. Students are encouraged to directly contact faculty instructors regarding the availability and status of a specific course.

All incoming graduate students, or those moving to a new program, are required to complete a 1-credit (P/F) course entitled: GEOS 5024 "Professional Development and Ethics in Geosciences" during their first semester. The purpose of this course is to provide an overview of the department and what it means to be a graduate student in the Department of Geosciences. Approximately 40 percent of the course will be devoted to Professional Ethics. An online ethics training will be required of all incoming graduate students in the Spring semester.

- Registrar's current Timetable and Academic Calendar:
https://banweb.banner.vt.edu/ssb/prod/HZSKVTSC.P_DisRequest

Special Notes for International Students

International students (unless they are native English speakers or have gotten previous degrees from U.S. universities) must score 25 or greater on the TOEFL Speaking subtest. Students who are below the minimum must retake the TOEFL.

Advisory Committee

For each MS and PhD candidate, there is a resident faculty member who acts as the student's advisor and chair of the student's Advisory Committee. (Incoming students who have no advisor will have a temporary advisor appointed by the GSAC.) The advisory committee serves three purposes.

First, the committee serves the purpose of quality control, to evaluate progress and scholarship and ensure that graduates and degree-holders meet departmental standards. Second, the committee acts as a resource to aid in research by providing relevant expertise and guidance. Finally, the committee serves to protect the student. The committee may act as a mediating body between the student and advisor, when miscommunications or misunderstandings arise related to expectations or timetables of meeting research goals.

The committee serves to ensure that the student receives adequate guidance in their academic program, and to monitor student progress. Committees are generally an excellent sounding-board when conflicts arise, and should be viewed first and foremost as a resource for the student.

Graduate students should choose an advisory committee within their first semester, prior to completion of the Plan of Study and the Annual Report (see below). Selection of the advisory committee is the joint responsibility of the student and primary advisor. The advisory committee is comprised of at least three members for MS candidates and four members for PhD candidates (at least two-thirds must be from VT, in both cases). The primary research advisor counts as one of these members and serves as the committee chair. Post-doctoral researchers can be additional members of committees, but cannot count as one of the required three or four members for MS and PhD committees, respectively.

There is no upper limit for the size of committees, and committees as large as five or six members are common for PhD candidates. Although external (non-VT) committee members are encouraged, the student may find it useful to have at least three (MS) or four (PhD) VT committee members, such that, in case external members are unable to travel to VT, an adequate number of members is present for meetings, the preliminary exam, and the final defense (**all** who are listed must be accounted for at the defense). Curriculum vita with date of birth should be provided for all non-VT faculty. Please check with April if you have questions.

Committee members may be changed at any time, pending approval of all members, new and old, and the Department Head.

All MS candidates and PhD candidates in their first three years of residence are required to have at least one meeting with their advisory committee each year. Pending advisor's approval, PhD candidates that have been in residence for more than three years may conduct their meeting via email. Committee meetings should take place in fall or early spring term, prior to completion of the Annual Report (see below).

For 2nd year MS students: The Department asks that all 2nd year MS students have a committee meeting during the fall semester. The purpose of this is to ensure that the students are on track to finish their MS program during the spring semester or summer of their 2nd year. After the meeting, the advisor should prepare a letter of evaluation to be shared with the student and submitted to April

for GSAC review. It is up to the student, advisor and committee to decide if the student should have a follow-up meeting in the spring before the MS defense. The Annual Report for 2nd year MS students is due at the same deadline as all other students.

It is the responsibility of the student to schedule the committee meeting according to the schedules of the committee members and to reserve a room with April Newcomer. Committee meetings should include all local members of the advisory committee; external committee members need not be present, but should be communicated with before or after the meeting.

The purpose of the annual committee meeting is to update the committee on student progress and for the committee to provide direction, feedback, and guidance to the student and advisor. Prior to the committee meeting, the students should prepare a draft of the Annual Report (see below) to show to the committee. At the committee meeting, the student should present an overview of the research question, goals, and progress to date, followed by discussion between and amongst the student and committee members. The meeting should include discussion of future plans and timetable for completion of goals. At the end of the meeting, the student will leave the room and the committee will discuss and evaluate the student's progress. GSRS or other public presentations may not be used as substitutes for the annual committee meeting, although it may be convenient to schedule the committee meeting directly following the students GSRS presentation.

Special committee meetings may also be called at any time if issues arise; for example, in the case of conflict or misunderstanding between advisor and student, the student's first response should be to call for a special committee meeting to discuss the issue.

Plan of Study

MS and PhD candidates must file a Plan of Study before completing 15 course credit hours in their program. For students entering the program in fall semester, a target date for completing and submitting the Plan of Study is at the same time as the Annual Report. The Plan of Study is a requirement of the Graduate School and must be completed to maintain satisfactory graduate student status. The Plan of Study only needs to be submitted once unless changes are made (see below).

The Plan of Study should be completed after consultation with the research advisor and the student's Advisory Committee. Instructions and format details will be sent to new students in early spring. The minimum number of course credits should be compiled, which fulfills the requirements summarized above. A PhD candidate's Plan of Study must indicate the semester (or summer session) during which the preliminary exam will be taken.

After the proposed Plan of Study is filled out and signed, the original signed hard copy should be given to April Newcomer who will enter the contents electronically and send to the Graduate School for approval. Graduating students are required to review their plan of study one semester *before* graduation in order for changes to be approved by the department.

Students must obtain a 3.0 GPA both overall and for courses listed on the Plan of Study. If a student gets less than a C- in a course that is on the Plan of Study, it must be retaken and both grades are included in the calculation of the Plan of Study GPA. Courses taken five or more years prior to the completion of the MS degree or seven years for the PhD will not be counted toward fulfilling the degree requirements unless revalidated by the student's advisory committee.

Annual Reports

The Graduate School requires all graduate students to complete an Annual Report each spring. All students, including those about to defend, are required to complete this report. The Department's format for the Annual Report may vary from year to year, but is made available during the fall semester. **Reports are typically due in early to mid-April.**

The Annual Report requests information regarding research (e.g. papers, presentations, and grants), teaching, and classes taken in the past year, as well as a statement of plans for the future and the student's current CV. For the purpose of reporting, the one year timeframe is considered to be the year since completing the previous Annual Report (or, for new students, everything done up to that point). As such, the Annual Report may cover the April through April timeframe (or roughly the current spring semester, preceding fall semester, and preceding summer), rather than the Calendar Year or Academic Year. Once completed, the report is shared with the advisor and committee members, and the Advisory Committee meeting is held.

During the meeting, members of the committee provide feedback to the advisor and will rate the progress of the student in accordance with directions set forth in the Annual Report. Following the meeting, the advisor writes a letter to the student (cc'd to the committee) that summarizes the evaluation of the committee regarding their progress and any recommendations for the future. This letter is a requirement for all advisors of their students.

Once the student has read the advisor's letter, they attach it to the Annual Report and sign, and then have each committee member sign the Annual Report and turn the final copy into April Newcomer by the due date. External committee members are required to sign, but may do so via fax or by sending an email stating that they read and agree to the report, which should then be printed and attached to the report. Reports turned in without all signatures will be returned to the student.

Once complete, the GSAC Chair will read each Annual Report to review progress of each student. In the event of any red flag(s), the Chair of GSAC will meet with the student. The Annual Reports will then be sent to the Graduate School for evaluation (a requirement of the Graduate School).

Ratings from the reports will not have an automatic impact on stipend, TA assignments, or graduate student status, but are simply documentation of the student's progress. Ratings could be used as supporting information when reviewing applications for special awards and grants made at the Department level. Ratings may also be appealed by the graduate student or advisor, by written communication to the GSAC.

Late Annual Reports will not be accepted. If they are not turned in on time and available to the GSAC by the time it has its meeting, it will not be possible to give a satisfactory rating and thus an unsatisfactory rating will be given by default. If a student cannot complete the report on time due to extenuating circumstances, this should be communicated and cleared with the GSAC in advance of the due date.

As stated in the directions of the Annual Report, **students receiving a ranking of unsatisfactory on their Annual Report will meet with the GSAC Chair to discuss the advisory committee's letter and specific issues regarding the student's progress.** If needed, the Chair will communicate with the advisor/advisory committee for specific information. The student will be required to hold an additional committee meeting during the following semester; the committee members will then discuss whether necessary improvements have been made. If they have been made, then no action needs to be taken. If the committee decides that necessary improvements have not been made, the GSAC Chair will meet with the advisor and the Department Head to discuss the range of possible

actions that should be taken. Note that students making unsatisfactory progress may be ineligible to attend special department functions, such as the spring banquet and graduation.

Conversions from MS to PhD Program

Prior to the end of the third semester of residency, MS candidates may apply for conversion to the PhD program without completion of the MS degree. Students cannot convert after completing the third semester of residence as an MS student. Any student converting from an MS degree program to a PhD program or wishing to enter the PhD program after having completed an MS degree program at Virginia Tech must submit a formal application to the GSAC. The application for conversion includes a form (see April), a letter from the student, and a letter from the advisor.

PhD Preliminary Exam

Content: The Department does not give a standardized Qualifying Examination. Subject to the regulations of the Graduate School and the general departmental requirements listed below, **each PhD advisory committee shall have responsibility for the make-up and administration of the Preliminary Examination.** Each research group in the Department has developed their own written guidelines. These guidelines can be obtained from faculty and are available on the Graduate Advising Canvas site. It is critically important that students preparing for their prelims check with their advisor and committee members about format, as they differ from research group to research group.

Timing: The Department requires that **students take their PhD preliminary exam by the end of the 5th semester of their academic program.** This is true for direct PhD students, as well as students with MS degrees from VT or other universities.

Note: committee meetings cannot be a replacement for a preliminary exam.

- The intent of the committee meeting is to monitor the annual progress of a student.
- The preliminary exam determines if a student is prepared to pursue a doctorate degree.

These two meetings are separate.

Scheduling: The preliminary exam request is an online process found at <https://ess.graduateschool.vt.edu/pages/login.php>.

Schedule the preliminary exam with April Newcomer, and then submit the online exam request with the Graduate School **at least four weeks in advance of the exam date.**

The exam notice is emailed by the Graduate School to the student, advisor, and committee. It is the student's responsibility to make sure all members sign off on the electronic exam approval in a timely fashion.

After the exam:

1. The advisor enters the committee's decision online.
2. All committee members, including the advisor, approve the original input for the exam.

Graduate school regulations that apply to the Preliminary Exam are:

1. The examination must be taken at least six months before the thesis/dissertation defense. Failure to take the Preliminary exam on time can be construed as a lack of satisfactory

progress toward the student's degree and can result in the loss of support or dismissal from the graduate program.

2. The Preliminary Examination shall include both an oral and a written portion.
3. Other faculty members may attend the exam, but only the members of the Advisory Committee will vote on the results.
4. To pass any of the required examinations, a graduate student is allowed at most one unsatisfactory vote. If a student fails an examination, one full semester (a minimum of 15 weeks) must elapse before the second examination is scheduled. Not more than two opportunities to pass any one examination are allowed. A student failing any of the examinations required by Graduate Policies two times will be dismissed from graduate studies by the Graduate School.
5. The student must be enrolled for a minimum of 3 credit hours to sit for the preliminary exam including summer sessions.

Thesis/Dissertation Defense

Because the MS and PhD degrees are professional degrees, the faculty expects that theses or dissertations will be prepared and presented in a format appropriate for publication in a recognized journal in the field of study. Data, protocols, and other information not appropriate for publication can be put in appendices at the end of the document.

As a partial requirement for completion, the student must defend the thesis or dissertation before the Advisory Committee. The presentation component of the defense is open to the public, and all faculty and graduate students of the Department are encouraged to attend. This is followed by a closed-door session with the Advisory Committee, in which more detailed questions will be asked of the student.

When a student is deemed ready to defend their thesis or dissertation by the chair of his/her Advisory Committee, the student should:

1. Schedule the defense with April Newcomer, submit the online defense request, and the Graduate School **at least four weeks in advance of the defense date**. It is a departmental requirement that the Graduate Program Chair sign off on the request. April Newcomer will send appropriate departmental notices.
2. Prior to approving the defense date request, the written thesis draft must also be approved not later than **4 weeks prior to the defense**. A thesis draft must be uploaded to the Graduate School for iThenticate approval (for plagiarism check; see below for more information) 4 weeks prior to the defense. At the same time, the draft should be submitted to the advisory committee for approval. The defense date cannot be set until the committee signs off that the student is ready to defend based on the status of the thesis draft and the iThenticate report.
3. A complete version of the thesis or dissertation (less any modifications and editing required after the defense) must be made available to each committee member **at least two weeks** prior to the defense. Students should check with committee members as to their preference of reading hard copy vs. electronic drafts.
4. Any outstanding student fees must be paid at the Bursar's Office prior to the defense.
5. The student is responsible for arranging the time and room with April Newcomer.

6. The defense notice is emailed by the Graduate School to the student, advisor and committee. It is the student's responsibility to make sure all members sign off on the electronic defense approval in a timely fashion. If a member is unable to attend the defense:
 - a. make sure the thesis is provided to her/him in advance
 - b. advisor must solicit comments on the thesis from the member
 - c. advisor must solicit any questions that the member wants to ask regarding the thesis
 - d. if the member is in agreement that the student passes the defense, s/he must email the advisor an approval and sign off on the electronic defense approval. The email should then be sent to April to be put on file.

After the defense:

1. The advisor enters the committee's decision online.
2. All committee members, including the advisor, approves the original input for the defense, as well as, the Electronic Thesis or Dissertation (ETD)
3. The final ETD approval must be acted on by the two week deadline, as there are NO exceptions.
4. Although the defense may be scheduled for any part of a semester, the student is expected to remain in residence after the defense if they are being paid on a GTA or GRA or fellowship contract. That is, they must still perform their duties so long as they are receiving a stipend from the department.

iThenticate Check

Per Graduate School policy, all written theses and dissertations must be checked for plagiarism and self-plagiarism using the iThenticate platform. This must be completed prior to scheduling the oral defense. The software generates a report on the similarity of the text to other sources. The report is reviewed by the student and committee chair for plagiarism and changes made if deemed necessary (no other penalty results in the draft stage). Once the review has occurred and the document is deemed appropriate, the oral examination can be scheduled. A copy of the iThenticate report must accompany the submission of the final examination scheduling form.

Instructions for using iThenticate may be found from the links below. The Graduate School requires the "Similarity Index" to be 14% or less, and "Sources" need to be 4% or less. When running the iThenticate report, save the "Text Only" report as pdf. When uploading the document to iThenticate, exclude the title page and bibliography/works cited references. Set the folder filters to exclude quotes, small matches and sources to be "word count=9 words", and to include Academic Abstract through the end of the document body, appendices, and all repositories.

<https://graduateschool.vt.edu/faculty-and-staff-resources/ithenticate.html>

<https://graduateschool.vt.edu/academics/what-you-need-to-graduate/ithenticate-for-students.html>

Graduate Program Assessment

To assess and improve the M.S. and Ph.D. programs, the department conducts standardized assessment of key learning outcomes. These assessments are performed during the annual committee evaluation and during final defenses following the evaluation rubrics provided via the website. The committee evaluates and assigns a consensus score for each learning outcome on a 1-4

scale. These scores are shared and discussed with the student, signed, and turned in with the student's Annual Report or to the Student Coordinator following the defense.

These evaluations are strictly confidential and are not shared outside of the committee or used in conjunction with the student's name for any further specific assessment of the student, advisor, or research group. Forms will be placed in the student's file and available to the student, advisor, advisory committee, Department Head, or Graduate Program director upon request, but will not be made available to any other party and will not be turned into the Graduate School with the Annual Report. These rubrics are designed to make evaluations more structured, while also to convey more organized feedback to the student. Completed rubrics ideally inform and reflect the committee's overall evaluation. However, specific scores on rubrics have no formal bearing on the overall result of the final defense; there is no automatic implication of receiving low scores in any or all of the learning outcomes. Similarly, there is no specific formula that translates scores into whether student annual performance is regarded as satisfactory.

Once turned in, a copy of the evaluation rubric card is rendered anonymous and results of all cards are synthesized annually for the purpose of tracking how well students do across the entire department. These results are used anonymously on a comparative basis to track improvements over time as changes are made to the program. This self-assessment is required by the Virginia Tech Office of Assessment and Evaluation. The department has set and must report on specific targets of what percentage of students will score at a certain level for each learning outcome. Changes to the program and to the rubric itself will be made as data are accumulated.

The M.S. and Ph.D. rubrics are provided in the Graduate Advising Canvas site. These were first used in 2018-2019 and revised slightly for 2019-2020.

Electronic Thesis or Dissertation (ETD) Submissions

It is critical that students check the formatting requirements of the ETD (see link above) before submission. There are often training workshops about ETD preparation during the semester. As requirements change, it is not advisable to look at an old thesis or dissertation to get information about requirements, although it may be useful to look at a recent one (within the previous month or two) to see what an approved ETD looks like.

Once submitted, the ETD is checked by the Graduate School for various forms of compliance related to style and copyrighted material. Students must monitor their VT email until final ETD approval is received. Corrections to the ETD may be required; typically, there is a one week time limit to make corrections and resubmit the ETD. Missing this correction deadline could result in changing of the graduation date and/or additional charges.

The Graduate School also processes Doctoral ETDs for UMI, and monitors the availability status of ETDs. Within that context, the Graduate School is charged with ensuring that ETDs conform to the Copyright laws. These laws direct that if an ETD includes an item taken from another source it can only be used under certain circumstances: if copyright permissions have been secured or if the item is in the public domain. More information on Copyright Issues can be found on the ETD website (<http://etd.vt.edu>). ETDs containing copyright protected material cannot be approved without the written permission of the author quoted.

Application Dates for Graduation

<u>Completing degree requirements in:</u>	<u>Apply on or Before:</u>
June (1 st summer session)	June 1
August (2 nd summer session)	August 1
December (fall semester)	October 1
May (spring semester)	March 1
See http://graduateschool.vt.edu/academics/deadlines	

Administrative “Good Standing”

There are numerous administrative obligations that graduate students must fulfill for both the university and the department. This includes replying to emails, adhering to deadlines, filling out forms and reports, attending meetings and trainings, and more, that students must complete as a part of their program. If a student does not fulfill these obligations, significant work is created for department and university staff. Delinquency reduces the overall efficiency of administrative entities. As a result, it is critical that students complete these obligations, following all directions and deadlines.

To enforce the timely completion of these obligations, the department maintains a policy of administrative “good standing”. A student is considered in good standing when first joining the program and retains this status so long as obligations are met. If a student repeatedly fails to meet these obligations, good standing may be temporarily revoked, in which case the student is considered not-in-good standing. Loss of good standing status requires 3 or more instances of failure to meet obligations, and is determined by a majority vote by the Graduate Student Affairs Committee based on information synthesized by the Student Coordinator. This determination may be appealed to the Graduate Program Director or directly to the Department Head at any time. Revocation of good standing status is temporary, with a first-time duration of 3 months and second-time duration of 6 months. After the term, good-standing status is returned, assuming the student has subsequently been meeting requirements. When a student is considered not-in-good-standing, they are no longer eligible for numerous benefits provided by the department, including funding provided to attend meetings, departmental grants and scholarships, and participation in official functions (committees, field trips, panels, etc.).

Leave of Absence

If a student wishes to take a leave of absence from Virginia Tech for one or more academic semesters, s/he must notify April Newcomer and the GSAC chair in writing. Although leaves of absence are generally approved, once a student leaves there is no guarantee that the financial resources will be available to provide the assistantships that were originally offered; financial support upon return will be pending the availability of resources at that time. An approved leave of absence does not guarantee readmission and may result in a new application fee.

In Absentia Status Request

Graduate students in good standing who, for academic reasons, need to spend an entire Fall or Spring semester away from campus should apply for in absentia status. In absentia status is granted for work that is directly related to the student’s academic course of study and that is integral to the degree.

The form can be found at this web page: <http://graduateschool.vt.edu/academics/forms>

Resigning from the Program

In rare cases students may find that they have enrolled in a degree or research program that does not suit them, or experience changes in life priorities that create a need to leave the program. While some of these situations may be for the best, or may be unavoidable, it is important that students not resign without exploring all options. Before resigning from the program, students are strongly encouraged to talk at length with their advisor to see if solutions can be worked out. It is strongly advised that students hold a committee meeting prior to making a decision to leave the program., as the committee may be able to assist in developing solutions. Students should also seek the counsel of the Graduate Program Director to explore options that may include switching advisors or transferring to a different program. The student may also wish to meet with the Department Head or the Graduate Ombudsperson prior to making a decision.

If after thorough discussion, a student finds that resigning is the best solution, there are still practical considerations that should be heeded. Resigning mid-term can lead to financial penalties that could be avoided. For example, if a student is supported on a GRA and resigns from that project, they may be responsible for a tuition bill for the remainder of the semester. Other ramifications may include loss of insurance or effect on taxes or loans. It is recommended that a student resign from the program only at the end (or between) terms, to avoid these types of issues. It is strongly advised that a student not resign before being counseled by the Student Coordinator, Program Director, and representative of the Graduate School about these practical considerations.

Checklist for Departing from the Program

Upon successful completion of the degree and/or departure from the program, various administrative and archival obligations must be met for the department (in addition to any specific instructions for the research group). These include steps such as returning keys and all university property, archiving data and samples, and more. The required steps are outlined in a checklist that can be found in the Graduate Advising Canvas site. Students are required to complete all steps prior to departure and may not receive the diploma until all obligations have been met.

III. Financial Support

General Policies

It is the Department's intent to provide adequate financial support (semester stipend and tuition) for all graduate students actively pursuing a degree, but limited and changing resources sometimes necessitate adjustments in the number of students supported, the level of support and the duration of support. Support decisions are based upon availability of funds and upon the progress and qualifications of the student. Unsupported students wishing to be considered for support should apply in writing to the GSAC.

Eligibility for Support

1. Financial support for students with regular student status is offered for durations listed below. Students may be eligible for support beyond these terms, pending the availability of resources at the time.

After eligibility has expired, if a student would still like additional support, s/he must complete an extension request. As part of this request, the student and the primary

advisor must each write a letter to GSAC requesting support and providing reasons why additional support is needed. **This extension request must be submitted every semester after eligibility has expired.** GSAC will consider the requests and will inform the student and advisor if the request can be granted.

- a. MS students – 4 semesters of support.
 - b. PhD students without prior MS degree – 10 semesters of support.
 - c. PhD students who have previously completed a MS degree not at Virginia Tech – 8 semesters of support
 - d. PhD students who have completed a MS degree at Virginia Tech – 10 semesters of support (4 semesters for MS, plus 6 semesters for PhD)
 - e. PHD student who have completed a MS degree at Virginia Tech and changes projects – 12 semesters of support (4 semesters for MS, plus 8 semesters for PhD)
2. Only students with regular or provisional graduate student status may be supported. Currently, support includes payment of your tuition equal to your assistantship offer (i.e., full-time offer/full-time tuition, half-time offer/half-time tuition)
 3. Students must continue to make satisfactory progress toward their degree. This includes maintaining their GPA above 3.0. A one-semester grace period is allowed for a student whose GPA falls below 3.0 if the student can reasonably be expected to raise his/her GPA above the 3.0 by the end of that semester.
 4. GTAs are required to maintain a satisfactory level of performance in their teaching duties. Teaching performance is evaluated on the basis of faculty observation and student teaching evaluations (which must be submitted for every course taught). Uncovered absences, incompetence, disregard for students, and any other unprofessional behavior are grounds for immediate termination of a GTA appointment.
 5. GTAs are required to notify the GSAC chair and April Newcomer in writing at least two weeks in advance if they need to be off campus for more than 1 week during the academic semester. Chair of GSAC will notify, in writing, if approved or otherwise.
- NOTE: Don't make travel plans before you receive written approval.**
3. International students (unless a native English speaker or previous degrees were awarded from U.S. universities) must score 25 or greater on the TOEFL Speaking subtest. Students who are below the minimum must retake the TOEFL.

NOTE: There is a Graduate School policy on additional employment for domestic students only while on a full time (20hrs/week) assistantship contract. See assistantship contract for details.

Support Levels

During the 2019-2020 academic year, the current stipend levels in the Department are as follows. MS candidates (1st and 2nd year) and PhD candidates who do not have an MS degree (called Direct PhDs) are paid at \$1,888.50/month. PhD candidates with MS degrees are paid at \$2,005.58/month. These are the base pay rates for GTAs and GRAs.

Any student on GRA or GTA may receive additional stipend amounts added on to the base pay rate if the research advisor supplements the pay using research funds.

Several special GRAs may pay at higher rates according to the rules of the support, including NSF Graduate Fellowships, MAOP, ICTAS, and IGERT fellowships. These stipend rates are determined by the source of the funding, not the Department.

Graduate Teaching Assistantships (GTA) and Research Assistantships (GRA)

The major source of financial support for graduate students during the academic year (4.5 months per semester, 9 months total – August 10 to May 9, including winter break, but not including 3 summer months) is teaching assistantships in undergraduate laboratories. Full-time GTAs require 20 hours per week, and half-time positions require 10 hours per week. It is the GTA's responsibility to teach the laboratory sections, to grade papers, and to maintain scheduled office hours.

If you plan to be away from campus for more than one week during the Fall or Spring semester, permission must be requested of the Chair of GSAC at least two weeks in advance of your departure to assist the department in making GTA assignments. If you have to be out of town, it is your responsibility to find someone to teach your lab(s). Specific instructions for GTAs are provided by laboratory coordinators or the faculty instructors of the course.

GTA assignments are made by the GSAC chair, but closely follow the requests of faculty instructors, the areas of expertise of the graduate students, and the desires and interests of the graduate students. Requests for specific GTA assignments should be sent to April Newcomer when solicited. Effort is made to give each student their desired GTA, if available, and to maintain consistency so that GTAs do not have to teach different laboratory courses each semester. Questions related to GTA assignments should be directed to the GSAC chair.

In some cases GTA assignments may open up from other related departments, such as Biological Sciences or Chemistry. If you are scheduled to be a Geosciences GTA, but have interest in applying for a GTA in another department, please notify April Newcomer and the GSAC chair via email. Even if final decisions from other departments come shortly before a semester starts, communication will help GSAC coordinate and come up with plans for how to react and fill Geosciences GTA slots if a TA drops out for another assignment at the last minute.

GTA student perceptions of teaching (SPOT) scores are submitted by the classroom students online when they are notified by the university a few weeks before the end of each semester. These evaluations are reviewed by the GSAC chair. Satisfactory evaluations are required for continued support as a GTA. All entering students who may later be GTAs must also take the Graduate School's Workshop on GTA Training the week before classes. Additional information will be provided by the Graduate School. GTAs must also attend Departmental training the week before the start of fall classes (information will be provided by April Newcomer).

A GRA is a research assistantship provided by individual faculty members to their students using research funding. It is up to faculty advisors to decide which students are covered by these funds. Depending on availability of grants, GRAs may not be available. Full-time GRAs require 20 hours per week, and half-time positions require 10 hours per week. GRAs carry no additional duties beyond the research as indicated by the advisor.

Summer graduate student funding is also generally provided by the research advisor using research funds. GTA semester appointments are 4.5 months each, or 9 months per year, and do not cover summer stipend. If a research advisor does not provide full summer funding (3 months), a student may apply for funding from special department awards.

Maintaining Satisfactory Student Status

Continued financial support is contingent upon meeting the expectations of satisfactory progress towards research and classwork, as well as special expectations of GTAs. **Students must maintain a GPA of at least 3.0 and meet deadlines for submission of Plans of Study and Annual Reports in order to maintain their status as continuing students.** Each student must also meet the expectations for research progress as defined by their research advisor and the Advisory Committee. Students who do not demonstrate satisfactory progress toward their degree can be dropped from their graduate student status by the GSAC with the approval of the Department Head.

Student Fees

Departmental support for stipend and tuition does not cover the student comprehensive fees that are required by the university. The university charges all graduate students an annual fee to cover expenses that tuition is not legally appropriate for given state regulations, such as athletics fees. Each student is responsible for paying these fees prior to the start of each semester (deadlines are communicated each year). The cost of the fees varies from year to year. Current fees can be found at:

<http://www.bursar.vt.edu/#totalstable>

Payment Plan for Comprehensive and Capital Fees for Graduate Assistants

Graduate students on assistantship appointment may pay their comprehensive and capital fees (CFE) through a [payment plan](#) during the fall and spring semesters. Enrollment is managed through Hokie SPA and students must sign up each semester in which they wish to take advantage of this opportunity. Enrollment is not available for the summer terms. The payment plan allows students to pay their comprehensive and CFE fees over the course of the semester. Fully integrated with the students account system, the plan debits coincide with university payroll dates and adjust seamlessly with changes to the student account balance.

Enrollment periods for 2019-20:

- Fall Semester: 15 July –30 September
- Spring Semester: 15 December –14 February

Students may enroll in the plan only after they have registered for classes and, after their tuition remission has been entered in the Banner system by the hiring department. The projected debit amount and remaining debit dates will be displayed during the enrollment process. There is no cost to participate. Once enrolled in the program, students cannot cancel unless the balance is paid in full.

Remember August 12 is the university deadline for tuition and fees for fall 19. More details may be found here: [Payment Plan for Comprehensive and CFE Fees](#)

Payroll Procedures

Students are paid on the first and sixteenth of each month. **You must make arrangements in Hokie SPA to have your checks deposited directly into your bank account.** For information on graduate stipend payroll procedures see April Newcomer. For information on wage procedures, see Sharon Collins or Mary Jane Smith.

The first payday for fall is September 1. If you enter spring term, your first payday is February 1st. Students receiving hourly wages must submit hours online through TimeClock Plus every two weeks on the first and sixteenth of each month.

Departmental Awards and Special Funding

The Department offers special funding for students to attend meetings. Currently, each graduate student that is presenting at a national meeting as first author is eligible for up to **\$250** from the Department for one meeting per year. This should be requested when filling out travel approval paperwork in the main office prior to travel. A copy of the abstract for the meeting should be provided. Note that this policy could change at any time due to availability of funding.

The Department has numerous endowed accounts that are used for scholarships and research funding each year. This is done primarily on a proposal basis. In early fall, a request for proposals is sent to graduate students. Proposals are generally only one page long and must be submitted separately for each award category together with supporting letters from advisors.

Proposals are due **by the end of fall semester** and are reviewed by the GSAC. Awards are typically announced **by the end of January**. More explanation of the format for proposals and the criteria for awards will be provided in the request for proposals sent to students in early fall. GRAs and summer stipends are paid directly to the student as normal salary, whereas the scholarship awards are directly deposited to students Hokie Spa account.

Industry scholarships are also available, on a case-by-case basis, when corporations make specific donations to the Department. These are generally awarded to students directly, without proposal applications, based on the criteria of the scholarship and decision of the GSAC and the Department Head.

The Department also has several special awards for outstanding performance. Tillman Teaching Awards are given to GTAs for excellence in lower-level and upper-level laboratory instruction (typically 2 awards per year). The Outstanding Service award is given to a student for going above and beyond the call of duty and being a great Departmental citizen. The awards above are decided by the faculty, using the student perceptions of teaching (SPOT) scores as well as other pertinent information.

There are also numerous grant opportunities through professional societies, such as GSA, Sigma Xi, and AAPG. Information related to these funding opportunities may be obtained through professional society webpages.

Students are strongly encouraged to complete a [FAFSA](#) every year to ensure they are eligible for all funding opportunities.

Reasonable Academic Progress

The federal government requires the University to have a financial aid satisfactory academic progress policy for the purpose of continuous financial aid eligibility. Being sensitive to the language of the university's satisfactory academic progress policy and to alleviate potential public confusion, the Office of University Scholarships and Financial Aid (USFA) chose to title its financial aid satisfactory academic policy, Reasonable Academic Progress (RAP).

The federal government requires the institution to assess a student's satisfactory academic progress toward timely program completion through the student's pace, the evaluation of the cumulative grade point average, and the maximum time frame for program completion. In compliance with federal regulations, University Scholarships and Financial Aid (USFA) manages the assessment of students' academic progress, the notification to students of failure to meet the policy, and the student appeal process as defined in the Reasonable Academic Progress Policy. Details concerning RAP are available at this link <http://www.finaid.vt.edu/appeals/rap/policy-2011-2012.html>

IV. Facilities and Resources

Departmental Staff

Department staff is available to assist graduate students for various activities. Administrative staff is generally available for help with travel forms, reimbursements, placing orders, copier use, and other paperwork. If you have a question and need assistance, please check with the relevant staff member as listed below. Note that the administrative staff do not perform general secretarial duties (e.g. typing, photocopying) for faculty, staff, or students, but rather each serve specific administrative duties as listed below. (Contact information for each may be found on the department's phone list.)

In addition, undergraduate work study students are often on duty in the main office and may also assist with basic office functions, including assistance with copiers. If you have questions or issues, please contact the Department Head, Dr. W. Steven Holbrook.

April Newcomer: Advising & Enrollment Manager; Graduate Coordinator (academics, payroll issues, general assistance for all graduate activities)

Sharon Collins: Program Support Tech. (some aspects of human resources management, social function coordinator, travel, general assistance and backup when Jo Thomason or Mary Jane Smith is not available)

Mary Jane Smith: Program Support Tech. (mail services, copiers, travel reimbursements, wage payroll, time clock, keys, purchasing)

Llyn Sharp: Outreach Program and Supervisor

Jo Thomason: Business Manager (finances, space issues, purchase orders, reimbursements, grant activity, overall responsibility for coordination of office management)

Technical staff is available for specialized needs related to computing, printing, and teaching and research equipment maintenance. Each staff member has specific responsibilities, but each area is generally met by more than one staff member. The areas of responsibility are listed below. If you

need assistance, please contact the staff member directly. If you have questions or issues, please contact Jim Langridge. For contact information, please see the department's phone list.

James Dunson: Unix Systems Administrator (Unix systems administration, Geophysics computer lab and server room, research computing/high performance computing, department websites, specially licensed software [MATLAB, Geographix, etc.], computer programming support, Mac support [backup])

Charles Farley: Lab Tech. (maintenance and use of research equipment in Dr. Bodnar's group, including the ICP-MS and RAMAN instruments; also maintains computers in room 4069)

Jim Langridge: Electronics Tech. (PC support, Mac support [primary], computer purchasing [primary], software installation, specially licensed software [backup], SEM/microprobe lab support, classroom computers and projectors [backup], poster printing [backup])

Mark Lemon: Electronics Tech. (PC support, classroom computers and projectors [primary], software installation, computer purchasing [backup], poster printing [primary], field equipment maintenance/support, dept. vehicle maintenance, surplus property)

Greg Norris: Electronics Tech. (lab instrument maintenance/support, thin section lab maintenance/support, furniture, wall hangings and misc. repairs, Safety Officer, Crystallography Lab tech. support, storage facilities manager)

Gary Glesener: Geosciences Space Coordinator. (Coordinate office assignments, lab space, etc.)
Contact: 231-6028, gbgmedl@vt.edu

Office Functions

Copy Machines: Two copy machines are available in 4042/4043. The copier against the wall is for general use by graduate students. **Copying related to teaching and classes can be made using the TA access PIN, which is obtained from Mary Jane Smith. Each graduate student may also use their individual PIN number to make copies related to their research. 1000 copies per year are provided for free.** Additional copies may be purchased using research accounts from Mary Jane (\$40/1000). The copier in the center of the room is generally for use by faculty and staff, but may be used by graduate students if the other copier is broken or in emergencies; please check with Mary Jane to gain access to this copier. Both copiers are also capable of scanning documents, including double sided collated documents, and emailing the resulting scans as PDF files to a VT email address. Check with Mary Jane or one of the student office workers for help on how to scan documents.

Fax machine: The fax machine in the main office (540-231-3386) is available for use for research and teaching related activities. Fill out the log when you send a fax. You will not be charged if the fax is being sent for official purposes.

Office Supplies: The department does not provide free office supplies. You may obtain office supplies from the department's stock only through your research advisor, who will have to pay for them using research funds. In general, only faculty and staff can order office supplies through the main office. The department does provide letterhead stationery and departmental envelopes, which are available for use by graduate students for official mailings related to research. These may be found in the mail room.

Mail: U.S. and campus mail addressed to graduate students is deposited in mailboxes in the fourth floor copy/mail room. Students should check these boxes on a regular basis. Students who

expect to be out of town for long periods should tell Mary Jane Smith how they could be contacted in an emergency, and whether they want first class mail forwarded. Outgoing mail may be placed in the mailroom for pick-up by the VT mail service. Students generally will need to pay for their own postage, although research-related mail may be paid for using research funds (check with your advisor). It is also possible to send express postage via UPS for research-related activity; please check with Sharon or Mary Jane when you need to use this service, and place the postage on a research account (check with your advisor).

Travel and reimbursements: All forms of travel must be pre-approved by the department. See Sharon Collins or Mary Jane Smith for the necessary procedure. To be eligible for reimbursement, your travel receipts must be returned to the ladies no later than three days after returning, and all State guidelines must be met. **If travel forms are not submitted correctly, they will be returned.**

For reimbursements of personal expenses related to research activity, please consult with your advisor and see Jo Thomason (and save all receipts).

Graduate Student Offices

Offices: Each graduate student is assigned an office area for their use related to research, teaching, and classwork. Students should each receive a desk, bookshelf, chair, and file cabinet as standard issue office furniture. Office assignments are made by the department space coordinator, and should be discussed directly with him/her or April Newcomer if problems arise. Many research groups have their own office space that they coordinate and maintain, while others have offices in common graduate student office space (e.g. rooms 1070, 5050). The department's goal is to provide adequate office space for each graduate student, so please communicate issues or complaints freely with the student coordinator if the office assignment is not meeting your needs.

Keys: Keys for offices, the outer door to Derring, and classrooms may be obtained from Mary Jane Smith. Each key must be signed out. If a key is lost, see Mary Jane Smith for a replacement; note that you may be responsible for the cost of re-keying locks and obtaining replacement keys. All keys must be returned to Mary Jane upon graduation.

Computers: The department does not provide computers to each graduate student, unless it has a surplus of computers at a particular time. Computers may be provided to students by their research advisors

Other notes:

Pets are not permitted in university buildings except in cases of special need.

Bicycles must be parked outside of the building and may not be brought into offices unless special permission is given by the Department Head.

Please keep your office area as *clean* as possible, and avoid accumulating old materials or equipment (e.g. old computer monitors). Excess, old equipment may be *surplused* through the university via the technical staff (contact Jim Langridge).

Please do not *hammer or drill* into office walls; if you need assistance in this way, or with moving or acquiring new furniture, please contact technical staff member Jim Langridge.

Custodial staff empty trash cans of basic waste, but specialized *waste disposal* (e.g. rocks) is the individual's responsibility.

Recycling bins are available in the mailroom and in other locations around Derring.

Cardboard boxes may be placed in the hallways for removal by custodial staff.

Broken glass should be wrapped and sealed with tape, placed in a box, labeled, and placed in trash cans for disposal by custodial staff.

Disposal of chemicals should be done under the supervision of the faculty member who supervises the laboratory or via Environmental Health and Safety Services (EHSS). If you have any questions regarding proper disposal of waste, contact the Chair of the Safety Committee.

Communication and Computing

Email and listservs: All entering students are assigned a personal identification (PID), which is their email identifier on the Virginia Tech email server. Before one can use this address for email, the account must be activated. To activate the PID view the web page <http://www.computing.vt.edu/content/student-getting-started-guide> and then follows the directions. There is no cost associated with this service.

After checking into the department, you will be subscribed to the departmental listserv gs-gradst-g (full address gs-gradst-g@vt.edu), which in turn is subscribed to the list gs-all (full address gs-all-g@vt.edu). Announcements of seminars, job interviews, etc., are transmitted within the department via the listservs. As a graduate student, you may also send messages to the graduate student listserv, but please be cautious and send only emails that pertain to all students and that are business-related. Note that these messages are also received by the student coordinator and GSAC chair.

You will also be added to the GEOS Graduate Advising Canvas site. This site is currently under development, but the intention is to include information that will be helpful as you move through your degree program. If you have comments or suggestions, please contact April Newcomer.

Internet: Internet access is provided to all students by the university. Graduate students are expected to use wireless internet, which is provided as part of their student fees. Access to wireless internet may be obtained by going to http://www.cns.vt.edu/data_services.html or checking with Jim Langridge or Mark Lemon. Any graduate student computer that does not have wireless capability will be upgraded for free by the department to enable wireless access. The use of wired ethernet connections is discouraged, as each active line costs the department to maintain it as an active port.

Telephones: Students may use departmental telephones in their offices for local calls only. Students who wish to make long distance calls on departmental telephones must have the specific approval of a faculty member to whom the call is being charged. Long distance calls for personal reasons are not allowed on departmental telephones. Please use telephones/cell phones in graduate student offices conscientiously, as prolonged use of phones may inconvenience other graduate students in that office.

Computing: Computers are not provided by the department for all students, but may be provided to graduate students by the faculty advisor. Software is also the responsibility of the faculty advisor to provide. Most faculty provide their students with licensed access to operating systems and Microsoft Office applications, as well as specialized software including Adobe Illustrator or Photoshop. Licenses for these software products may be purchased from university computing. License agreements typically stipulate that software purchased with university funds may only be installed on university owned computers. If you desire software for your personally owned computer, the software must be purchased with personal funds.

The university and department provide access to some software without user paid licensing fees for use on university owned computers, including ArcGIS and MATLAB. For information on software licensing, availability, or to obtain software installation CDs, check with technical staff (Mark Lemon,

Jim Langridge) or with the university computing services center <http://computing.vt.edu/>. All graduate student computers are required to conform to university policies regarding the fair and appropriate use of computers; information on this policy may be found at <http://www.vt.edu/about/acceptable-use.html>.

Of special note, all computers are required by the university to maintain active firewalls, to be routinely backed up, and to have the latest virus protection installed. All software in use must also have an active license, and information on this license must be retained in case it is requested by the university. Unlawful copying and installation of software, or downloading media from the internet that is not related to research, are strictly prohibited. The ultimate authoritative documentation of what is legal and illegal for a particular piece of software is found on the copyright information with each individual package. It is the student's responsibility to abide by the copyright policy.

Classrooms and Projectors

Classrooms and the conference room (room 4052) may be arranged for special department-related activities, such as geology club meetings, group meetings, or special seminars. Classrooms can be reserved through April Newcomer. Classrooms are often used for classes and other reserved activity in the evening or on weekends, so please check with April and reserve a room even if it is for after-hours. It is against departmental policy to use classrooms for non-departmental activity (e.g. watching movies in 4069 is not allowed).

Classrooms generally contain overhead projectors, computer projectors with computers and laptop hookups, and VCRs that connect to the BoxLight projectors. Problems with these projectors should immediately be communicated to technical staff (Mark Lemon and Jim Langridge for all classrooms except 4069 - Charles Farley). Projection equipment, including portable BoxLight projectors and slide projectors, may also be requested and checked out from the technical staff (Lemon/Langridge).

Thefts of classroom equipment have occurred in the past, so it is critical that you ensure that you leave rooms locked when leaving. Please lock each classroom after use, even if during the middle of the day; don't assume someone will use the room after you.

Research Support Facilities

Research facilities are generally provided by each individual research group; more information can be obtained by the faculty, students, and post-docs already working in these labs. Other research groups may also have equipment that may be useful to you in your research. Lists of major instrumentation are available on the Department's webpage and on webpages for each individual research group. Additional information may be obtained by talking to existing Departmental personnel.

There are also several facilities open to the Department, listed below. Contact the supervisor for access to these:

FACILITY	ROOM	SUPERVISOR
Geosciences Museum	2nd floor	Llyn Sharp
Classrooms	4052, 4069, 5071, etc.	April Newcomer
Electron Microprobe	5067	Dr. Caddick
Thin Section Lab	1085	Greg Norris
Mineral Separation Labs	Prices Fork	Dr. Spotila
Rock Storage	Prices Fork, Wave tank	Dr. Spotila
Scanners, photography	variable	
Large poster printer, printers	1047/1066	Mark Lemon
Computer Classroom	3040	Mark Lemon/April Newcomer
Geophysics field equipment	1047	Mark Lemon
Trimble GPS	4060B	Mark Lemon
X-ray Diffraction	5103	Dr. Johnson
X-ray Fluorescence	5069	
Particle size analyser	1089B	Dr. Romans
Stable isotope laboratory	1089D	Dr. Gill

Geosciences Library and Information Resources

All geoscience library materials are integrated with the main collection of the University Libraries. Most books and journals in the geosciences can be found on the 4th floor (QE call numbers) and 5th floor (TN call numbers) of Newman Library. Geological maps and air photos are located on the 1st and 2nd floor. Library maps showing the layout of each floor are available at <http://www.lib.vt.edu/tour/index.html>.

Online resources include GeoRef, GeoScience World, Web of Science, and many more. A web page listing resources for the discipline is available under "Subject Guides" on the library home page. The library also offers training workshops on using many of these databases. Contact the science reference librarian, Edward Lener lener@vt.edu, for assistance in locating materials or using online resources. For general information and access to electronic journals, go to <http://www.lib.vt.edu>

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Departmental Safety

Departmental safety policies and procedures are described in a separate document, the Departmental Safety Manual, which is available via electronic copy to all students and exists in paper form in the main office. Safety policies are managed on several tiers; university safety policy are created and administered by Environmental Health and Safety Services, which maintains extensive safety documents online.

Department safety is further managed by the Departmental Safety Committee and administered by the Safety Officer, Greg Norris. Laboratory safety for each research group is further administered by the faculty member that is responsible for each lab. Each lab should have relevant safety manuals, chemical hygiene plans, operating procedures, chemical inventories, and waste disposal procedures that lab workers are required to learn and follow. Some labs may also require specialized safety training, such as for radiation safety. Please refer to the Department's Safety Manual for additional information on lab, field, and office safety.

Parking

To park in the commuter lots, you need to display a hangtag permit, which you can purchase from Parking Services at this link <http://parking.vt.edu/> Make yourself familiar with the parking rules.

V. Professional Development and Activities

Graduate Student Liaison Committee

The liaison committee serves as a way for graduate students to communicate issues and ideas to the faculty and administration, as well as for the faculty to learn more about what the needs are and how to improve the graduate experience at VT. If there is a problem with a departmental procedure, or a complaint that all graduate students have but which might never have been expressed to the faculty, the Liaison Committee is the avenue for doing something positive about it. The administration and faculty may not be able to resolve the problem, but communication is the first step and the Liaison Committee is an ideal means of communication between the graduate student body and faculty.

The responsibilities of the Liaison Committee are basically to be well informed regarding what is important to graduate students, and to communicate these to the GSAC. It keeps its ears open to know the hearts and minds of the students and can even arrange for a more formal way to gather feedback such as meetings or surveys. The Liaison Committee meets a few times a year with the departmental administration to chat about issues. The liaisons also may approach the GSAC chair at any time to point out issues, ask questions, etc. The advantage of the committee is that it is tasked with communication as its mission, so that issues can be raised without the students feeling as if they are complaining. Graduate students should tell their complaints to members of the Liaison Committee, who will then communicate that to the administration anonymously.

Membership on the Liaison Committee is selected each year from among volunteers from the graduate student body. Typically at the start of fall semester, a call will go out via the listserv for volunteers, and the committee chair (a returning member from the previous year) will then work to make sure the committee consists of a broad range of students from different backgrounds that represent the diversity of the student body and different core research areas of the department.

Geosciences Student Research Symposium (GSRS)

The Geosciences Student Research Symposium is produced and organized by the students and faculty of the department. The symposium is held on campus and provides an opportunity for your fellow students, the faculty, and the public to learn more about research topics currently being investigated in the geosciences by graduate and undergraduate students. It also provides students with an opportunity to prepare and present professional talks in a friendly atmosphere. Many student advisory committees use the GSRS presentations as a preliminary to the annual student-committee meeting.

GSRS is a student-run activity. The GSRS committee is made up and chaired by graduate students, who organize the program and schedule each year. The GSRS committee is encouraged to confer with the GSRS faculty advisor, Dr. James Spotila, for advice and suggestions.

Participation in GSRS is not required of all students, but is strongly encouraged. Many research advisors require their students to present. The faculty also expects (without formally requiring) that first-year and second-year students, including both MS and PhD candidates, present. First-year students are not generally expected to have research results or data to present, but rather should focus their presentation on a research question or concept, or a research approach to a certain problem that they hope to follow. Presentation of a research topic and methodology is preferred to presenting research that was conducted at another university for a different degree. New graduate students arriving in the spring semester should not feel obliged to present at GSRS. Advanced PhD candidates in the 4th or 5th years are generally expected to not present at GSRS unless they feel specifically urged.

Based on experience, participation in GSRS is an excellent means of developing your skills for public presentation, which will be useful for you in any academic or industry position you may go on to take after graduation. Public presentation of your research is also an excellent vehicle to help organize your research. Many first-year students find that the GSRS exercise is the most instrumental in defining their research projects.

Although giving a GSRS presentation is not strictly required, students should be aware that GSRS is a great way to demonstrate their research progress and aptitude to the faculty. Any student that does not present at GSRS will need to work that much harder to demonstrate to faculty that their research is coming along, which could become an issue if applying for special departmental awards and grants. GSRS presentations may thus be an important consideration in the selection criteria for special funding and awards, although students who did not present at GSRS are still eligible to apply for these awards. A lack of a GSRS presentation will not be a consideration for advanced PhD candidates, who are generally not expected to present.

Although presentation at GSRS is not required, all students are expected to participate in GSRS as far as going to the majority of the talks and participating in the social functions. GSRS is the most important graduate student function in the department each year, and all students should enthusiastically participate.

Seminars

Departmental seminars are held on Fridays from 3:30 to 4:30 p.m. in Derring 4069, with refreshments provided after. Most speakers are from other universities, industry, or governmental organizations. **Graduate students are expected to attend all seminars.** Graduate students are encouraged to suggest names of potential speakers, and are also encouraged to host speakers during

their visits. This is a great way to network; the connections could be very helpful in your research and in your career preparation. There is usually an opportunity for students to meet with visiting speakers for lunch (watch for emails).

Career Planning

There are currently three career mentors; Tom Burbey, Brian Romans, and John Chermak are available to help plan job searches and who coordinate a variety of other job and career-related activities. Dr. Burbey can provide career mentoring in hydrology and environmental consulting. Dr. Romans provides mentoring for jobs in the oil and gas industry. Dr. Chermak works with students on jobs in environmental consulting and mining.

The department is often visited by industry representatives. Many are interested in talking to students for specific internships or permanent jobs. **Students who are even remotely interested in industrial employment, whether in exploration, production, environmental consulting or in industrial laboratories, or who may want only to gain insight into industrial employment opportunities are encouraged to attend presentations and/or signing for interviews.** April Newcomer coordinates these industry visits and the scheduling of interviews. Announcements related to these recruiting activities are electronically sent to all students.

The university has several career fairs during the academic year, starting with the Engineering Expo in mid-September. Many of the companies and federal agencies represented at the fairs may also employ geologists (e.g. mining, energy, environmental). We strongly recommend that you attend these fairs starting early on in your graduate career, so that you have a sense of what types of jobs are available. To prepare for the fairs, you will need an updated resume. You should research companies beforehand to find out what they do, and we also recommend that you practice your “elevator pitch” before attending. Career Services and the Graduate Life Center have sessions on career fair prep. In addition, Career Services, located in the Smith Career Center, is an excellent source of information on career planning.

Professional Societies

Being a member of professional societies should be considered standard for most graduate students, particularly those interested in going into academics or who are seeking jobs. The primary organizations are AGU, GSA, AAPG, SEG, MSA, and AGI. More information on these is available online. Some organizations often offer free membership to graduate students; information will be made available regarding this as needed. Many professional societies also offer reduced journal subscription rates for students. Other organizations that are active in the Department include SGE (Sigma Gamma Epsilon), which is an honor society for geoscientist that is organized by undergraduates. The Geology Club is also managed by undergraduates and has several functions per year, including trips. The Geophysical Society of Virginia Tech promotes geophysics and coordinates seminars and functions. More information on these clubs and societies may be found online.

Expectations of Professional Behavior

As graduate students, you are considered junior colleagues to the faculty: professionals in training. As an MS candidate, you will develop into a professional that is not just a technical employee, but someone that can manage complex projects and take a leadership role that includes analysis and interpretation and communication of results. As a PhD candidate, you will become an

expert and scholar in your field: an independent scientist that can lead others in creative research, mentor and teach, and meet all scholarly challenges.

As junior colleagues, graduate students have high responsibilities regarding professional behavior. First and foremost, never take unfair advantage of another person, be it a professional colleague, student, or coworker. The Department is a fair, family-like environment, and your considerations at maintaining this are very much appreciated. As developing scientists, you also have responsibilities related to academic and scientific ethics and integrity. All graduate students are expected to uphold the Virginia Tech Principles of Community and the Graduate School's Expectations for Graduate Study as well as the scholarly integrity and research ethics standards of their disciplines. Towards this end, graduate students are required to participate in ethics and integrity activities as part of their graduate studies. The Department of Geosciences will offer opportunities for graduate students to engage in activities that promote and strengthen their academic and professional integrity while studying at Virginia Tech. Specific topics that will be addressed are:

1. Plagiarism and other violations of the Graduate Honor Code
2. Proper use of professional conventions in citation of existing research and scholarship, accurate reporting and ownership of findings, and acknowledgement of contributions to the work
3. Ethical standards in teaching, mentoring, and professional activities
4. Appropriate lab procedures and maintenance of lab notebooks and other research documentation
5. Fair use of publications, software, and equipment
6. Guidelines for maintenance of confidentiality (and, where relevant, anonymity) in research
7. Guidelines for determination of authorship
8. Appropriate grant and contract management, including appropriately asserting personnel or program capacities and competencies when applying for grants and contracts
9. Available avenues for reporting alleged misconduct

You are implicitly trusted, so a high level of honor and personal ethics are now demanded of you. This includes areas of academics and honesty in data collection and communication. As graduate students, there is also a high level of expectation with regards to performance and effort. In addition to working hard and being motivated, students are strongly encouraged to be as active as possible in the activities (social and academic) within the Department.

The Graduate School website provides university expectations for graduate students, and has links on more information on expectations for graduate study, the Graduate Honor System (see below), Principles of Community, Code of Student Conduct, and the Office of the Graduate Ombudsperson.

<http://graduateschool.vt.edu/expectations>

The Graduate Honor Code establishes a standard of academic integrity for all graduate students at Virginia Tech. The code is founded on the concept of honesty with respect to the intellectual efforts of oneself and others. Compliance with the Graduate Honor Code requires that all graduate students exercise honesty and ethical behavior in all their academic pursuits at Virginia Tech, whether these undertakings pertain to study, course work, research, extension, or teaching. Graduate students, in accepting admission, indicate their willingness to subscribe to and be governed by the Graduate Honor Code and acknowledge the right of the university to establish policies and procedures and to take disciplinary action (including suspension or expulsion) when such action is

warranted. The home page for the Graduate Honor Code is <http://ghs.graduateschool.vt.edu/>. If you are a GTA; it is useful to know about the undergraduate honor system as well. Its home page is <http://www.honorsystem.vt.edu/>.

Sexual harassment is considered to be a form of discrimination based on sex and falls within the statutory prohibitions against sex discrimination. The university is committed to maintaining a working and a study environment free of sexual harassment. Accordingly, in compliance with Section 703 of Title VII of the Civil Rights Act of 1964 and Title IX of the Education Amendments of 1972, it is the university's policy not to tolerate any verbal, nonverbal, or physical behavior, which constitutes sexual harassment. Personnel with supervisory responsibilities are required to take immediate and appropriate action when incidents of alleged sexual harassment are brought to their attention. Violations of the policy prohibiting sexual harassment may lead to disciplinary actions, including reprimand, suspension, or termination of employment or academic status. Sexual harassment is defined as unwelcome sexual advances request for sexual favors, and other verbal, nonverbal, or physical conduct of a sexual nature when: 1) submission to such conduct is made either explicitly or implicitly a term or condition of an individual's employment or academic decisions, or 2) submission to or rejection of such conduct by an individual is used as the basis for employment or academic decisions; or 3) such conduct has the purpose or effect of unreasonably interfering with an individual's work or academic performance or creating an intimidating, hostile, or offensive working or academic environment. Faculty, staff, students, and applicants for employment or admission with complaints of sexual harassment should contact the University Office of Equity and Inclusion on a confidential basis and request an informal investigation.

Faculty, staff, and students may file formal complaints outside the university. Students may file formal complaints with the Office of Civil Rights of the Department of Education. Faculty may file formal complaints with the Equal Employment Opportunity Commission. Staff may contact the State EEO Office or the Equal Employment Opportunity Commission.

Each student is expected to comply with the alcohol regulations of the Commonwealth of Virginia and the university. Virginia Tech recognizes that the misuse and abuse of alcohol is a persistent social and health problem of major proportion in our society and that it interferes with the goals and objectives of any educational institution. Accordingly, Virginia Tech does not encourage the use of alcoholic beverages and strongly discourages illegal or otherwise irresponsible use of alcohol. Members of the university community are accountable for their decisions regarding their use of alcohol as well as their behavior, which occurs as a result of these decisions. Virginia Tech fully complies with the alcohol regulations of the Commonwealth of Virginia. All state laws apply to Virginia Tech students.

Sometimes conflicts arise between students and advisors, as well as between students. We encourage that individual's first try to resolve differences on their own, but realize that some issues may be complex and may require additional assistance. We have several people in the department who can help resolve conflicts. April Newcomer has years of experience working with students and is a confidante of many of our students. The GSAC is also available for assistance and/or advice regarding conflicts. If conflicts cannot be resolved with the help of April and/or GSAC, students should feel free to contact the Department Head for additional conversation and assistance. If a student would prefer to talk to someone outside of the Department, she/he should feel free to contact the Graduate Student Ombudsperson. The Ombudsperson helps graduate students resolve issues and address concerns provide a resource for and information about institutional policies and

acts as a facilitator to work towards resolutions of graduate students' concerns. More information can be found at: <http://www.graduate.ombudsman.vt.edu/>.

FERPA – Family Educational Rights and Privacy Act of 1974

The Family Educational Rights and Privacy Act (FERPA) (20 U.S.C. § 1232g; 34 CFR Part 99) is a Federal law that protects the privacy of student education records. The law applies to all schools that receive funds under an applicable program of the U.S. Department of Education. For more details click this web page <http://www.registrar.vt.edu/privacy/>

Title IX and the Violence Against Women

Maintaining a campus free of sex discrimination or sexual harassment, including sexual violence is important for all students and employees.

Title IX of the Education Amendments (1972)

prohibits discrimination on the basis of sex in any educational program or activity that receives federal financial assistance (20 U.S.C. § 1681(a)). Title IX prohibits sexual harassment, including sexual violence.

The Violence Against Women (VAWA) Reauthorization Act (2013)

also prohibits sexual assault, domestic violence, dating violence, and stalking. This federal legislation is sometimes referred to as the Campus Sexual Violence Elimination (SaVE) Act.

Virginia Tech [Policy 1025](#) is consistent with the federal law in prohibiting discrimination on the basis of gender, gender identity, and sexual orientation. Policy 1025 also prohibits discrimination based on gender expression. For more details click this web page http://www.hr.vt.edu/oea/title_ix/

Haven Plus

is an online educational program for adults on the important issues of sexual harassment, sexual assault, relationship violence, and stalking. Graduate students are required to take this online program as part of Virginia Tech's new comprehensive prevention strategy and in response to federal guidelines under the [Campus Save Act](#).

Haven Plus is NOT optional <http://www.dsa.vt.edu/onlineprograms/graduate.php>

Diversity.edu

All incoming graduate students (as well as incoming undergraduates) will be asked to complete the module during their first semester on campus. Diversity.edu will provide a common language and knowledge base for extending diversity and inclusion discussions across campus. In August, the Graduate School sends correspondence to all incoming graduate students about the Diversity.edu module.