

# Northwestern | Earth and Planetary Sciences

Graduate Student Guidebook 2023-2024



# Graduate Student Guidebook

## Department of Earth and Planetary Sciences (EPS)

For Students Admitted Academic Year 2023-2024  
Last Revised September 15, 2023

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*The EPS Graduate Guidebook contains department-specific policies and procedures that supplement the rules set by The Graduate School (TGS). Students are subject to the regulations in effect at the time of matriculation. The student is responsible for being aware of these and TGS regulations.*

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## Introduction

This *Guidebook* summarizes the departmental programs and requirements for graduate students in Earth and Planetary Sciences. The Department of Earth and Planetary Sciences (EPS) is part of the Weinberg College of Arts and Sciences (WCAS) at Northwestern University (NU). Names associated with administrative roles are provided in [Appendix F](#).

The academic life of graduate students is guided by the rules of The Graduate School (TGS), the administrative unit for all graduate programs at NU. Each department has its own supplementary rules concerning fulfilling the requirements for graduate degrees. EPS requirements are outlined in this document. Information about university policies relating to graduate students can be found in the following electronic publications:

TGS is located in the Rebecca Crown Center at 633 Clark Street

[www.tgs.northwestern.edu](http://www.tgs.northwestern.edu)

TGS PhD Degree Policies

[www.tgs.northwestern.edu/about/policies/phd-degree-requirements.html](http://www.tgs.northwestern.edu/about/policies/phd-degree-requirements.html)

TGS Academic Services

[www.tgs.northwestern.edu/academics/academic-student-services/index.html](http://www.tgs.northwestern.edu/academics/academic-student-services/index.html)

This website addresses Master's and PhD Degree Requirements, Leaves of Absence, Registration Questions and Problems, TGS Fellowships and Grants, Academic Integrity Policies and Violations, Department Transfers, Withdrawals, Readmissions, Dissertation Formatting and Submission, **Degree Deadlines**, and Awarding of Graduate Certificates, among other things.

TGS Funding Policies

<https://www.tgs.northwestern.edu/academic-policies-procedures/policies/student-funding-policies.html>

Most EPS graduate students receive financial support through the university (stipend and tuition). This website shares regulations that govern recipients of financial support.

NU Student Handbook,

<https://www.northwestern.edu/communitystandards/student-handbook/>

EPS Graduate Student Guidebook

<https://www.earth.northwestern.edu/graduate/graduate-program/graduate-student-guidebooks.html>

Class Schedules and course descriptions are available electronically via the online CAESAR system. You will need a NetID to log in.

[www.northwestern.edu/caesar](http://www.northwestern.edu/caesar)

Graduate students' progress is tracked in the Graduate Student Tracking System (**GSTS**). You will need a NetID to log in.

<https://gsts.northwestern.edu/site/login>

The **EPICENTERS** annual reports might be useful for informally familiarizing yourself with the department

<https://www.earth.northwestern.edu/about/newsletter/>

NU Resources

<https://www.tgs.northwestern.edu/services-support/index.html>

While ample advice is available from faculty and staff to assist students in planning their academic and research programs, ***it remains the student's responsibility to know the University and department rules and meet all the requirements and deadlines.*** If you ever have a question, please remember to check here first.

*Disclaimer:* EPS reserves the right to change without notice any statement in this publication concerning, but not limited to, rules, policies, tuition, fees, curricula, and courses.

### **EPS Foundation Requirements**

All graduate students entering our program must have completed three years (six semesters or nine quarters) of courses in foundational sciences, including Math, Statistics, Physics, Chemistry, Biology, or Earth Science. If this requirement is not entirely met, the student may complete it within their first year in the program.

A formal and documented degree audit at the program's start between the student, the DGS, and the faculty advisor(s) will be implemented to identify necessary foundational course work and formulate an associated course plan for the first year. The Degree audit is ideally completed by one week before course registration opens for incoming graduate students in their first quarter.

All students are encouraged to have or gain literacy in scientific computer programming such as Python (taught in EARTH 361), R (taught in EARTH 390), or another programming language. Note that some EARTH courses *require* programming skills.

### **Spoken English Proficiency**

TGS requires students to be proficient in spoken English before they become teaching assistants, take the Qualifying Examination, or receive a Master's Degree. TGS, along with the Department of Linguistics, will assess incoming international students and recommend taking courses in English as a second language (ESL). No graduate credit is associated with taking these courses.

<http://www.tgs.northwestern.edu/funding/assistantships/graduate-and-teaching.html>

### **PhD Degree Requirements**

As stated under "EPS Foundation Requirements," students in the EPS PhD program who do not meet the EPS foundation requirements must make up this deficiency as soon as possible after admission to the program and before the end of their first year.

The department's specific PhD requirements complement the more general [TGS degree requirements](#) (see Introduction). Besides providing the training necessary for your graduate research, these requirements aim to develop professional breadth and depth.

**The PhD requires a total of 16 courses that should be taken by the 12<sup>th</sup> quarter of the program, of which 13 courses must be taken within the first eight quarters. Please note, and consider in your planning, that few, if any, EARTH courses are taught in the summer quarter.** These courses are as follows:

**Group A)** Six 300-level EARTH courses (Advanced Earth Science Courses);

**Group B)** Zero to four graduate-credit bearing courses, offered by other departments than Earth and Planetary Sciences, in mathematics, statistics, natural sciences, data science, or engineering. Note that all 400-level and most, but not all, 300-level courses fall in this category). Students with a foundation in Earth Sciences are encouraged to take at least two of these non-EARTH courses. (Advanced non-Earth Science Courses);

**Group C)** Four to six EARTH 499 courses (Independent studies) with two different faculty members, taken within the first eight quarters. Recommended pacing is one per quarter with two in the quarter before the qualifying exam. (EARTH 499 Courses).

**Group D)** Zero to six other EARTH courses bearing graduate credit. Additional courses may be considered to fulfill group D by petitioning in writing to the Director of Graduate Studies (DGS) (Other EARTH Courses).

All courses that satisfy these requirements should be graded with regular letter grades (a “Pass” grade does not qualify). The letter grade system employed at Northwestern University, as well as TGS policies on incomplete grades, is explained at:

[www.tgs.northwestern.edu/about/policies/general-registration-policies.html#grades](http://www.tgs.northwestern.edu/about/policies/general-registration-policies.html#grades)

First-year graduate students may take a maximum of half of their total course credits in any given quarter as EARTH 499 (Independent Study). ([www.tgs.northwestern.edu/academics/registration-and-courses.html](http://www.tgs.northwestern.edu/academics/registration-and-courses.html)).

Course registration guidelines are provided in [Appendix C](#).

Some graduate-level courses completed to fulfill PhD requirements (Group A, B, C, or D) may also be counted towards “EPS Foundation Requirements,” if necessary, upon request and written approval from the DGS.

Students need to pass their qualifying examination to advance to PhD candidacy. See the **Qualifying Examination** section for information. In addition, a **dissertation** under the direction of a faculty member and approved by a dissertation committee appointed by the DGS is a requirement of the degree. See the **Final Examination** section for information.

### **Transfer of Credit**

A graduate student who completed advanced coursework before entering the EPS graduate program, such as a student with a Master’s degree, may petition the DGS for a waiver of up to two NU courses required for the PhD in course groups B, C, or D. The student needs to petition for a course waiver within the first two quarters of the program. In special circumstances, the student may also petition for the

transfer of credit to be counted toward some of the six courses in group “A.” The total number of credits that may be approved will not be greater than two courses. In such a case, the student will need to successfully complete a total of 14, not 16, courses.

The department reserves the right to require that a student with a Master’s degree complete the full 16 courses as are necessary for EPS PhD students.

### **Maintaining Status as a Full-Time Graduate Student**

To maintain status as full-time graduate students, students must be registered for *no fewer than three and no more than four course units of credit* authorized for graduate credit per quarter. In rare cases, PhD candidates can request that the DGS permit a fifth credit. Most, but not all, courses carry one unit of credit. Various options for withdrawing from a course during the quarter are available; see TGS general registration policies at: <https://www.tgs.northwestern.edu/about/policies/general-registration-policies.html>

There are *serious consequences* for students who fail to successfully complete the minimum of three course units of credit in each quarter. The student will no longer be considered a full-time graduate student and will not only lose their stipend and tuition but will also be asked to reimburse the university for the portion of the stipend already received by the student for that quarter. Details on what constitutes satisfactory academic progress and the consequences of unsatisfactory progress can be found on the TGS website: <https://www.tgs.northwestern.edu/academic-policies-procedures/policies/satisfactory-academic-progress.html>

Fully funded graduate students (i.e., those receiving a stipend and tuition) are expected to be full-time students carrying out their studies and research. Any additional volunteer or paid commitments outside the department that reach 10 hours per week or more require formal requests and approvals. Please see TGS’ Funding Policies website at <https://www.tgs.northwestern.edu/academic-policies-procedures/policies/student-funding-policies.html> about what to do when presented with volunteer or remunerated opportunities for additional work outside of our PhD program.

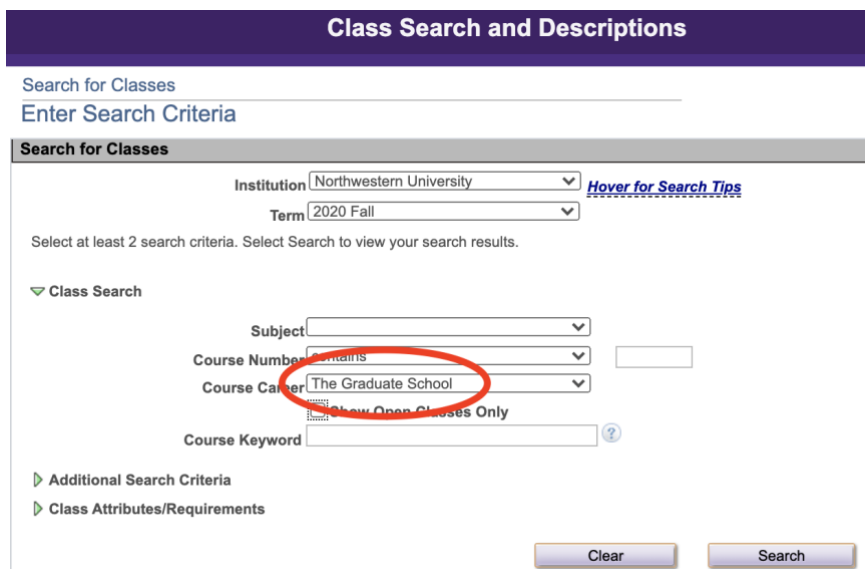
The DGS is available to offer advice and help in difficult situations. However, staying in touch with the DGS while in good standing and reaching out early when things begin to change is far more effective at preventing problems than waiting until the problem arrives.

## Course Credit

Only courses listed in CAESAR under a Course Career of The Graduate School bear graduate credit (see image at right).

In sciences and engineering, typically, all 400-level and most 300-level courses appear in the TGS Course Career section. However, not all 300-level courses bear graduate credit and thus will not appear in the TGS Course Career. Courses with 100 or 200 codes also do not bear graduate credit.

Students taking general-requirement courses to obtain the minimum proficiency levels in mathematics and science must additionally take at least three approved graduate course units of credit each quarter to maintain status as full-time graduate students (which impacts registration and eligibility for financial support).



The screenshot shows the 'Class Search and Descriptions' interface. At the top, there is a purple header with the text 'Class Search and Descriptions'. Below the header, there are two links: 'Search for Classes' and 'Enter Search Criteria'. The main search area is titled 'Search for Classes' and contains several dropdown menus and input fields. The 'Institution' dropdown is set to 'Northwestern University' and has a link 'Hover for Search Tips'. The 'Term' dropdown is set to '2020 Fall'. Below these, there is a instruction: 'Select at least 2 search criteria. Select Search to view your search results.' The 'Class Search' section is expanded, showing 'Subject', 'Course Number', 'Course Career', and 'Course Keyword' fields. The 'Course Career' dropdown is highlighted with a red circle and shows 'The Graduate School' selected. There are also checkboxes for 'Show Open Classes Only' and 'Additional Search Criteria'. At the bottom right, there are 'Clear' and 'Search' buttons.

## Academic Integrity

Students need to maintain and promote academic integrity at all times. The University policies concerning academic integrity can be found at the following sites:

<https://www.northwestern.edu/provost/policies-procedures/academic-integrity/>

<http://www.weinberg.northwestern.edu/undergraduate/courses-registration-grades/integrity/>

<https://www.tgs.northwestern.edu/academic-policies-procedures/policies/academic-integrity.html>

## Responsible Conduct of Research (RCR) Training

All graduate students must complete the Responsible Conduct of Research (RCR) training in their first year in the EPS graduate program. This training course does not contribute to course credit but is mandatory for students engaged in research, which, per definition, includes all graduate students. This training includes online "CITI" modules and face-to-face discussion sessions. New students should contact the Assistant Chair about RCR training.

## Teaching Requirement

Teaching experience is a crucial aspect of graduate student training and is generally required of PhD students during their time in the program. A minimum of two quarters of being a Teaching Assistant over the duration of the PhD program is required.



Graduate student teaching assistants lead discussion or lab sections, grade homework and exams, and occasionally present class lectures. Our students have found teaching experience to be a valuable asset, and potential employers, especially in academia, commonly inquire about the quality of teaching performed by job applicants.

The Searle Centre for Advanced Learning and Teaching provides opportunities for graduate students to develop teaching skills throughout the year

<https://searle.northwestern.edu/programs-services/>

Of particular value is the Quarterly Academic Kickoff held before the Fall and Spring of each year, which all students are required to attend at least once, preferably before becoming a TA for the first time. First year students may attend even if not yet appointed as a TA, but all students entering their second year and those facing their first TA assignments in the upcoming year should register and attend the conference. <https://searle.northwestern.edu/programs-services/programs/program-pages/quarterly-academic-kickoff-events.html>

The Course and Teacher Evaluation Council (CTEC) collects teaching evaluations for completed courses. Evaluations of graduate TA's are included in these reports. CTEC results may be accessed online after final grades for a course have been submitted. With appropriate interpretation, CTEC reports can help improve the quality of teaching.

A teaching portfolio is a commonly required component of the application package for academic positions. Student evaluations of teaching in CTEC's provide this component of a comprehensive teaching portfolio. It is often best to collect CTEC and other materials for a teaching portfolio as they are generated.

### **Research Advisor**

The student identifies a primary research advisor via mutual agreement during the first three quarters in the program. Ways to learn about mutual research interests include reading professional publications from prospective advisors, actively participating in courses taught by potential advisors, attending departmental seminars, asking fellow graduate students about their research, requesting individual discussions with prospective advisors, consulting with mentors, etc. Once the primary research advisor has been identified, the student enters the name of the advisor in GSTS. The student must notify the DGS if in their third quarter they have not yet matched with a primary research advisor. In special cases, the DGS may grant an extension.

After a student is matched with a primary research advisor, the student meets regularly with their primary advisor, shares research progress, and receives research advice. The research advisor often acts as a mentor. However, students are free to also obtain mentoring advice from others, such as members of the student's advisory committee, department leadership, or the DGS. Early in the program, it is important to discuss mutual expectations of the advisor and student roles in this collaboration. Appendix I contains helpful tips for initiating or guiding such a discussion.

If a student and/or primary research advisor believe at any point that the student would be better served by a different primary research advisor, the student may identify another advisor by mutual agreement or must exit the graduate program. In such a situation, the student must immediately contact the DGS,

who will determine a deadline by which the student must identify a new advisor. If the EPS program deems a student to not have been making satisfactory academic progress, the student may be excluded from TGS according to stated policy.

As stated by TGS policy at

<https://www.tgs.northwestern.edu/academic-policies-procedures/policies/phd-degree-requirements.html#dissertation>, the primary research advisor needs to be a member of the NU Graduate

Faculty. Composition of the following program committees also needs to adhere to the above cited TGS policy.

To establish required ad-hoc committees in support of research and academic progress, a graduate student may talk to potential committee members, suggest names of committee members, discuss them with their research advisor and the DGS, then enter the names in GSTS and alert the DGS when they have done so. Upon formal approval by the DGS, the student may formally invite the faculty members and other experts onto the committee.

### Required Committees

A graduate student formally interacts with three different ad-hoc committees:

#### 1. **Graduate Advisory Committee**

This committee is comprised of a minimum of two NU Graduate Faculty members and a minimum of one additional expert in the pertinent field of study. Typically, the student's primary research advisor serves as the chair of the Graduate Advisory Committee. The committee needs to be formed by and meet during the third quarter (typically the Spring Quarter of Year One in the program). At least two members of the committee must be faculty of the department of Earth and Planetary Sciences. At least one member of the committee must not be directly involved with the student's research (e.g., as an EARTH 499 instructor or as a co-author).

Regular meetings between the student and their Graduate Advisory Committee are encouraged. Students are required to at minimum meet synchronously with their full committee in **Spring Quarter Year 1 and annually** in the spring quarters after their qualifying exam. In addition, second and third year students also meet synchronously with their committee in **the first month of the Fall Quarter Year 2**, for receiving feedback on their research proposal, and in **the Fall Quarter of Year 3**, for discussing the student's Individual Development Plan. The Graduate Advisory Committee will advise and provide feedback on the first-year proposal (see below) and administer the qualifying exam

One week prior to the scheduled meeting the student should provide each committee member:

- An unofficial transcript, for pre-candidacy students only;
- An updated *Curriculum Vita* (CV) including activities, awards/honors, publications, and other accomplishments for the reporting period (i.e., since the last committee meeting);
- A self-evaluation;
- A narrative statement on progress and a description of the student's current research topic

- During the Year 2 Fall Quarter meeting, students are asked to submit a draft of a graduate fellowship proposal;
- A list of professional meetings that the student presented research at as well as attendance of non-credit courses, trainings, seminars, workshops, etc.;
- Goals for academic and research progress for the upcoming academic year.

These updates should be included in GSTS under the tab “Academic Progress”, while the student’s CV should be uploaded under the “Documents” tab at <https://gsts.northwestern.edu/site/login>

The information provided by the student will be reviewed by the research advisor and the graduate advisory committee and will be discussed with the student during the annual spring meeting. During the meeting with the student, the committee chair will record the discussion in a brief synopsis to accompany the materials prepared by the student. This synopsis must be entered in GSTS. The student’s research advisor will evaluate the student’s academic progress in GSTS. The committee may ask the student to amend or update the information provided. After the advisory meeting concludes and the student completes requested updates, both the research advisor and the committee chair must approve the student’s record of academic progress for that academic year, which includes the date of the meetings and names of those present at the meetings. In EPS, the research advisor and committee chair are often the same person. ***This system of documentation and approval is a requirement of TGS—failure to file summaries by stated deadlines may result in suspension of departmental financial support.***

***The members of the Graduate Advisory Committee can be changed by request of the student to the DGS. Such requests should be made and approved in writing.***

## **2. Qualifying Examination Committee**

By the beginning of the second year the DGS will appoint a Qualifying Examination Committee. The composition of this Committee is identical to the Graduate Advisory Committee.

## **3. Final Examination Committee/Dissertation Committee.**

Members of this committee read the student’s dissertation, suggest corrections and other enhancements, and conduct the Final Examination, during which the student defends their dissertation and answers questions from the committee members. The composition of this Committee is subject to the same requirements as and may, but is not required to, be the Graduate Advisory Committee.

Members of one or more of these committees can be replaced upon request at any time, but only with written approval from the DGS. New members need to be invited by the student and agree to serve on the committee. Members who will no longer serve on the committee will be informed by the DGS.

## **First-Year Proposal**

Each student will write a primary research proposal due to the advisory committee by the end of Quarter four (typically the first summer) on the topic of their primary proposition, written in consultation with the primary research advisor. The student and qualifying committee must meet in the first month of Quarter five to discuss and provide feedback on all aspects of the proposal. The committee will provide substantive feedback on this proposal, which should be revised for the qualifying exam. The proposal must be well thought-out, carefully written, and edited, and with appropriate

references and illustrations. The scope of the proposed work should be achievable within the timeline of a typical PhD thesis and may range from a single to multiple chapters of work. It may be appropriate to outline field logistics, equipment needs, instrument time, computation needs and other relevant details in an appendix. Guidelines for contents of this proposal can be found in The Qualifying Examination section.

### **The Qualifying Examination**

The Qualifying Exam consists of an oral defense of a primary and a secondary research proposition on different subjects. Students are required to take the Qualifying Examination by the middle (Week 05) of their seventh quarter as a full-time graduate student (typically spring quarter of year 2). Possible outcomes of the examination are: full pass, conditional pass, fail with the option to retake, and outright fail. Students who pass the Qualifying Examination are admitted to PhD candidacy.

The Propositions should be on different subjects, each prepared under the guidance of a different faculty advisor. The topic of both the primary and secondary proposals should be discussed and agreed upon by the graduate advisory committee in the fifth quarter (typically fall Y2). Written propositions should be delivered to the Qualifying Examination Committee not less than ten working days before the examination.

*Primary:* The primary proposition will consist of a research proposal or paper describing a substantive body of scholarship and research derived from the first-year proposal. The student should have command of their research question and hypothesis, the relevant literature, research methods and approaches, and expected outcomes that may optionally include some preliminary analysis of data. The research proposal must provide a concise review of the background literature, and must discuss the proposed problem, its importance, and the methods to be applied to its examination.

*Secondary:* The secondary proposition will also consist of a research proposal or paper describing a substantive body of scholarship, but the topic can be wide ranging including another topic of research in Earth Sciences, scientific communication, a diversity, equity, and inclusion topic, a geoscience education project, or something else approved by the advisory committee.

The qualifying exam is oral and consists of three parts:

1. A presentation of each proposition (no more than 20 minutes duration);
2. An examination of the candidate on the merits of the proposition, including but not limited to the aspects listed in the written proposition; and
3. An examination of any subject matter judged by committee members to be relevant to the student's ability to carry out the proposed research.

The entire examination is typically 2.5 hours to 3.5 hours long. Even though the qualifying examination is open for EPS faculty to attend, regardless of whether they are on the committee, no part of the examination is public.

As soon as practically possible, but no later than the first quarter of their second year in the program, students should submit via GSTS the titles of the two research propositions they will defend in the Qualifying Examination, including the name of the advisor for each proposition. To schedule the Qualifying Exam, students should contact the DGS and update their course work under the "Plan of Study" tab in GSTS, including moving courses into the correct categories. Students can also utilize the Worksheet for PhD Requirements ([Appendix D](#)). The process of preparing for and taking the Qualifying Examination is

detailed in [Appendix E](#). Propositions should be delivered to the Qualifying Examination Committee not less than five working days before the examination. Propositions should be uploaded to GSTS before the Qualifying Examination begins.

After the exam the committee produces an electronic record, in GSTS, of the outcome of the examination, including conditions imposed upon a conditional pass. In the event of a failed examination, the student may be invited to retake the Qualifying Examination no later than one quarter after the original exam. If the committee does not recommend a second exam, the student will be expected to leave the program by the end of the quarter, at which time financial support will cease. In rare, extraordinary cases, for example when the student made substantial progress on a research paper but was unable to finish it because of hardship, the DGS may grant an exception. In the event of a conditional pass, the student is responsible for meeting the conditions and obtaining electronic approval from their primary advisor and committee members. Once the conditions have been met, the student's committee electronically reports this to the DGS, cc-ing other committee members and the graduate student. In the event of an unconditional pass, or once the conditions of a conditional pass are met and have been met and reported, the student needs to submit TGS form "The PhD Qualifying Exam".

Students who pass the Qualifying Examination are admitted to PhD candidacy.

### **Individual Development Plan**

The student will draft and submit an Individual Development Plan (IDP) by Quarter nine (typically Fall Year three) to their committee (see student schedule). The purpose of this plan is to formalize an agreement between the student and committee to 1.) address deficiencies noted in the qualifying exam process, 2.) identify educational and professional development goals and objectives, of the student, and 3.) identify a path to graduation. Once agreement between the student and committee has been agreed upon, the IDP will be posted in GSTS under Documents.

### **The Prospectus (Dissertation Proposal)**

Once a student passes their Qualifying Exam completely and is admitted to PhD candidacy, TGS requires a PhD Prospectus. EPS considers this prospectus to be the ensemble of

1. the two propositions presented by the student at their Qualifying Exam, updated as requested by the Qualifying Examination Committee,
2. the written Individual Development Plan, consisting of the student's draft enhanced with feedback from the Graduate Advisory Committee.

Once the student's Graduate Advisory Committee approves this ensemble, the student needs to submit the PhD prospectus form, formally before the end of their fourth year in the program, but in practice this is often done in year three. A student not meeting this milestone will be considered not in good standing and will not be eligible for fellowships, traineeships, teaching or research assistantships, and scholarships, and may be excluded from TGS.

### **Scientific Communication**

Each Ph.D. Candidate will present their work in a 30+ minute talk in year three, four, AND five. This requirement may be filled either through internal seminar series participation or in external venues. The presentation date, length, venue, and title should be logged in GSTS and reported on at the annual committee meeting.

## **Dissertation Defense**

The dissertation defense (Final Examination) consists of a public presentation of their dissertation work followed by a closed-door defense of that work with the dissertation committee. Members of the department and public may ask questions after the public presentation. After the Final Examination, the committee recommends to pass or fail the student. Usually, but not always, a student passes conditionally upon completing a final set of corrections to the research and/or dissertation.

## **Good Academic Standing & Exclusion Policies**

To be in good academic standing, a student must meet both the standards set by TGS and by the EPS degree program.

(See <https://catalogs.northwestern.edu/tgs/academic-policies-procedures/satisfactory-progress/>).

The following sets of criteria are taken into account by EPS in determining whether or not students are making satisfactory academic progress and are in good academic standing. It is important to note that in some instances the criteria for determining a student's academic standing in EPS are more strict than those established by TGS.

- Grades and cumulative GPA: A student whose overall grade average is below B (3.0 GPA) or who has more than **two** incomplete (Y or X) grades is not making satisfactory academic progress and will be placed on probation by EPS. (Note: This policy differs from TGS, which allows three incomplete grades). A student remains responsible for completing courses with incomplete grades, even if they otherwise satisfy the course requirements of the Ph.D. program.
- Milestone deadlines: Doctoral students who have not been admitted to candidacy (have not passed the Qualifying Examination) by the end of their second year are not making satisfactory academic progress and will be placed on academic probation by EPS. (Note: This policy differs from TGS, which states that students must be admitted to candidacy by the end of their third year.)
- Program length: Doctoral students must complete all requirements for the PhD within **nine** years of initial registration in The Graduate School. Students who do not complete degree requirements by the established deadline will be placed on academic probation by EPS and TGS.
- Failure to make satisfactory academic progress may also be a result of, but not limited to: poor performance in classes, unsatisfactory performance in a qualifying examination, unsatisfactory research progress, unsatisfactory progress in writing the dissertation, failure to communicate with program and/or advisor, failure to have a primary research advisor, or the inability to meet other program requirements (such as proficiency in English).

**Failure to make satisfactory academic progress as determined by either The Graduate School or The Department of Earth and Planetary Sciences will result in probation or exclusion (dismissal).** See [Appendix B](#) for a complete list of degree milestones.

## ***EPS Academic Probation***

When a student fails to meet any of the criteria listed above for maintaining satisfactory academic progress, the student will be placed on probation by the Department of Earth and Planetary Sciences.

When a decision to place a student on probation is made by EPS, the student and TGS will be notified in writing. A student will be given *at most* two quarters to resume satisfactory academic standing. At the end of the probationary period, progress will be reviewed by EPS. If a student does not reestablish satisfactory academic standing, the student will become ineligible to receive financial aid and will be excluded (dismissed) from the program.

### ***TGS's Academic Probation***

When a student fails to meet any of the three sets of criteria established by TGS (see <https://catalogs.northwestern.edu/tgs/academic-policies-procedures/satisfactory-progress/>) for maintaining satisfactory academic progress, the student will be placed on probation by TGS.

TGS will notify the student in writing, along with the program's DGS, and the student will be given *at most* two quarters (not including summer quarter) to resume satisfactory academic standing. TGS notifies students of probation status on a quarterly basis.

During the TGS-imposed probationary period, students will remain eligible to receive federal and institutional assistance (except when they have exceeded their degree deadline or failed to maintain status as a full-time graduate student). At the end of the probationary period, progress will be reviewed by TGS. If a student does not re-establish satisfactory academic standing during the two probationary quarters and does not successfully petition for an extension of the probationary period (see <https://catalogs.northwestern.edu/tgs/academic-policies-procedures/satisfactory-progress/>), the student will become ineligible to receive financial aid and will be excluded (dismissed) from TGS.

***Notification of Termination*** - When a decision to exclude is made, both the student and TGS must be informed of this decision in writing and sent the withdrawal document(s) within three business days. Students should be told clearly the reason(s) for their dismissal, and these reasons must be in line with written program and TGS guidelines.

***Published Appeal Process*** – The appeal process for students who have been dismissed or excluded will follow existing appeal procedures (<https://catalogs.northwestern.edu/tgs/academic-policies-procedures/satisfactory-progress/>). To appeal a program decision, students should submit a request in writing to the attention of the Senior Director of Student Services within ten calendar days of the date of the program's final written determination of exclusion to the student and include any supporting materials at that time. If no appeal is filed within the ten-day period, the program's decision becomes final and not subject to appeal.

### ***Misconduct***

Cases of academic and/or research misconduct, discrimination or harassment, and inappropriate or unprofessional behavior are considered outside the boundaries of "satisfactory academic progress." Resources for these issues can be found here:

TGS Academic Integrity policy:

<https://catalogs.northwestern.edu/tgs/academic-policies-procedures/academic-integrity/>

Office for Research Integrity:

<http://www.researchintegrity.northwestern.edu>

Office of Civil Rights and Title IX Compliance:

<https://www.northwestern.edu/civil-rights-office/>

Student Handbook:

<https://www.northwestern.edu/communitystandards/student-handbook/final-23-24-student-handbook.pdf>

Northwestern University does not discriminate or permit discrimination. [See Appendix G.](#)

Guidelines on scientific integrity and professional ethics are provided by the American Geophysical Union (AGU)'s ethics policy at

[https://www.agu.org/-/media/Files/Learn-About-AGU/AGU\\_Scientific\\_Integrity\\_and\\_Professional\\_Ethics\\_Policy\\_document.pdf](https://www.agu.org/-/media/Files/Learn-About-AGU/AGU_Scientific_Integrity_and_Professional_Ethics_Policy_document.pdf)

### **Recourse:**

EPS is committed to assisting students with a concern, conflict, complaint, or other issue. If a student's advisor, the DGS, and the Department Chairs are unable to provide appropriate assistance, the DGS, Chairs, and/or the Program Assistant will refer the student to a third NU party inside or outside EPS, including two ombuds people, will act as a delegate or intermediary in finding a solution ([See Appendix E](#)).

All University employees are obligated to report sexual misconduct to the University's Title IX Coordinator. Confidential support for a sexual misconduct case can be found via the University's Office of Civil Rights and Title IX Compliance (see <https://www.northwestern.edu/sexual-misconduct/get-help/confidential-support.html>).

### **Financial Support**

Students may be supported during the academic year by University Fellowships, Teaching Assistantships, Research Assistantships, as well as other (e.g., external) Research Grants and Fellowships. Internal awards and appointments are made by TGS acting on the recommendations of the department. Financial support typically provides a living stipend and covers the graduate tuition fees. Continuing financial support in the graduate program is contingent on satisfactory academic progress, which is evaluated each quarter. At least once per year, in the spring, but preferably more frequently, each student's Graduate Advisory Committee meets to review past accomplishments and future plans. At these times, decisions about the continuation of support are made.

- **University Fellowships** are provided by TGS and typically used for first-year graduate students.
- **Teaching Assistantships** (TA) may be assigned to students in any year. Teaching is an essential element of the education and training experience of PhD students at Northwestern. Our teaching requirement, described above, is an integral aspect of professional development.
- **Research Assistantships** (RA) represent a principal source of financial support for students in all years. RAs are contained within research grants to faculty members from external funding sources. RAs are for specific research as described in specific research proposals. Research projects and financial support are arranged by mutual consent of the student and faculty members.



- **Sloss Fellowships** are supported by endowment funds, created to honor the memory of geologist Larry Sloss.

- **Boos Fellowships** are supported by endowment funds, created to honor the memory of geologist Margaret Boos, and provide support to qualified female graduate students.

- **Health insurance** - All graduate students are required by the University to carry health insurance. The Department and TGS subsidize the annual premium for a health insurance plan that is provided through the University, if students remain enrolled as a full-time student through at least October.

**TGS External Award Policy.** TGS strongly encourages every graduate student to apply for Research Grant or Fellowship funding from a source external to the University, some time before the end of their fourth year. Please follow this link for more details: [www.tgs.northwestern.edu/funding/fellowships-and-grants/index.html](http://www.tgs.northwestern.edu/funding/fellowships-and-grants/index.html).

Examples of awards include but are not limited to:

- NSF Graduate Research Fellowship: <https://www.nsfgrfp.org/>
- Fellowships for Graduate Environmental Study: <https://www.epa.gov/research-grants>
- NASA Future Investigators in NASA Earth and Space Science and Technology: <https://science.nasa.gov/learners/learner-opportunities>
- **Diversity Fellowships** from external sources can be found through TGS' funding resources page at: <https://www.tgs.northwestern.edu/diversity/funding-resources/index.html>
- Other fellowships can be found through TGS' fellowship and scholarship information pages at: <http://www.tgs.northwestern.edu/funding/fellowships-and-grants/index.html>

## Taxes

Your funding source may change from quarter to quarter, and on rare occasions even from month to month. At other times, it changes from one year to the next. In some cases, tax advances are automatically withheld from your stipend, and in other cases they are not. If too much is withheld, you will receive a refund after you file your tax return each year before or by April 15. If too little is withheld, you will need to pay when you file your tax return each year before or by April 15.

What can you do?

1. You can voluntarily change the amount of taxes that is being withheld (consult with the NU Payroll Department on how to do so).
2. You can read the information on the TGS web site and ask for clarification if something is not clear: <https://www.tgs.northwestern.edu/funding/taxes/>  
<https://www.tgs.northwestern.edu/funding/taxes/tax-faqs.html>
3. You can try to save some of your stipend to be prepared for tax uncertainties and surprises.

## External Internships

After reflection and consultation with their research advisor, some graduate students dedicate a quarter to undertake a paid internship in an organization or industry unrelated to Northwestern. These students must request approval for a leave of absence from the graduate program during that quarter (by submitting a Petition for Absence TGS form) and will neither enroll in courses nor receive a stipend during that quarter.

## Conference Travel

The primary responsibility for support of student participation in research conferences rests with the student's advisor. However, students who have completed three quarters of full-time registration who will be presenting research at a professional conference or in a seminar may apply for a TGS Conference Travel Grant (see <https://www.tgs.northwestern.edu/funding/fellowships-and-grants/internal-fellowships-grants/conference-travel-grant.html>). Students are eligible to receive one grant up to a posted maximum per fiscal year and are eligible for a maximum of two grants over the entire course of their graduate career. See the [TGS website](#) for further details.

Additionally, TGS travel funds may be further supplemented by up to \$300 from the department of EPS, upon written application to the Department Chair. The application email sent to the Chair and the Business Administrator should include a copy of the research abstract, and be submitted ideally 60 days prior to the conference, but no later than one month beforehand.

For travel to a second meeting, departmental support of up to \$300 may be awarded upon application. In general, students should remind their faculty advisors that conference travel for presenters should be supported by the research grants funding their work. Students may also seek additional funding for conference attendance awarded on a competitive or need basis from sources such as the major professional associations (AGU, GSA, etc.).

**NOTE:** First-year students wishing to present research completed *prior* to arriving at NU must seek travel funds from former advisors or major professional associations such as AGU, GSA, and others.

## Awards

The department recognizes excellent performance in teaching and research by graduate students. Our alumni have generously endowed the *Horace A. Scott Awards* for outstanding research, the *Marion Sloss Award* to an outstanding Teaching Assistant, and the *Graduate Service Award* for positive lasting impact on the EPS community. These awards are bestowed annually at the spring graduation reception.

Students may also be eligible for other National or University awards, and these opportunities should be brought to the attention of the research advisor, the DGS, or the Chair's Office so that nomination of the student may be considered. For example, EPS graduate students have successfully obtained Fulbright and NU Presidential Fellowships.

## **Path to the PhD Degree**

### ***Advising***

The first step in the advising process is for the student to meet with the DGS shortly upon arriving on campus and determine whether all General Requirement prerequisites have been met, and if not, to plan appropriate coursework. A *Worksheet for PhD Requirements* ([Appendix D](#)) is included at the end of this *Guidebook* to aid each student in academic planning. Please upload updated copies of this form to GSTS under the tab “Documents”: <https://gsts.northwestern.edu/site/login>

A generic timetable to the PhD degree is summarized in [Appendix A](#).

Each newly admitted graduate student is assigned an initial faculty adviser based on research interests expressed in the graduate application. The faculty advisor works together with the DGS to provide initial research and curricular consultation. During the first year, students should identify faculty advisors for their two qualifying examination propositions (usually, but not always, the initial faculty advisor becomes the primary dissertation advisor).

Students are encouraged to make progress in research work as soon as possible, and to choose a curriculum that provides needed training for their research. However, course work should also expand one’s knowledge beyond sub-discipline boundaries. Graduate Advisory Committees will assist in guiding each student’s selection of courses.

### ***Dissertation Research***

Students should formally identify the research topic of the PhD dissertation as soon as practically possible after having passed the Qualifying Examination. By that time the PhD candidate should file a brief statement in GSTS identifying the subject matter of the thesis, the name of the primary dissertation advisor, and an outline of the research involved. Submissions are reviewed by the DGS. The statement is not binding on the student as far as the field and nature of the upcoming research are concerned, but any substantive changes in topic or any change of dissertation advisor(s) must be submitted in writing to the DGS as soon as such changes occur.

At the end of the sixth year after matriculation, each doctoral student must submit to TGS a statement of progress and timetable for completion of the dissertation, signed by the student and endorsed by the dissertation advisor.

### ***The Final Examination***

A complete draft of the dissertation must be read and approved by the primary dissertation advisor. The student shall then provide the approved version of the dissertation to all Final Examination Committee members and the EPS Program Assistant not less than 10 days before the Final Examination. The Program Assistant will make the dissertation available for consultation by any member of the department at least one week before the defense.

The Final Examination is an oral presentation held in an open-lecture format, and defense to the committee of the dissertation. Following the presentation, the Final Examination Committee meets to decide on approval of the defense, improvements to be made to the dissertation, and recommendation to confer the degree.

Students who are completing their degree will submit the following TGS forms through GSTS:

- 1) Application for Degree;
- 2) PhD Final Exam Form, which must be approved by the Final Examination Committee and the department;
- 3) National Research Council Survey of Earned Doctorates, which will be sent to you by TGS;
- 4) Online submission of dissertation via UMI ProQuest. [www.etsdadmin.com/cgi-bin/home](http://www.etsdadmin.com/cgi-bin/home)

In order to graduate, it is the student's responsibility to ensure that all graduation requirements of EPS and TGS are fulfilled.

### ***Deadlines and Extensions***

TGS mandates that all requirements for the PhD degree must be met within **nine years** of initial registration in a doctoral program. The Final Examination on a completed dissertation and its subsequent submission to TGS in a required format must fall within this period.

During the period of extension, the student is not required to maintain a full-time graduate student status or register for courses. In this case, the student must register for TGS 513 Resident Research Continuation if a student is supported by a scholarship, needs University health insurance, access to certain University facilities, or must meet registration requirements for foreign students.

### ***Master's Degree***

Students who pass the PhD Qualifying Examination may apply to receive a Master of Science (MS) degree from TGS. Students who do not achieve PhD candidacy by passing the qualifying exam may also earn the MS degree, pending approval of the faculty. In each case, the student must meet requirements for the MS degree established by TGS and EPS. Graduate School requirements are summarized at, and MS degree completion forms are found on, the TGS website at:

<http://www.tgs.northwestern.edu/about/policies/masters-degree-requirements.html>

Departmental requirements for the MS Degree in Earth and Planetary Sciences include the following:

- A) Twelve courses from among those bearing graduate credit in science or engineering.
- B) A Master's thesis approved by the student's Advisory Committee. The thesis is ordinarily the result of Independent Study course work (EARTH 499) taken by the student within the required 12-course total and should be formulated as a manuscript intended for submission to a geoscience journal.

#### ***Note:***

- ***TGS stipulates that no more than one-third of the courses qualifying for credit can be Independent Studies (EARTH 499).***
- ***The EARTH 590 Research is the only EARTH course for which the Pass/No Pass option is acceptable.***

### **Assessment of Learning**

We aim to advance conscientious thought leaders in the Earth and Planetary Sciences

The pillars of our educational platform are **Knowledge, Research Skills, Professionalism, and Communication**. To robustly support these pillars, we propose the following learning objectives. Ph.D. students graduating from our program will be able to:

Accurately represent the state of knowledge within Earth Science broadly and deeply within their own subfield, and think critically and independently within and beyond the Earth Science (*Knowledge*)

- These objectives will be assessed by completion of course requirements, the first-year proposal, qualifying exam process, departmental presentations, and through the writing of scientific publications.

Identify, conceive, and articulate scientific hypotheses and questions and be actors in their science including developing the technical and creative skills necessary to lead, design, and undertake science in their subdiscipline (*Research Skills*)

- These objectives will be assessed during the first-year proposal, the qualifying exam, research presentations in the department and at conferences, and through the production of scientific publications

Be citizens of the scientific community within and beyond EPS, understand and share how EPS contributes to science and society, and be equipped with the skills to earn a living within academia, industry, government, nonprofit, or other sectors (*Professionalism*)

- These objectives will be assessed with the individual development plan, and through active participation in departmental seminars and other events

Communicate scientifically with peers, colleagues, members of other disciplines, and the public as well formally teach undergraduates (*Communication*)

- These objectives will be assessed by the qualifying exam oral presentations, the presentation requirement, presentations at conferences, through the production of scientific publications, and through serving (and being formally evaluated as) a departmental teaching assistant

## Appendix A: Timetable of the PhD Degree

|  |  |
|--|--|
| START  | <p>Upon arrival,</p> <ol style="list-style-type: none"> <li>1) Attend TGS and EPS graduate orientation meetings and</li> <li>2) Degree audit and foundational course completion plan with DGS and advisor.</li> <li>3) Submit top of Worksheet for PhD course Requirements, transcript, and CV to GSTS Documents</li> <li>4) Meet with prospective research advisor and other faculty to discuss research interests.</li> <li>5) Start courses, teaching, and research.</li> </ol> |
| 2 <sup>nd</sup> quarter  | Submit to DGS: Names of members of Graduate Advisory Committee and proposition advisors.   |
| 3 <sup>rd</sup> quarter (typically Spring of year 1)           | <ol style="list-style-type: none"> <li>1) Have first graduate advisory committee meeting</li> <li>2) Submit up to date CV to GSTS</li> </ol>   |
| 4 <sup>th</sup> quarter (typically summer of year 1)           | First year proposal due to committee at end Quarter 4  |
| <b>Quarter 5</b> (typically Fall Year 2)                       | <p>Have graduate advisory committee meeting 2</p> <p>Preparation for Qualifying Exam:</p> <ol style="list-style-type: none"> <li>1) Review First Year Proposal with committee.</li> <li>2) Submit possible titles of research propositions in GSTS</li> <li>3) Submit up to date CV to GSTS</li> </ol>   |
| <b>Quarter 6</b>   | <p>Preparation for Qualifying Exam:</p> <ol style="list-style-type: none"> <li>1) Submit possible titles of propositions</li> <li>2) Evaluate examination preparation strategy with research advisor and/or DGS</li> <li>3) Book a date for Qualifying Examination</li> </ol>  |
| Quarter 7 (typically Spring of Year 2)                         | <ol style="list-style-type: none"> <li>1) Review progress towards course requirements with DGS.</li> <li>2) Submit updated CV to GSTS.</li> <li>3) Complete Qualifying examination no later than the middle of the seventh Quarter.</li> <li>4) Student submits TGS form: PhD Qualifying Exam</li> </ol>   |
| Quarter 9 (typically Fall of Year 3)                           | Individual development plan due to graduate advisory committee   |
| After Quarter 9 and before the end of the 4 <sup>th</sup> year | <ol style="list-style-type: none"> <li>1) Qualifying examination committee must approve that qualifying conditions have been met.</li> <li>2) Submit up to date Individual Development Plan to GSTS</li> <li>3) Once 1 and 2 approved by committee, student submits TGS form: PhD Prospectus</li> <li>4) Form a Final Examination Committee.</li> </ol>  |
| 5 years from start   | <ol style="list-style-type: none"> <li>1) Defend dissertation in Final Examination</li> <li>2) Submit dissertation</li> </ol>  |
| 9 years from start   | Final deadline for completion and submission of dissertation.  |

## Appendix B: Milestones of the PhD Degree

The following milestones, which are tracked within a student's profile in the [Graduate Student Tracking System \(GSTS\)](#), must be met to make satisfactory academic progress within the PhD program:

| <b>Milestone</b>                                 | <b>Description of Milestone</b>   | <b>Deadline (quarters from start)</b> |
|--|---|---------------------------------------|
| Foundation Course Review with DGS                | Meet with the DGS To review your course history and start your plan of study.   | 1                                     |
| 1 <sup>st</sup> -Year Committee Meeting - Spring | Meet with your Committee to review your progress.   | 3                                     |
| Qualifying Topics and Committee                  | Draft and enter two qualifying exam topics in GSTS and setup your qualifying committee.                               | 5                                     |
| Qualifying Exam Status                           | Participate in the qualifying exam  | 7                                     |
| Completion of Coursework                         | Complete course requirements for the PhD degree.  | 7                                     |
| Individual Development Plan                      | Submit approved IDP to GSTS   | 10                                    |
| 3 <sup>rd</sup> -Year Committee Meeting - Spring | Meet with your Committee to review your progress.   | 11                                    |
| TGS Qualifying Exam                              | Pass and complete all conditions of the qualifying exam. Receive approval of the TGS Qualifying Exam form.            | 13                                    |
| 4 <sup>th</sup> -Year Committee Meeting - Spring | Meet with your Committee to review your progress.   | 15                                    |
| TGS Prospectus                                   | Finalize your PhD dissertation research topic. Receive approval of the TGS Prospectus form.                           | 17                                    |
| 5 <sup>th</sup> -Year Committee Meeting - Spring | Meet with your Committee to review your progress.   | 19                                    |
| PhD Dissertation Defense                         | Defend your dissertation  | 20                                    |
| TGS PhD Degree Completion                        | Pass and complete all conditions of the dissertation defense. Receive approval of the TGS PhD Degree Completion form. | 37                                    |

### Appendix C: Course Registration Guidelines

|                        |                 |     |  |
|------------------------|-----------------|-----|--|
| Year 0                 | Summer          |     | Students who start the PhD program in the summer before Year 1 fall quarter, register for TGS 500.   |
| Year 1                 | Fall            | Q1  | Typical enrollment is three or four graded courses, with three required to maintain full time status.<br><br>If a "placeholder" enrollment is required, then it may be possible to register for 1 or more credits of EARTH 590, but typically should only be considered after a core of basic courses have been completed. Written approval from the DGS is required for EARTH 590 registration during the academic year (i.e. not the summer).  |
|                        | Winter          | Q2  |  |
|                        | Spring          | Q3  |  |
|                        | Summer          | Q4  | EARTH 590 for 3 units.   |
| Year 2                 | Fall            | Q5  | Typical enrollment is three or four letter-graded courses, with three required to maintain full time status.<br><br>If the necessary courses for the EARTH PhD program are completed (or not available in present quarter), then registration in EARTH 590 may be possible during the academic year with approval of the DGS.<br><br><b>Qualifying exam to be undertaken in the first month of the Q7 / spring quarter of Year 2.</b>  |
|                        | Winter          | Q6  |  |
|                        | Spring          | Q7  |  |
|                        | Summer          | Q8  | If Qualifying exam passed in Spring Q, then register for TGS 500.<br><br>If the Qualifying exam process and paperwork is not completed, then register for EARTH 590 for the summer Q.<br><br>All requirements of the Qualifying exam are ideally fulfilled in the Spring (7th) quarter, but if the Chair approves a recommendation by the committee for continuation in the summer, then completion of Qualifying exam requirement is typically needed 3 weeks before Fall quarter begins. |
| Year 3                 | Fall            | Q9  | Students with no courses, register for TGS 500.<br><br>Students registering for one course must co-register with TGS 500. Permission from the DGS is required for a student to register for two courses in addition to TGS 500.<br><br>Only students registering for 3 or 4 letter grade courses need not register for TGS 500.<br><br><b>All course requirements for a doctoral program must be completed by the end of the twelfth quarter.</b>  |
|                        | Winter          | Q10 |  |
|                        | Spring          | Q11 |  |
|                        | Summer          | Q12 |  |
| Year 4 +               | Q 13 and beyond |     | TGS 500  |
| If funding terminating |                 |     | TGS 512  |



## Appendix D: Worksheet for PhD Requirements

*All requirements must be completed prior to scheduling the Qualifying Examination.*

|            |              |
|------------|--------------|
| Student    |              |
| Start Date | Current Date |

| REQUIREMENT | COURSES | WHEN TAKEN | GRADE |
|-------------|---------|------------|-------|
|-------------|---------|------------|-------|

**Foundational Requirements:**

|  |  |  |  |
|--|--|--|--|
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

**A) SIX REQUIRED**  
300-level EARTH courses

|    |  |  |  |
|----|--|--|--|
| 1. |  |  |  |
| 2. |  |  |  |
| 3. |  |  |  |
| 4. |  |  |  |
| 5. |  |  |  |
| 6. |  |  |  |

**B) ZERO - FOUR REQUIRED**  
graduate courses in math,  
stats, nat. sci or engineering

|    |  |  |  |
|----|--|--|--|
| 1. |  |  |  |
| 2. |  |  |  |

**C) FOUR - SIX REQUIRED**  
Independent studies in EPS  
(EARTH 499)

|    |  |  |  |
|----|--|--|--|
| 1. |  |  |  |
| 2. |  |  |  |
| 3. |  |  |  |
| 4. |  |  |  |
| 5. |  |  |  |
| 6. |  |  |  |

**D) ZERO - SIX REQUIRED**  
Other EARTH courses

|    |  |  |  |
|----|--|--|--|
| 1. |  |  |  |
| 2. |  |  |  |

*NOTE: Indicate any awarded transfer credits (max. 3) for graduate courses completed elsewhere.*

**PROPOSITIONS**

Advisor \_\_\_\_\_ Title \_\_\_\_\_

Advisor \_\_\_\_\_ Title \_\_\_\_\_

Qualifying Exam Date \_\_\_\_\_

## Appendix E: Administrative Steps for Completing Your Qualifying Exam

Please complete the following steps in preparation for your Qualifying Exam (Quals):

### Fall quarter of your second year

1. Make an appointment with the Director of Graduate Studies (DGS) if you:
  - a) are not planning to take your quals before the midpoint of spring quarter;
  - b) have received course exemptions on account of a prior master's degree; or
  - c) have questions about or run into any problems completing steps 1-3.
2. Confirm that the "Committee" tab in GSTS is up-to-date and that you:
  - a) list at least three qualifying examination committee members under the "Committee" heading;
  - b) list your principal research advisor(s) under the "Advisor(s)" heading AND under the "Committee" heading (if applicable);
  - c) designate one of your committee members with the "Chair" role (if you have two chairs, they should both be labeled as "Co-chair" instead);
  - d) confirm that the chair of the committee and at least one other committee member are Northwestern Graduate Faculty;
  - e) enter any non-Northwestern committee members under the "Non-Northwestern Committee Member" heading so that they are officially invited (through GSTS).
3. Confirm that the "Research Project" tab in GSTS is up-to-date with at least preliminary titles for your two propositions. When your titles are updated/finalized, they should be updated in GSTS.

See Figure A below for an example "Committee" page:

### Winter quarter of your second year

1. Work with your committee to schedule your qualifying exam in the first half of spring quarter.
2. Update proposition titles in GSTS (if applicable)

### One week prior to the scheduled exam

1. Submit a “PhD Qualifying Exam” form under the “TGS Forms” tab in GSTS.
2. Upload two proposition documents to GSTS under the “Documents” tab under the “Milestones” heading. (See Figure B below).
3. Provide each committee member with:
  - a. the two proposition documents (list advisor name for each proposition in the pertinent document),
  - b. an unofficial transcript (find this on your GSTS profile page by clicking on “unofficial grade report”—see Figure C below);
  - c. an updated *Curriculum Vita* (CV) including activities, awards/honors, publications, and other accomplishments for the reporting period (i.e., since the last committee meeting);
  - d. a self-evaluation that includes:
    - i. a narrative statement on progress and a description of your current research topic;
    - ii. a list of professional meetings at which you presented research at and/or attendance of non-credit courses, trainings, seminars, workshops, etc.;
    - iii. Goals for academic and research progress for the upcoming academic year.

### Following your qualifying exam

1. Complete all conditions of your qualifying exam. Once complete, your committee can sign off on the approval of your “PhD Qualifying Exam” form (this can take up to a year).
2. Draft, discuss with committee, revise, and submit Individual Development Plan to GSTS
3. Once Step 1 and 2 are complete, submit a “PhD Prospectus” form under the “TGS Forms” tab in GSTS.

Figure A: How to enter members in the “Committee” tab in GSTS

### Advisor(s)

I have an advisor.  
 No  Yes

The **Principal Research Advisor** (also known as mentor, PI, dissertation director, advisor) is the Graduate Faculty member who works with the student to develop a research topic, formulate ideas and structure for, and guides the progress of the thesis/prospectus/dissertation. A student may have a **Principal Research Co-Advisor** who also works with the student to develop a research topic, formulate ideas and structure for, and guides the progress of the thesis/prospectus/ dissertation. Students may have other types of advisors, such as a program advisor or training grant director. Advisors may be listed in multiple categories, if appropriate.

Search faculty...

| Faculty Name              | Role                       | Invitation? | Accepted? |
|---------------------------|----------------------------|-------------|-----------|
| Name of Principal Advisor | Principal Research Advisor |             |           |

1 record(s)

### Committee

I have formed a committee.  
 No  Yes

The **Committee** has expertise in and informs the student's area of research. It serves as a reader of the thesis, prospectus, or dissertation, and determines the outcome of the proposal defense/final exam. The Graduate School sets minimum requirements regarding composition of the master's committee and PhD committee for prospectus and final exam. Programs may have additional requirements.

#### Northwestern Faculty

Search faculty...

| Faculty Name                | Role             | Invitation? | Accepted? |
|-----------------------------|------------------|-------------|-----------|
| Name of NU Graduate Faculty | Committee Member |             |           |
| Name of Principal Advisor   | Chair            |             |           |

2 record(s)

In order for **Non-Northwestern Committee Members** to join your committee you must follow the steps below:

1. Add your Non-Northwestern committee member(s).
2. Notify your advisor(s)/program office of your Non-Northwestern committee member(s). If your program is using GSTS communications, a notification will be sent to your advisor(s)/program office.
3. The program office will complete the setup for your Non-Northwestern committee member(s).
4. Once the program office has completed setup for your Non-Northwestern committee member(s), the setup complete field will be marked 'yes'.
5. Now that their setup is complete they may access GSTS. If your program is using GSTS communications, your Non-Northwestern committee member(s) will be included in the committee invitation mailing list and you may send them invitations to join your committee.

#### Non-Northwestern Committee Member

| Faculty Name                    | Role             | Setup Complete | Invitation? | Accepted? |
|---------------------------------|------------------|----------------|-------------|-----------|
| Name of non-NU Committee Member | Committee Member | Yes            |             |           |

1 record(s)

Figure B: Where to upload your proposition documents in GSTS

Dashboard Committee Plan of Study Academic Progress Research Project **Documents**

## Documents for **G15PH**

### Guidelines for Document Management

Documents added to GSTS are accessible to the student and those with access to the student's GSTS record. For please consult the [Retention of University Records policy](#).

Manage Documents Upload Documents

#### Student Documents

Expand All

- ▶ General
- ▼ **Milestones**
- ▶ Plan of Study
- ▶ Academic Progress

| Document Name                          | Uploaded | Updated | Notes (255 max) |
|--|----------|---------|-----------------|
| Upload both proposition documents here |          |         |                 |

2 record(s)

Figure C: Where to get an unofficial transcript in GSTS

PROFILE INFORMATION (edit) UNOFFICIAL ADVISING TRANSCRIPT **UNOFFICIAL GRADE REPORT** MILESTONES

## Appendix F: EPS Program Administration

| Position                           | Name             | Office                     | Phone        | E-mail*                |
|------------------------------------|------------------|----------------------------|--------------|------------------------|
| Department Chair                   | Matt Hurtgen     | F392/393                   | 847-491-7539 | <i>matt@earth.</i>     |
| Director of Graduate Studies (DGS) | Andrew Jacobson  | F396/398                   | 847-491-8183 | <i>adj@</i>            |
| Assistant Chair                    | Patricia Beddows | F295/296                   | 847-491-7460 | <i>patricia@earth.</i> |
| Business Administrator             | Lisa Collins     | F377                       | 847-467-1002 | <i>lisa@earth.</i>     |
| Graduate Program Assistant         | TBD              | F374                       | 847-467-2976 |                        |
| Program Assistant                  | Leana Yonan      | F374                       | 847-491-3238 | <i>leana.yonan@</i>    |
| Financial Assistant                | TBD              | F279                       | 847-491-8190 |                        |
| NU ombudsperson                    | Sarah Klaper     | 555 Clark St.<br>Suite 209 | 847-467-2430 | <i>ombuds@</i>         |

\* e-mail addresses all end in "northwestern.edu".

## Appendix G: Nondiscrimination Statement

Northwestern University does not discriminate or permit discrimination by any member of its community against any individual on the basis of race, color, religion, national origin, sex, pregnancy, sexual orientation, gender identity, gender expression, parental status, marital status, age, disability, citizenship status, veteran status, genetic information, reproductive health decision making, or any other classification protected by law in matters of admissions, employment, housing, or services or in the educational programs or activities it operates. Harassment, whether verbal, physical, or visual, that is based on any of these characteristics is a form of discrimination. Further prohibited by law is discrimination against any employee and/or job applicant who chooses to inquire about, discuss, or disclose their own compensation or the compensation of another employee or applicant.

Northwestern University complies with federal and state laws that prohibit discrimination based on the protected categories listed above, including Title IX of the Education Amendments of 1972. Title IX requires educational institutions, such as Northwestern, to prohibit discrimination based on sex (including sexual harassment) in the University's educational programs and activities, including in matters of employment and admissions. In addition, Northwestern provides reasonable accommodations to qualified applicants, students, and employees with disabilities and to individuals who are pregnant.

Any alleged violations of this policy or questions with respect to nondiscrimination or reasonable accommodations should be directed to Northwestern's Office of Equity, 1800 Sherman Avenue, Suite 4-500, Evanston, Illinois 60208, 847-467-6165, [equity@northwestern.edu](mailto:equity@northwestern.edu).

Questions specific to sex discrimination (including sexual misconduct and sexual harassment) should be directed to Northwestern's Title IX Coordinator in the Office of Equity, 1800 Sherman Avenue, Suite 4-500, Evanston, Illinois 60208, 847-467-6165, [TitleIXCoordinator@northwestern.edu](mailto:TitleIXCoordinator@northwestern.edu).

A person may also file a complaint with the Department of Education's Office for Civil Rights regarding an alleged violation of Title IX by visiting [www2.ed.gov/about/offices/list/ocr/complaintintro.html](http://www2.ed.gov/about/offices/list/ocr/complaintintro.html) or calling 800-421-3481. Inquiries about the application of Title IX to Northwestern may be referred to Northwestern's Title IX Coordinator, the United States Department of Education's Assistant Secretary for Civil Rights, or both.

## Appendix H: Acronym Glossary

|             |  |
|-------------|--|
| <u>AGU</u>  | <u>American Geophysical Union</u>            |
| <u>CTEC</u> | <u>Course and Teacher Evaluation Council</u> |
| <u>CV</u>   | <u>Curriculum Vitae</u>                      |
| <u>DGS</u>  | <u>Director of Graduate Studies</u>          |
| <u>EPS</u>  | <u>Earth and Planetary Sciences</u>          |
| <u>GSA</u>  | <u>Geological Society of America</u>         |
| <u>GSTS</u> | <u>Graduate Student Tracking System</u>      |
| <u>IDP</u>  | <u>Individual Development Plan</u>           |
| <u>NU</u>   | <u>Northwestern University</u>               |
| <u>RA</u>   | <u>Research Assistantship</u>                |
| <u>RCR</u>  | <u>Responsible Conduct of Research</u>       |
| <u>TA</u>   | <u>Teaching Assistantship</u>                |
| <u>TGS</u>  | <u>The Graduate School</u>                   |
| <u>WCAS</u> | <u>Weinberg College of Arts and Sciences</u> |



## Appendix I: Advisor-Student Collaboration

We encourage all students to have a discussion with their initial faculty advisor soon after beginning in our program. The discussion's goal is to prepare you for an honest, mutually invested, and transparent collaboration with your advisor, for example by clarifying expectations for progressing in the program, identifying effective styles of communication and collaboration, facilitating the discovery of strengths and weaknesses, aligning goals, and more. The discussion will facilitate mutual understanding while in some cases it could lead to a formal advisor-student contract.

Here are some things for you (as an advisee) to consider before the discussion:

- Why do I want or need an advisor and/or mentor? Consider encouragement, support, perspective, experience, working with group members, confidence, feedback, challenges, priorities, opportunities, knowledge, etc.
- What do you look forward to when working with your advisor and/or mentor? Consider exploration, discovery, regular progress check-ins, reflections, learning, honest criticism, guidance for research and career choices, the importance of my field and research, technical skills, expanding knowledge, preparing my future, imagining, etc.
- What do you *not* want from your advisor and/or mentor? Consider inappropriate comments or conversations, meeting in non-professional or closed-door settings, sharing intimate aspects of our lives, too much guidance, too little guidance, sharing confidential information, requesting you to not have other mentors, etc.
- What is my communication style and what style do I respond to? Consider what you focus on, what you typically want to know or share, how you respond to stress, what you need or like, etc.
- How do you hope your advisor/mentor will help you with your graduate education or future job opportunities? Consider the sharing of information about opportunities and job openings, introductions to other professionals and networking, transferable skills, suggestions for independent work, demystify academia, etc.