



# TEXAS TECH UNIVERSITY

## Department *of* Geosciences

### **Graduate Student Handbook** **MS in Geoscience, including concentration in Geophysics**

**August 2025**

#### **Table of Contents**

Welcome statement and useful links	2
Guidelines for the Master's Program in Geosciences	3
M.S. Program Timeline	6

Dear Graduate Student,

This document describes the academic requirements and recommended timelines for completion of a Master of Science (M.S.) in Geosciences at Texas Tech University.

Admitted students should associate themselves with a faculty member by the end of their first semester in residence. This Faculty member is expected to serve as the student's principal advisor and will be responsible for supervising a student's degree program.

The department welcomes students with non-Geoscience bachelor degrees to enroll in the Geosciences graduate program. Leveling requirements will be determined on a case-by-case basis, and be decided by the Graduate Committee in conjunction with perspective faculty supervisors. A graduate minor may be taken either inside or outside this department.

The Graduate Committee in the Department of Geosciences is committed to helping you navigate the program. However, ultimately individual students are responsible for making timely progress in the program and being aware of the benchmarks to be met, and the timeline for their completion.

Department policies for the completion of graduate degrees are generally based on general Graduate School requirements, it is therefore important that Graduate degree-seeking students familiarize themselves with the overarching requirements of the Graduate School, and remain up-to-date on changes in Graduate School policies and deadlines, which vary from semester to semester. To assist you with complying with various Graduate School requirements, important web-site links are provided below:

[The Graduate School \(http://www.depts.ttu.edu/gradschool/\)](http://www.depts.ttu.edu/gradschool/)

[Graduate School guidelines for students pursuing a Master's with Thesis \(http://www.depts.ttu.edu/gradschool/academic/masters\\_thesis.php\)](http://www.depts.ttu.edu/gradschool/academic/masters_thesis.php)

Graduate Committee  
Department of Geosciences  
Texas Tech University

## Master's Program in Geosciences: Guidelines

For additional information, the reader is referred to the TTU Graduate Catalog (<https://catalog.ttu.edu/content.php?catoid=13&navoid=1333#master-s-program>)

### 1. LEVELING

- i. All incoming M.S. students in Geosciences at Texas Tech University are expected to have completed mathematics and science courses equivalent to those required for the B.S. degree in Geosciences at Texas Tech University. Students lacking appropriate mathematics and science courses will be required to enroll in courses for leveling purposes. Courses completed to fulfill leveling requirements will not be applied towards the MS degree.
- ii. Students entering the master's program with a B.S. in a subject other than Geosciences may be asked to enroll and complete a selection of geoscience courses recommended by their supervisor and the Graduate Committee. Courses completed to fulfill leveling requirements will not be applied towards the MS degree, unless they carry graduate credit.
- iii. While fulfilling any leveling requirements, a new M.S. student is free to take graduate courses in the Department of Geosciences that are part of their degree plan so long as they have fulfilled any pre-requisites and have the permission of the instructor.

### 2. COURSE WORK

#### *Requirements:*

- i. A total of **thirty** credit hours are required for the MS degree in Geosciences: See [https://catalog.ttu.edu/preview\\_program.php?catoid=23&poid=15671&hl=geosciences&returnto=search](https://catalog.ttu.edu/preview_program.php?catoid=23&poid=15671&hl=geosciences&returnto=search).
- ii. Of the required thirty hours, **twenty-four** hours must be credit hours earned through the completion of *named* graduate course work of instructor-led lecture, including named GEOL/GPH/GCH 5300 courses and laboratory courses.
- iii. Each student is required to enroll and complete GEOL 5101 – *Graduate Seminar* as early as possible in their degree plan, preferably during the first Fall semester in residence.
- iv. **A minimum of six** hours of graduate Master thesis (GEOL 6000) must be completed and will be counted towards the MS degree in Geosciences
- v. Up to a total of **six** hours of graduate course work in related fields of science outside of the Department of Geosciences (e.g., engineering, mathematics, computer science, geographic information sciences, and related disciplines) may be applied towards the **twenty-four** hour course requirement. Students should consult with their supervisor and the Graduate Program Director (GPD) to check the appropriateness of external courses, including possible exception beyond 6 credit hours.
- vi. Graduate students supported by the department, including grant-supported Research Assistants, are required to register for 9 credit hours per long semester (3 credit hours per summer session of support). Students, who are self-supported and wish to be considered as full time students, must register for at least 9 credit hours per long semester.

Summary of Requirements for the MS degree:

Named Courses* + GEOL 5101 Graduate Seminar	24 hours
<u>GEOL 6000 Thesis (second year)</u>	<u>6 hours</u>
Total	30 hours

\*May take up to 6 hours of courses outside the Department of Geosciences courses.

*Geographic Information Science and Technology (GIST) Graduate Certificate*

([https://catalog.ttu.edu/preview\\_program.php?catoid=2&poid=1162&returnto=404](https://catalog.ttu.edu/preview_program.php?catoid=2&poid=1162&returnto=404))

In addition to a MS degree in Geosciences, students may seek to obtain a GIST Graduate Certificate. Four graduate courses with a total of 12 credit hours are required for the Certificate (assuming students have an introductory course in GIST completed). However, only 6 of the 12 credit hours, excluding GEOL 5341: Digital Imagery In Geosciences, may count toward the 24 credit hr. requirement of the MS Geosciences degree.

Summary of Requirements for the MS degree with GIST Certificate:

Named Courses* + GEOL 5101 Graduate Seminar	24 hours
GIST Certificate courses	6 (=12-6) hours
<u>GEOL 6000 Thesis (second year)</u>	<u>6 hours</u>
Total	36 hours

\*May include up to 6 hours of GIST Certificate courses. The remaining from the Department of Geosciences (GEOL, GPH, GCH) courses

3. THESIS SELECTION & THESIS COMMITTEE FORMATION

*Procedures:*

- i. PRELIMINARY FACULTY ADVISOR SELECTION: Before starting their first long semester in the M.S. program, incoming MS students must contact a faculty member from the geosciences discipline, in which the student is interested in pursuing thesis research. A selection of courses for the first semester of study must be made.
- ii. PRELIMINARY THESIS COMMITTEE FORMATION: During the first long semester, the student should identify a thesis advisor and form Provisional Thesis Committee, comprising a minimum of three faculty members (i.e. thesis advisor and two additional committee members). In consultation of a thesis advisor, the student must prepare an outline of courses to be taken during their MS program based on the Graduate Course rotation list.
- iii. It is the student's responsibility to initiate identifying a topic for the master's thesis. The thesis topic *must* involve the collection and analysis of geoscience data, and requires original research by the student. The thesis topic should be chosen no later than the end of the first semester.

- iv. FINALIZE THESIS COMMITTEE, DEGREE PLAN AND THESIS PROPOSAL. Prior to the end of the student's second long semester, the student will finalize their thesis committee. The thesis committee may, but not necessarily, comprise the Provisional Thesis Committee.
- v. Before the start of a student's second year of study, a thesis proposal should be prepared, distributed, and approved by **all** committee members. If the thesis proposal is not completed by the beginning of the third long semester, then your funding support may be reconsidered by the Department.

#### 4. MASTER'S THESIS

Visit *Graduate School: Master's Program*

(<http://www.depts.ttu.edu/gradschool/academic/MastersPrograms.php>)

- i. Upon completion of the above steps student may enroll in GEOL 6000 – MS thesis in the third long semester. ***Students must be continuously enrolled in GEOL 6000 after the first semester of registration.***
- ii. Expected Semester of Graduation: Approximately 2 months prior to the start of their intended semester of graduation, the student will ensure that their expected semester of graduation in their enrollment services account (Degree Works) is accurately listed.
- iii. Apply to Graduate: Students should inform the Graduate School of their intent to graduate as per Graduation schedule deadlines for anticipated semester of graduation. This deadline is approximately within couple of weeks after the start of the semester of graduation. Upon submission of an intent to graduate (Apply to Graduate) the Graduate School will initiate a degree audit.
- iv. Defense Notification. At least 3 weeks prior to your defense date, students initiate Defense Notification form that has to be submitted by their department.
- v. Theses should be prepared and formatted according to the guidelines provided by the Graduate School. Templates are available from the website ([https://www.depts.ttu.edu/gradschool/academic/thesis\\_diss/forms/TDforms.php](https://www.depts.ttu.edu/gradschool/academic/thesis_diss/forms/TDforms.php)) describing the Electronic Thesis & Dissertation (ETD) Submission process. If there are any questions, unusual formatting requirements of potential special considerations, obtain approval of the Graduate School *before* preparing the copies of the thesis.
- vi. Complete thesis (text with all figures and illustrations) should be distributed to all committee members at least two weeks prior to the date of the thesis defense. Note that for graduation in a particular semester there is a date by which the defense must occur to meet Graduate School deadlines for reporting examination.
- vii. Announcements of the time and place of the defense should be posted around the department two weeks prior to the defense date.
- viii. The Graduate Program Director (GPD) may select a member of the Graduate Faculty to chair their thesis defense. The chair of the defense is an impartial participant in the process and is responsible for introducing the candidate before their public presentation, and chairing the two portions of the question and answer session. The chair's primary role is to ensure a fair and impartial discussion occurs between the candidate, audience and thesis committee.

- ix. The thesis defense has two parts. First, the candidate will make a public presentation of their thesis research. The presentation should be approximately 30 minutes in length, followed by the audience's questions. Thereafter the candidate is examined by members of the thesis committee and members of the Graduate Faculty.
- x. After thesis approval, the document should be appropriately formatted and submitted to the Graduate School for archiving in the Texas Tech libraries via the ETD system.

#### Continuous Enrollment requirements

- Students who have begun Master's thesis (GEOL 6000) must enroll in at least 3 credit of GEOL 6000 every semester and at least 1 hr in one summer session until their term of graduation. A student may apply for an off-campus exemption, requiring only 1-hour of enrollment.
- In the semester of their thesis defense and graduation, Master students must be registered for 3 credit hours of GEOL 6000.

#### **M.S. Program Timeline**

Visit *Graduate School: Master's Program*

(<http://www.depts.ttu.edu/gradschool/academic/MastersPrograms.php>)

#### **STEP 1. PRIOR TO FIRST LONG SEMESTER.**

- Meet and discuss with potential faculty member(s) in the area of your research interests
- Register for first semester courses and discuss your thesis topics.

#### **STEP 2. DURING FIRST LONG SEMESTER.**

- Identify a thesis advisor and form Provisional Thesis Committee.

#### **STEP 3. DURING SECOND SEMESTER**

- Finalize thesis topic and thesis committee

#### **STEP 4. BEFORE THE START OF THE SECOND YEAR.**

- Prepare and submit a thesis proposal for thesis committee approval.
- Submit approved thesis proposal to the Graduate Program Director (GPD).

#### **STEP 5. DURING THIRD LONG SEMESTER.**

- Begin enrollment in GEOL 6000: Thesis.
- Check "Expected Semester of Graduation" in DegreeWorks and update if needed.
- File "Apply to Graduate" prior to University deadline (Check deadline on Graduate School website)

#### **STEP 7. FOURTH SEMESTER.**

- Degree Audit will be initiated by the Graduate School
- Schedule Defense and file *Defense Notification Form* (Check deadline on Graduate School website)

- Two weeks prior to defense provide copy of thesis to committee.
- Two weeks prior to defense post announcements in the department
- Stand for Defense
- Submit *Oral Defense and Thesis-Dissertation Approval Form* to graduate school with signature of all committee members (Check deadline on Graduate School website)
- Revise thesis as directed by the committee
- Pay thesis-dissertation fee
- Submit pdf of thesis on ETD