

DEGREE PROGRAM HANDBOOK  
**MASTER OF SCIENCE DEGREE IN GEOSCIENCES**

GRADUATE CATALOG 2023-25

DEPARTMENT OF EARTH AND PLANETARY SCIENCES

UNIVERSITY OF TEXAS AT SAN ANTONIO

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## I. INTRODUCTION

The Graduate Handbook for the Master of Geosciences degree is a guide to policies, requirements, and procedures that govern graduate study in the Department of Earth and Planetary Sciences (EPS). EPS interfaces with the UTSA Graduate School, which publishes “Master’s Degree Regulations” (<http://utsa.edu/gcat/chapter4/MastersDegReg.html>), an important document with which you should be familiar. The Graduate School encourages departments of the University to build graduate programs that are sufficiently rigid to assure uniformly high standards and yet flexible enough to provide the best possible education for individual students. This handbook supplements the material set forth in the Graduate Catalog. Petitions for exceptions to the requirements may be submitted in writing to the Graduate Advisor of Record (GAR) for the graduate program for consideration by the Graduate Studies Committee.

## II. GRADUATE STUDY

Graduate study involves far more than meeting a series of regulations and deadlines, the last of which is recognized by the award of the degree. Attaining specific goals at appropriate times is an important element in the development of a skilled and productive scientist, but it does not define the educational process of seeking an advanced degree. Graduate study requires the development of a disciplined, questioning mind and by pursuing a graduate degree, there is the opportunity to cultivate intellectual abilities to develop the foundation, independence, intellectual curiosity, and self-discipline necessary for productive scholarship.

The education of a scholar involves transition. It begins with the building of a firm foundation and proceeds to a stage in which knowledge is extended through research. This transition occurs as the scholar develops and does not result simply from the passage of time. It should begin early in the scholar's career and be marked by a change from accepting to questioning scholarly authority. It is marked by a change from a dependent to an independent approach to education. The change requires the individual to develop and extend intellectual curiosity. The degree to which one possesses and exercises intellectual curiosity determines in large part one's ultimate success as a scholar.

## III. DEGREE REQUIREMENTS FROM GRADUATE CATALOG

### A. COURSEWORK REQUIREMENTS

The Masters of Geosciences degree can be earned in two years through a thesis or non-thesis option, which have specific coursework requirements. The thesis option is for students who wish to engage in a research experience of significant scope and develop expertise in research techniques and data analysis through conducting an independent research project. The thesis option is recommended for students who plan a career in research or anticipate pursuing a doctoral degree. The non-thesis option is best for those who want to earn the degree primarily through organized coursework. The research experience embedded in this option is of a more limited scope compared to that associated with a thesis project. It is possible to switch from a thesis to a non-thesis option or vice versa. However, any switch needs to be done early in the degree program, preferably in the second or early third semester, to meet the completion guidelines. Each student devises a program of study in consultation with their supervisor and

other graduate committee members based on the option selected but keep in mind that the Graduate Advisor of Record must approve this program of study.

### **1. Coursework for Thesis option**

Required courses: 14 credit hours

- a) GEO 5103 Current Topics in the Geosciences (3 credit hours; first fall semester)
- b) GEO 5113 Research Design in the Geosciences (3 credit hours; first spring semester)
- c) GEO 5991 Graduate Seminar in Geosciences (1 credit hour; taken twice)
- d) GEO 6983 Master's Thesis (6 credit hours; required enrollment in the semester of graduation)

Elective coursework: 16 credit hours with adherence to two limits:

- a) Up to 6 credit hours of GEO 6953 Independent Study or GEO 6973 Directed Research or a combination can count toward electives
- b) Up to 6 credit hours of upper-division undergraduate course (with pre-approval by GAR, Chair, Dean) can count toward electives

### **2. Coursework for Non-Thesis option**

Required courses: 11 credit hours

- a) GEO 5103 Current Topics in the Geosciences (3 credit hours; first fall semester)
- b) GEO 5113 Research Design in the Geosciences (3 credit hours; first spring semester)
- c) GEO 5991 Graduate Seminar in Geosciences (1 credit hour; taken twice)
- d) GEO 6973 Directed Research (3 credit hours)

Elective coursework: 25 credit hours with adherence to two limits:

- a) Up to 6 credit hours of upper-division undergraduate courses (with pre-approval by GAR, Chair, Dean) can count toward electives
- b) GEO 6961 Comprehensive Exam (1 credit hour) does not count toward degree requirements. This course is taken only if no other courses are taken in the semester when the Comprehensive Examination is taken.

## **B. PROPOSAL FOR THESIS RESEARCH**

A research proposal is a plan for carrying out a specific research project. For the thesis option, this proposal will be developed in consultation with the supervising faculty member as well as other members of the supervisory committee. Prior to the collection of observations for a thesis project, the student must develop and defend a plan for carrying out the thesis research. The written proposal is circulated to members of the supervisory committee and then subsequently defended in front of them, starting with a 20-minute oral presentation that outlines key points of the research and its plan. More details can be found at: <https://www.utsa.edu/sciences/earth-planetary-sciences/resources/GeosciencesThesisDefense.pdf>. A form to use for scheduling a thesis proposal defense, which is open to all interested parties, can be found in the appendix.

The document content must cover seven key components as follows:

1. Background knowledge that critically summarizes what is known about a scientific problem and identifies gaps in knowledge.
2. A problem statement that articulates the knowledge gap that the research will address plus research questions or aims and hypotheses that will be tested.

3. The significance of the research topic in the subfield and/or discipline
4. A detailed methodology outlining the strategy for data collection and analysis and formal testing of hypotheses
5. Preliminary results if any
6. Expected results and how they are anticipated to contribute to the advancement of the science or application to societal needs.
7. Timeline for completing the research.
8. References cited

## C. EXAMINATION

Students must pass a comprehensive exam as part of the degree requirements. If it is not passed the first time, a second attempt can occur in a subsequent semester when enrolled as a student.

### 1. Comprehensive Exam for Thesis Option

The defense of the thesis document constitutes the comprehensive exam for the thesis option. This is an oral exam taken in front of the supervisory committee after the thesis document has been circulated to the committee. See section VI.B for details.

### 2. Comprehensive Exam for Non-Thesis Option

For the non-thesis option, the comprehensive exam consists of a written exam that covers several major areas of Geosciences and a written paper derived from a directed research course. The major areas are typically defined by the courses taken from the members of the supervisory committee. This examination can be taken after 30 credit hours of coursework have been completed. See section VIII for details.

## IV. PROGRAM REQUIREMENTS

### A. RESEARCH SEMINARS

As part of university life, scholars and scientists visit the campus to give research seminars. Attend as many of these as possible to expand your knowledge base and to meet people in your field of interest. GEO 5991 Graduate Seminar in Geosciences is required for two semesters but you should attend research presentations even when not enrolled in the course while at UTSA. Also look for notices of other research talks of interest that are posted on the UTSA website and around campus.

### B. RESEARCH PRESENTATION

The presentation of research results at professional gatherings and scientific meetings is a vital and rewarding part of professional development and scientific engagement. Giving a research presentation on Earth Day is highly encouraged for all graduate students in the program. This research showcase is held on campus every spring semester. Students are also encouraged to present at regional or national meetings put on by professional geoscience organizations.

### C. PUBLICATION OF THESIS RESEARCH

An important part of scientific engagement is sharing the results of a research project by publishing them in peer-reviewed journals or other venues, such as conference proceedings. All thesis students are highly encouraged to develop their results for possible publication. In doing so, students should work closely with their supervisor but should also involve other Graduate

Committee members who have made a significant contribution to the thesis project when developing manuscripts for possible publication.

## V. ADVISING AND SUPERVISION

Each student is responsible for fulfilling all degree requirements but faculty provide advice and help. The Graduate Advisor of Record (GAR) provides initial advising about courses and other program matters until the supervisory professor is consulted. All new students must meet with the Graduate Advisor to discuss their program of study prior to registering for classes (see section XIII.C for form). The Graduate Advisor runs the student orientation, which all new students are required to attend at the beginning of their first semester.

### A. SUPERVISOR

Each admitted student is assigned a faculty supervisor based on common research interests. Students should set up regular meeting times with their supervisor each semester to discuss their program of study, research project, etc. These meetings serve as an important opportunity for intellectual development as well as form an apprenticeship for graduate level learning, including how to conduct independent research.

Change in research direction by the student is typically the only reason why a change occurs in this supervisor-student relationship. In such cases, students need to discuss this change in direction with the faculty member. Failure to make progress on thesis research may lead a faculty supervisor to recommend the student complete the degree by the non-thesis option. In all cases, the Graduate Advisor is available for advice and mediation if change is requested.

### B. SUPERVISORY COMMITTEE

All students are required to form a graduate committee comprised of three faculty members. The committee provides input on and must approve the student's program of study, is tasked with examining the student in relation to degree requirements (e.g., research proposal examination, comprehensive examination), and provides advice and constructive criticism on thesis projects and directed research where relevant. The supervisor is the chair of this committee and must be a tenured or tenure track faculty member at UTSA (Table 1). It is possible for chair duties to be shared between two faculty members as co-chairs. Fixed term track faculty can co-chair a thesis or non-thesis committee. No more than one member can be a fixed term faculty member or be from another institution.

All committee members must be members of the Graduate Faculty at UTSA. If a desired member is not part of the Graduate Faculty, a petition can be filed with the University Graduate Council to add the person to the Graduate Faculty but there is no guarantee that it will be approved. The student must seek approval for their committee from the Graduate Advisor by submitting names so that the *Supervisory Committee* form can be filed (see section XIII.C for form). Any subsequent changes to committee composition must be communicated and approved by the Graduate Advisor by submitting names so that an updated form can be filed.

For students pursuing the thesis option, the supervisor should be an expert in the topical area of the thesis project. Committee members should have a similar or complementary expertise that would make their involvement advantageous based on the thesis project.

For students pursuing the non-thesis option, the supervisor should be an expert in a key area of Geosciences for degree examination. At least one course should be taken from the supervisor. Other committee members should be those from which a course has been taken to provide other major areas for the examination.

<i>Faculty group</i>	<i>Name</i>
Tenured/tenure track	Saugata Datta
	Yongli Gao
	Alexis Godet
	Judy Haschenburger
	Kaushik Mitra
	Alan Whittington
	Hongjie Xie
Fixed term track	Stephen Ackley
	Matt Cannon
	Sandy Cannon
	Alberto Mestas-Nunez
	Janet Vote
	Blake Weissling
Fixed term track - off campus	Newfel Mazari

<sup>a</sup> Current as of Fall 2023

## VI. THESIS RESEARCH

### A. SCOPE AND EXPECTATIONS

Thesis research should make a contribution to the discipline and in this way generates new observations, ideas, and/or models. Any research, therefore, must be set into the current knowledge from the scientific literature to ensure a contribution and have a specific research aim. In the geosciences, most research is hypothesis driven so there needs to be articulated research questions and hypotheses that will be tested using empirical data. Results that are derived are focused on addressing the research questions and must be explained and related back to the current state of knowledge on the topic in the discussion of the results. A good thesis also addresses the significance of the work and how it contributes to advancing understanding of the subfield and/or broader discipline of geoscience.

The thesis project should start in the first semester in the program. This is important for staying on track to complete the degree in two years (full-time students). The two-year timeline is more likely to be met if one writes as they go, instead of waiting until the last semester to write all the text. Following the timeline in Table 2 will help the entire research endeavor stay on track.



Complete by:	Research Task	Thesis Writing
First semester - fall	Develop thesis topic and initial background knowledge, research aim, and methods	Draft sections of topic introduction, background knowledge, and problem statement
Second semester - spring	Finalize background knowledge, research questions, hypotheses and methods	Draft section of methods; Update and expand background knowledge section
Third semester - summer	Finalize methods and collect observations in field, lab or modeling; start related lab analysis or calculations	Update methods section as data collected and analyzed
Fourth semester - fall	Process samples/observations and finish lab or data analysis	Draft section of results; Finalize introductory and methods sections
Fifth semester - spring		Finalize results section; Draft sections of discussion and conclusions; Finalize entire document and defend

\*assumes fall semester start to program

## **B. PROCEDURES FOR THESIS DEFENSE, GRADING, AND FINAL SUBMISSION**

The thesis must be first approved by the thesis advisor before distributed to the rest of the supervisory committee for comments. Committee members must receive the thesis at least two weeks before a scheduled defense. The thesis defense will take from about 2 hours to complete. It starts with a 20-25 minute oral presentation that summarizes the key points from each of the thesis chapters. The presentation is followed by a question and answer period. The defense is opened to all interested persons, who are given the opportunity to ask questions first. This is followed by a closed session when committee members ask questions of the candidate for the degree. A notice to defend form must be completed and submitted to announce the defense as required by Graduate School policy (see appendix for form).

The thesis defense receives a passing grade from the supervisory committee if the student is able to satisfactorily answer questions about the thesis project and geological knowledge more generally. A grade for the thesis document is assigned as part of the thesis defense process, which is applied to the 6 credit hours of thesis hours that form part of the degree requirements. The departmental thesis grading rubric assesses the quality of the research as written up in terms of background knowledge, methods, results, interpretation, significance, overall scientific argument, and writing (see section XIII.A for grading form). If one or more rubric elements do not meet this standard, the student will be asked to address them and improve the document before it is accepted as finished.

The format and submission of the thesis document must follow Graduate School requirements. See <https://graduateschool.utsa.edu/current-students/formatting-requirements/>.

## VII. DIRECTED RESEARCH FOR NON-THESIS OPTION

The Directed Research course serves as a means to build research, writing, and critical thinking skills while students pursue the non-thesis option. The student must work with an individual faculty member to develop the topic for independent research and file the appropriate form to register for the course (see section XIII.B for form). The faculty member should be a member of the supervisory committee and is typically the supervisor.

The research project must involve executing the research process and not be simply a literature review. Because it is limited to a one semester project, the scope of the research is less than that expected of a thesis project. The specific research conducted should test a hypothesis and/or answer a specific research question. The student must develop background knowledge about the topic appropriate at the graduate level through a literature review. The project must produce a set of results to allow for the required discussion of data and/or analysis (i.e., interpretation). The data and analysis can be either generated or compiled by the student and may include analytical data, observational data, calculations/analysis of pre-existing results or model output, etc.

The Direct Research course must include in a written document. This document will be evaluated as part of the course grade by the faculty member who is directing the project. The student can use any comments and suggestions provided by the faculty member to revise the document prior to submitting it to fulfill part 2 of the comprehensive exam (see section VIII).

## VIII. COMPREHENSIVE EXAM FOR NON-THESIS OPTION

Part 1 of the comprehensive exam tests knowledge gained from coursework completed that covers three (3) major areas of Geosciences. The areas are typically set by coursework taken from the supervisory committee members. This includes organized and independent study courses completed as part of the student's degree program. Part 2 of the comprehensive exam evaluates general skills that should be learned during a graduate program, i.e., critical thinking and writing skills as well as competency in carrying out the research process. It consists of a written paper that is based on the completion of the required Directed Research course.

Expectations for part 1 of the examination should be in place no later than six weeks prior to the examination date but no earlier than the first week of the semester during which the exam will be taken. Expectations for part 2 of the examination should be in place at the beginning of the semester in which the comprehensive exam is taken.

### A. PART 1 EXAM SPECIFICATIONS

A discussion between the student and each committee member is required to identify the major topics for the exam plus any specific guidance regarding concepts, knowledge, and course materials to be covered in the written exam. The examination is taken during regular business hours on campus on the agreed upon day and time. This is a closed book test. Students will be provided a laptop or other computer for writing responses to questions but internet access or

other forms of data mining are not allowed. The exam duration is typically 3 hours. Each major area will take approximately 1 hour to complete. Question(s) will test understanding of concepts and knowledge gained in the specified courses and be posed in ways that reflect the graduate level of the examination.

Responses to questions from each major area will be graded by the relevant committee member. A passing grade consists of at least a B on a +/- grading system. Each major area must earn the minimum grade to pass the comprehensive exam. If the grade earned for one or more of the major areas does not meet this minimum, the student will fail the examination. A second attempt at the exam can occur in the next semester and will include only the portion of the examination that was not passed the first time (i.e., a partial retake).

#### B. PART 2 WRITTEN PAPER SPECIFICATIONS

A meeting between the student and Chair of the Supervisory Committee (i.e., supervisor) will outline expectations and preparation for part 2. This part of the examination is a take-home exam and consists of a written report that is handed in for grading. Students can use personal computers or one in a departmental classroom or lab for the exam. The written paper is due no later than the day and time part 1 of the examination will be taken. Students can opt to hand in part 2 earlier in the semester in which the comprehensive exam is taken.

The written paper will be graded by each committee member using a standard rubric (see section XIII.A for grading form). A passing grade consists of at least a B on a +/- grading system. All grading rubric elements must earn this minimum grade to pass part 2 of the comprehensive exam. If a rubric element does not meet this standard, the student will fail the examination. A second test attempt can occur in the next semester and will include only the element of the rubric that was not passed the first time (i.e., a partial retake).

### IX. GENERAL STEPS AND TIMELINE FOR DEGREE COMPLETION

All full-time graduate students are expected to finish their degree requirements in two years. A part-time student will take longer but should not be more than six years. Table 3 outlines the general steps and timeline that all full-time students should attempt to follow to finish their degree within two years.

<i>Item</i>	<i>Thesis option</i>	<i>Non-thesis option</i>
Leveling and conditional courses	Finish before taking graduate courses <sup>^</sup>	Finish before taking graduate courses <sup>^</sup>
Decide on thesis or non-thesis option	First semester*	First semester*
Meet with assigned supervisor	Prior to or at beginning of first semester	At beginning of first semester
Develop preliminary program of study	First semester	First semester
Develop thesis topic or project topic	First semester	First semester
Identify committee members	End of second semester	Second or third semester
Defend thesis proposal to obtain feedback from committee	End of second semester	
Take directed research course		Third semester
Take comprehensive exam	Fourth semester	Fourth semester

<sup>^</sup>An exception can be made when prescribed undergraduate courses are not offered every semester but this requires approval of the Graduate Advisor.

\*Semester means spring or fall semester, not summer

## X. MAXIMIZING THE GRADUATE EXPERIENCE

As a graduate student one transitions to greater engagement with the subject matter and the overall endeavor of conducting science and contributing to the generation of new knowledge. This engagement can be achieved in various ways outlined below. Making the most of the graduate experience means taking advantage of all opportunities afforded.

### A. ACTIVITIES

#### 1. Learning from Peers

Volunteer to help your graduate student peers with aspects of their research projects, such as fieldwork, lab analysis, or calculations. In addition to learning more technical skills and gaining additional experience, if you are a thesis student, you will also gain help with your project in exchange.

#### 2. Membership in Professional Organizations

Joining a professional organization as a student often has great benefits, such as access to travel funds to support conference attendance, job postings, and/or competitive student research grant programs. Students should consult with their supervisor about professional organizations and meetings that are relevant to their research and career trajectory. Attending conferences, meetings, and workshop is a great way to network, which may facilitate employment after graduation.

#### 3. Applying for Research Grants

Students pursuing the thesis option are encouraged to work with their supervisors to gain valuable experience writing research grant proposals to help fund their projects. Writing proposals that outline a specific project or work task is a typical part of most geoscience-related

careers, including private consulting, public agencies, and academics. Honing these skills in graduate school will therefore have significant job-related benefits. See section X.C.II.

## B. RESOURCES

### 1. Graduate Student Professional Development Center:

<https://graduateschool.utsa.edu/current-students/category/graduate-student-professional-development/>

### 2. Department of Earth and Planetary Sciences website:

<https://www.utsa.edu/sciences/earth-planetary-sciences/>

## XI. FINANCIAL SUPPORT

### A. ASSISTANTSHIPS

Financial support is available as teaching and/or research assistantships in the Department or other units in The University. Applicants for research assistantships should directly talk to individual faculty members who have grants to support graduate students for research.

Applications for teaching assistantships should be directed to the Chair of the Department as well as Laurie Gay in the Departmental Office. Teaching assistantships vary in number from year to year, so that initial award of an assistantship does not assure the recipient of continuous support during residence. The Department has been successful, however, in providing continuous support to students who perform satisfactorily. If the work of a graduate teaching assistant is unsatisfactory or if the student is placed on academic probation, the Department may suspend the appointment. Department policy is that student can be supported as full-time teaching assistantships for a maximum of four semesters.

As required by the University, graduate students must meet the following academic eligibility requirements to hold a research or teaching assistantship.

1. Enrolled in a minimum of 6 credit hours during a long semester (Fall and Spring) and 1 to 3 credit hours during a Summer semester depending on student status and policy.
2. Maintain a minimum GPA of 3.0 so in good academic standing (see section X.B above).

### B. SCHOLARSHIPS

Several Departmental Scholarships are also available on a competitive basis and can be found using the link <https://www.utsa.edu/sciences/earth-planetary-sciences/scholarships.html>. Some of these scholarships can qualify students to pay in-state tuition and fees, if not otherwise qualified for in-state status.

## C. ADDITIONAL SOURCES OF FINANCIAL ASSISTANCE

### 1. Travel to Professional Conferences

There are several sources of funds to support travel to conferences to present research results. First, students can apply for partial support for travel expenses to give a paper at regional, national, or international conferences from the Department once a year. The number and amount of travel awards depend on the availability of funds.

Second, the Graduate School also supports presentations at regional, national, or international conferences. See <https://graduateschool.utsa.edu/gps/presenting/>.

Third, some professional organizations also operate a program to fund student travel when presenting research results. Applicants may need to be members of the organization to be eligible. Some known opportunities are listed below but search other individual webpages of professional organizations.

a) American Geophysical Union: <https://education.agu.org/grants/student-travel-grants-application-requirements/>

b) International Association of Sedimentologists: <https://www.sedimentologists.org/grants>

c) American Society of Photogrammetry and Remote Sensing: <https://www.asprs.org/awards-and-scholarships/student-assistantships.html>

d) Gulf Coast Association of Geological Societies:  
<https://www.gcags.org/GCAGS%20Awards/GCAGS.Student.Grant.Program.html>  
<https://www.gcags.org/PDFs/Travel.Grant.Guide.pdf>

### 2. Research Expenses

Students are strongly encouraged to submit proposals for research grants to professional organizations. Applicants may need to be members of the organization to be eligible.

a) American Association of Petroleum Geologists:  
<http://foundation.aapg.org/students/graduate/giaprogram.cfm>

b) Geological Society of America:  
[https://www.geosociety.org/GSA/Education\\_Careers/Grants\\_Scholarships/Research\\_Grants/GSA/grants/gradgrants.aspx](https://www.geosociety.org/GSA/Education_Careers/Grants_Scholarships/Research_Grants/GSA/grants/gradgrants.aspx)

c) Sigma Xi: <https://www.sigmaxi.org/programs/grants-in-aid-of-research/apply>

d) South Texas Geological Society: <https://www.stgs.org/node/90>

e) Gulf Coast Association of Geological Societies:  
<https://www.gcags.org/GCAGS%20Awards/GCAGS.Student.Grant.Program.html>  
<https://www.gcags.org/PDFs/Travel.Grant.Guide.pdf>

## XII. UNIVERSITY-WIDE POLICIES

### A. ENROLLMENT REQUIREMENTS

A domestic graduate student enrolling as full time must take at least 9 hours per fall or spring semester and 5 credit hours during the summer (see <https://onestop.utsa.edu/financialaid/paying/enrollment-requirements/>). International graduate students on a F-1 visa must comply with specific rules; visit <https://global.utsa.edu/students/enrollment-requirements.html> to learn more. Summer enrollment is required if a student is a teaching assistant or research assistant.

### B. ACADEMIC STANDING

Good academic standing requires a minimum GPA of 3.0. Student are placed on academic probation if:

- 1) The GPA is below 3.0 in any semester at UTSA. The GPA is based on all courses taken so includes graduate and undergraduate levels.
- 2) A grade of D+, D, or D- is earned in any course in a semester.
- 3) On reinstatement to the university following an academic dismissal.

### C. ACADEMIC DISMISSAL

A student who meets any of the following conditions is placed on the academic dismissal list:

- 1) Admission conditions are not met.
- 2) A grade of F is earned in any course.
- 3) The GPA is below 2.0 in any semester.
- 4) Conditions leading to academic probation occur in the semester following placement on academic probation.
- 5) Failure to pass an oral or written exam (such as Comprehensive Examination) required for the degree after the maximum of two attempts.

If dismissed from the university, a petition application for reinstatement can be filed after one long semester.

## XIII. DEPARTMENTAL AND UNIVERSITY DEGREE FORMS

University and departmental forms may be needed at different times during the degree program, related to degree plans (Program of study, Course add/drop), independent learning (Independent study, Directed research), official university travel (Student travel authorization), and employment at the university (Pre-application teaching assistant, Employee time sheet), and other financial support (Request financial support). Links to some of these forms can be found at <https://www.utsa.edu/sciences/earth-planetary-sciences/resources.html>. For reference, the most commonly used follow. Table 4 outlines key aspects of content, preparation, and submission guidelines.

A. DEPARTMENTAL-LEVEL GRADING RUBRICS

- a) Grading rubric for thesis document
- b) Grading rubric for non-thesis directed research paper

B. DEPARTMENT-LEVEL DEGREE AND FINANCIAL ASSISTANCE FORMS

- c) Proposed program of study
- d) Directed research
- e) Pre-application for teaching assistantship
- f) Thesis proposal defense form
- g) Thesis defense form

C. UNIVERSITY-LEVEL DEGREE FORMS

- i) Independent study
- j) Syllabus form for independent studies
- k) Permission to enroll in undergraduate course while a graduate student

<b>Table 4. Paperwork preparation and submission</b>		
<i>Item</i>	<i>Content Preparation</i>	<i>Form preparation and submission</i>
Pre-application teaching assistantship form	Established by student	Student responsible for submission to Laurie Gay and Chair of the department
Program of study form	Established by student in consultation with research advisor and Graduate Advisor of Record	Preliminary form completed by student; Finalized form submitted by departmental office in semester of graduation
Supervisory committee form	Established by student in consultation with research advisor	Student notifies department office of committee membership; Form submitted by departmental office
Independent study form and syllabus (if applicable)	Established by student in consultation with professor(s) supervising course and research project	Student and course professor responsible for forms and delivery; Submit to departmental office to obtain other approval signatures
Directed research form (if applicable)	Established by student in consultation with professor supervising course	Student and course professor responsible for form, approval, and delivery; Submit form to obtain other approval signatures
Graduate credit for upper-division undergraduate course form	Established by student in consultation with research supervisor and instructor of undergraduate course, including specific syllabus	Student responsible for form, instructor approval, and its delivery; Submit to departmental office to obtain other approval signatures prior to delivery
Thesis proposal defense announcement	Established by student in consultation with research advisor	Student responsible for form in consultation with supervisory committee; deliver to departmental office



Thesis defense announcement	Established by student in consultation with research advisor	Student responsible for form in consultation with supervisory committee; deliver to departmental office
Applying for graduation (online)	Established by student via ASAP; Student responsible for notifying departmental office if graduation semester changes	Final program of study and other associated graduation paperwork submitted by departmental office



## REQUEST FOR DIRECTED RESEARCH

*Instructions: Form to be completed with instructor. Email to [Laurie.Gay@utsa.edu](mailto:Laurie.Gay@utsa.edu) to obtain approvals.*

Directed Research: Prerequisites: Graduate standing. The directed research course may involve a laboratory, field-based, or theoretical problem. May be repeated for credit, but not more than 3 hours, regardless of discipline, will apply to the Master's degree.

Term:  Fall  Spring  Summer Year: \_\_\_\_\_ Course Number: \_\_\_\_\_

Student Name: \_\_\_\_\_ Student ID: \_\_\_\_\_

Program: \_\_\_\_\_ Instructor's Name: \_\_\_\_\_

Coursework previously taken which form a basis for this Directed Research, include course number and title:

Post-baccalaureate hours of Independent Study and/or Directed Research previously taken?  Yes  No  
If so, provide course number and title and when taken:

Will any of the work listed below be carried out in a laboratory?  Yes  No

Topic Covered (*describe course topic and list course objective*):

Work Required (*describe work assignments*):

Grade Breakdown (*based on assignments*):

---

### Signatures:

Student: \_\_\_\_\_ Print name: \_\_\_\_\_ Date: \_\_\_\_\_

Instructor: \_\_\_\_\_ Print name: \_\_\_\_\_ Date: \_\_\_\_\_

Graduate Advisor (GAR): \_\_\_\_\_ Print name: \_\_\_\_\_ Date: \_\_\_\_\_

Department Chair: \_\_\_\_\_ Print name: \_\_\_\_\_ Date: \_\_\_\_\_

# UTSA Earth and Planetary Sciences

College of Sciences

## DEPARTMENT GRADUATE TEACHING ASSISTANTSHIP (GTA) APPLICATION

Term: Fall                      Spring                      Summer                      New Applicant: \_\_\_\_\_ Returning: \_\_\_\_\_

### PERSONAL INFORMATION

Name: \_\_\_\_\_ Student ID Number: \_\_\_\_\_

Address: \_\_\_\_\_ Phone: (\_\_\_\_\_) \_\_\_\_\_

Email: \_\_\_\_\_ Major/Degree Program: \_\_\_\_\_ GPA: \_\_\_\_\_

Have you worked for UTSA? YES/NO \_\_\_\_\_ If YES, last date of employment? \_\_\_\_\_

UTSA Employee ID: \_\_\_\_\_

### ACADEMIC BACKGROUND

List degrees earned: Degree \_\_\_\_\_ Date: \_\_\_\_\_ Institution \_\_\_\_\_

Degree \_\_\_\_\_ Date: \_\_\_\_\_ Institution \_\_\_\_\_

If VIP check here:

If Auto Admit check here:

### AVAILABILITY - INTEREST

Rank the following laboratory courses that you are interested in teaching (1 = most interested; 2 = somewhat interested; 3 = least interested, but will consider; leave blank if not interested).

Laboratory	Rank	Laboratory	Rank
Introduction to Earth Systems		Sedimentary & Stratigraphy	
Earth History		Paleontology	
Mineralogy		Geomorphology	
Petrology		Geochemistry (lab portion)	
Structural Geology Lab		GIS or Remote Sensing	
Other (please specify):			

As a GTA you must be admitted as degree-seeking student and registered for a minimum of 6 hours of coursework during each long term (fall/spring), and maintain good academic standing. All student positions are dependent on availability of funds.

**CERTIFICATION:** I certify that the statements made by me in this application are true, complete, and correct to the best of my knowledge and belief and are made in good faith. I understand that any false statements made herein will void this application and any actions based on it. I understand that any offer of employment tendered me is contingent upon my agreement to abide by the Rules and Regulations of the Board of Regents of The University of Texas at System.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Email this application, and resume' (if applicable) to: [geo.sciences@utsa.edu](mailto:geo.sciences@utsa.edu).

## UTSA Department of Earth and Planetary Sciences

### Master of Science in Geosciences Thesis Proposal Request

Consult with your supervising faculty member for presentation dates, and Zoom setup if applicable. Return completed form to [Laurie.Gay@utsa.edu](mailto:Laurie.Gay@utsa.edu), prefer two weeks prior to proposal presentation.

Date: \_\_\_\_\_

Student Name: \_\_\_\_\_ Student ID: \_\_\_\_\_

Thesis proposal presentation date: \_\_\_\_\_ Time: \_\_\_\_\_

Check one and fill in information:

Location (in-person only):

Location (in-person and zoom) Provide Zoom Link:

Location (zoom only) Provide Zoom Link:

Proposed thesis title:

Proposed Thesis Supervisory Committee:

Chair (must be a tenured, tenured-track member)	
co-Chair (if applicable)	
Member	
Member	
Member	

*All committee members must be members of the Graduate Faculty in the major area of study. [See [Graduate Catalog Degree Requirements](#) for further information. An outside member is allowed with approval.]*

Student Signature: \_\_\_\_\_

Supervisory Faculty Signature: \_\_\_\_\_

c: Graduate Advisor of Record

# UTSA Department of Earth and Planetary Sciences

## Intent to Defend Master's Thesis

Consult with your thesis committee members for your defense date, and Zoom setup if applicable. Return completed form to [Laurie.Gay@utsa.edu](mailto:Laurie.Gay@utsa.edu), prefer two weeks prior to defense date.

Date: \_\_\_\_\_

Major: \_\_\_\_\_

Student Name: \_\_\_\_\_

Student ID: \_\_\_\_\_

Thesis Defense date: \_\_\_\_\_

Time: \_\_\_\_\_

Check one and fill in information:

Location (in-person only):

Location (in-person and zoom)      Provide Zoom Link:

Location (zoom only)      Provide Zoom Link:

Proposed thesis title:

### Thesis Supervisory Committee:

Chair (must be a tenured, tenured-track member)	
co-Chair (if applicable)	
Member	
Member	
Member	

Student Signature: \_\_\_\_\_

Committee Chair Signature: \_\_\_\_\_

c: Graduate Advisor of Record

# Independent Study Course Form

## Approvals to be obtained prior to Registration

**How to Submit Form:** The completed form must be submitted via the [Document Uploader](#).

Term: Spring Summer Fall Year \_\_\_\_\_

First Name: \_\_\_\_\_ Middle: \_\_\_\_\_ Last: \_\_\_\_\_

myUTSA ID: \_\_\_\_\_ Phone: \_\_\_\_\_ Preferred Email: \_\_\_\_\_

CRN: \_\_\_\_\_ Subject: \_\_\_\_\_ Course #: \_\_\_\_\_ Section #: \_\_\_\_\_

Will any of the work listed below be carried out in a laboratory? Yes No

Instructor's Name (printed): \_\_\_\_\_

This request for an Independent Study is due to the lack of an available organized course in this topic: Yes No\*

\* If No, provide a justification of how the work and topics covered in the independent study are different than an organized course:

A syllabus is required to be created by the faculty member and attached to this form. The syllabus must include the following items:

- the course number and name
- the instructor's name and contact information (including email address)
- the instructor's official office hours and location
- a description of the topics to be covered
- a list of deliverables and due dates of deliverables (assignments)
- grade breakdown based on deliverables
- frequency and duration of meetings with instructor (contact hours)
- the course policies the instructor wishes to impose, such as participation, expectations, late assignment policies, etc.
- the Common Syllabus Information link: [provost.utsa.edu/syllabus.asp](http://provost.utsa.edu/syllabus.asp)

**NOTE: No more than 6 hours of Independent Study may be applied to any UTSA degree.**

With a few exceptions, you are entitled on your request to be informed about the information U.T. San Antonio collects about you. Under Sections 552.021 and 552.023 of the Texas Government Code, you are entitled to receive and review this information. Under Section 559.004 of the Texas Government Code, you are entitled to have U.T. San Antonio correct information about you that is held by us and that is incorrect, in accordance with the procedures set forth in the University of Texas System Business Procedures Memorandum 32.

**UTSA OFFICE USE ONLY:**





**Independent Study Course Syllabus**

Term:                      Fall                                      Spring                                      Summer                                      Year: \_\_\_\_\_

CRN: \_\_\_\_\_ Subject: \_\_\_\_\_ Course No: \_\_\_\_\_ Section No. \_\_\_\_\_

Student Name: \_\_\_\_\_ MyUTSA ID: \_\_\_\_\_

Instructor Name and Email: \_\_\_\_\_

Instructor Office Hours & Location: \_\_\_\_\_

Common Syllabus Information link: <http://provost.utsa.edu/syllabus.asp>

Description of Topics Covered:

Assignments and Due Dates:

Grade Breakdown (*based on assignments*):

Frequency & Duration of Meetings with Instructor:

Course Policies (*Participation, Expectations, Late Assignment Policies, Etc.*):



**APPROVALS**

\_\_\_\_\_/ \_\_\_\_\_ / \_\_\_\_\_  
*GAR* *Print Name* *Date*

\_\_\_\_\_/ \_\_\_\_\_ / \_\_\_\_\_  
*Instructure signature* *Print Name* *Date*

\_\_\_\_\_/ \_\_\_\_\_ / \_\_\_\_\_  
*Department Chair signature* *Print Name* *Date*

\_\_\_\_\_/ \_\_\_\_\_ / \_\_\_\_\_  
*Associate Dean signature* *Print Name* *Date*

\_\_\_\_\_/ \_\_\_\_\_ / \_\_\_\_\_  
*Vice Provost and Dean of the Graduate School, signature* *Print Name* *Date*

**UTSA OFFICE USE ONLY:**

Department of Geological Sciences Thesis Document Assessment Rubric - 11/7/18

	A level	B level	C level	D level										
	<p>A+ = 3 of 3 descriptors apply to equal degree;                      A = 2 of 3 descriptors apply without qualification but third requires minor improvement within A level;                      A- = 1 of 3 descriptors applies but others require minor improvement within A level</p>	<p>B+ = only item 3 applies;                      B = Item 3 applies plus 1 or 2;                      B- = all descriptors apply</p>	<p>C+ = 1 of descriptors applies;                      C = 2 descriptors apply;                      C- = 3 of 3 descriptors apply</p>	<p>D+ = 1 of descriptors applies;                      D = 2 of descriptors apply; D- = all descriptors apply</p>										
<p><b>Background Research</b></p> <p><i>Instructions:</i>                      select the grade level that best represents the quality of the work</p>	<p>1) A thorough background of the research topic/problem presents current state of knowledge; 2) unknowns/gaps in knowledge are identified to which the research project aims to contribute; 3) hypothesis or problem statement based on this knowledge is formulated</p>	<p>1) Background of the research topic/problem presents current state of knowledge but connection to unknowns/gaps in knowledge to which the research project aims to contribute is not well defined; 2) gap in knowledge is well articulated and explained but background research is somewhat incomplete. 3) hypothesis or problem statement is articulated but its derivation from background research is somewhat weak</p>	<p>1) Background knowledge for the research is presented but is not thorough 2) background research is not connected to a defined gap in knowledge. 3) No hypothesis is provided or it does not derive from the background knowledge presented.</p>	<p>1) Inadequate background knowledge (i.e., not up-to-date or focused enough) with 2) little to no connection to the research activities and 3) absence of hypothesis</p>										
COMMENTS:														
SCORE:	100	97	94	90	87	84	80	77	74	70	67	64	60	Enter value:
	A+	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	D-	

	A level	B level	C level	D level									
	A+ = 4 of 4 descriptors apply to equal degree A = 2 or 3 of 4 descriptors apply without qualification and no more than 2 requires minor improvement. A- = 1 of 4 descriptors applies but others only require minor improvement.	B+ = 2 of 4 descriptors apply B = 3 of 4 descriptors apply B- all descriptors apply	C+ = 2 of 4 descriptors apply C = 3 of 4 descriptors apply C- all descriptors apply	D+ = 2 of 4 descriptors apply D = 3 of 4 descriptors apply D- = all descriptors apply									
<b>Methods</b> including data collection, lab analysis, and data analysis	Methods are 1) appropriate to the investigation, clearly described, supported and justified by appropriate citation (e.g., seminal work). 2) It is clear the student understands how the methods work and any limitations to these methods. 3) Data gathering and analysis is thorough. 4) Specific analyses are presented to test hypotheses.	Methods 1) are appropriate to the investigation, but not well described or justified (e.g., lacks citations). 2) Student may understand how the methods work and their limitations, but it is somewhat unclear or shows some confusion. 3) Data gathering and analysis is sufficient but maybe not thorough. 4) Specific analyses are presented but linkage to test hypothesis is not completely clear.	Methods 1) are appropriate but not well understood. 2) Student is not clear about the way methods work and/or their limitations. 3) Data gathering and/or analysis has some flaws/errors. 4) Analysis that tests hypotheses is incomplete or not well argued.	Methods 1) are not appropriate to the goals of the project. 2) Student does not show understanding of the principles behind the methods 3) data gathering and analysis has errors. 4) Analysis that tests hypotheses is lacking.									
COMMENTS:													
SCORE:	100 A+	97 A	94 A-	90 B+	87 B	84 B-	80 C+	77 C	74 C-	70 D+	67 D	64 D-	60 Enter value:

	A level	B level	C level	D level										
	<p>A+ 4 of 4 descriptors apply A = 2-3 of 4 descriptors apply without qualification and no more than 2 requires minor improvement. A- = 1 of 4 descriptors apply but other only require minor improvement.</p>	<p>B+ = 2 of 4 descriptors apply B = 3 of 4 descriptors apply B- all descriptors apply</p>	<p>C+ = 2 of 4 descriptors apply C = 3 of 4 descriptors apply C- all descriptors apply</p>	<p>D+ = 2 of 4 descriptors apply D = 3 of 4 descriptors apply D- = all descriptors apply</p>										
<b>Results</b>	<p>1) data gathered appropriately; 2) enough data is gathered to make interpretations 3) any error or bias is reported; 4) data is presented in a clear way</p>	<p>1) some minor errors in data gathering; 2) data is gathered to make interpretations, but additional data is needed; 3) error or bias is presented but not clearly; 4) data is presented but needs clarification</p>	<p>1) major errors in data gathering; 2) data collected is of minimal use to make interpretations; 3) error or bias is not presented; 4) data is not presented clearly</p>	<p>1) little data gathered; 2) data collected cannot be used to make interpretations; 3) errors or bias not presented; 4) data not presented or incorrectly presented</p>										
<b>COMMENTS:</b>														
<b>SCORE:</b>	100	97	94	90	87	84	80	77	74	70	67	64	60	Enter value:
	A+	A	A-	B+	B	B-	C+	C	C-	D+	D	D-		

	A level	B level	C level	D level
	<p>A+ = 3 of 3 descriptors apply;  A = 2 of 3 descriptors apply but third requires minor improvement within A level;  A- = 1 of 3 descriptors applies but other two require minor improvement within A level</p>	<p>B+ = 1 of 3 descriptors apply;  B = 2 of 3 descriptors apply;  B- = 3 of 3 descriptors apply</p>	<p>C+ = 1 of 3 descriptors apply;  C = 2 of 3 descriptors apply; C- = 3 of 3 descriptors apply)</p>	<p>D+ = item 1 applies;  D = items 1 and 2 apply;  D- = all descriptors apply</p>
<p><b>Interpretations</b>  <i>Instructions:</i>  select the grade level that best represents the quality of the work</p>	<p>Presents 1) sound interpretation of data and analysis in light of existing knowledge in the field that is comprehensive in terms of breadth and depth; 2) provides reasonable alternative hypotheses where appropriate; 3) demonstrates consideration and clarity about assumptions and/or qualifications of results</p>	<p>Presents 1) reasonable interpretation but lacks strong connections to existing knowledge or is somewhat limited in breadth and/or depth; 2) does not provide reasonable alternative hypothesis where appropriate; 3) mentions some assumptions and/or qualifications of results but does not discuss all of them or to a sufficient level</p>	<p>Presents 1) some unreasonable interpretations and/or makes little connection to existing knowledge and/or is too narrow in scope; 2) no alternative hypotheses discussed where appropriate; 3) fails to address or discuss assumptions and/or qualifications to results</p>	<p>1) Interpretations are incorrect and show little to no connection to existing bodies of knowledge; 2) fails to discuss assumptions and/or limitations to results; 3) no alternative hypotheses are considered;</p>
<p>COMMENTS:</p>				
<p>SCORE:</p>	<p>100 97 94 90 87 84 80 77 74 70 67 64 60</p> <p>A+ A A- B+ B B- C+ C C- D+ D D-</p>	<p>Enter value:</p>		

	A level	B level	C level	D level
<b>Significance</b> <i>Instructions:</i> select grade level that best represents quality of the work and assign a score that captures quality within this grade level	The work is original or novel, provides new data that significantly advances knowledge in the sub-discipline.	The work is original or novel, provides new data that slightly advances knowledge in the sub-discipline	The work is only marginally original or novel, provides new data but does not advance knowledge in the sub-discipline	Duplicates work previously done and project not designed to critical test prior results. No advance in knowledge is evident.
COMMENTS:				
SCORE:	100 97 94 90 87 84 80 77 74 70 67 64 60	A+ A A- B+ B B- C+ C C- D+ D D-		Enter value:

	A level	B level	C level	D level
<b>Scientific argument</b> <i>Instructions:</i> select grade level that best represents quality of the work and assign a score that captures quality within this grade level	Provides a thorough and convincing argument across all sections of the thesis	Argument constructed in the thesis is generally convincing and thorough but some improvement is possible in one or two sections	Argument constructed in the thesis is only partially convincing and thorough so improvement is possible across two or three sections	Argument constructed in the thesis is incomplete and not convincing throughout
COMMENTS:				
SCORE:	100 97 94 90 87 84 80 77 74 70 67 64 60	A+ A A- B+ B B- C+ C C- D+ D D-		Enter value:



	A level	B level	C level	D level										
	<p>A+ = all descriptors apply equally; A = 1 to 2 items requires minor improvement within A level; A- = 3 to 4 items require minor improvement</p>	<p>B+ = 3 of 4 descriptors apply; B = 4 of 4 descriptors apply; B- = 4 of 4 with at least one being particularly severe</p>	<p>C+ = 3 to 4 descriptors apply; C = 4 of 4 apply; C- = 4 of 4 with one being particularly severe</p>	<p>D+ = 3 of 4 descriptors apply; D = 4 of 4 apply; D- = 4 of 4 apply with one being particularly severe</p>										
<p><b>Writing</b></p> <p><i>Instructions:</i> select grade level that best represents quality of the work</p>	<p>Document is 1) well-structured with logical flow of all text; 2) clear and concise; 3) grammatically correct with correct spelling and usage of notation and terminology; 4) illustrated with clear and appropriate figures and tables</p>	<p>Document is 1) structured and text logical so that it can be followed, but could use some improvement; 2) generally clear and concise but text in a few parts of the report could be clearer or more concise; 3) mostly free of grammatical, spelling, notation and/or terminology errors (i.e., not enough to be distracting); 4) illustrated with appropriate figures and tables but a few could use minor improvements</p>	<p>Document is 1) structured so it can be followed but is somewhat confusing (e.g., one part is missing or logical flow of text is a repeated problem); 2) deficient in clarity and conciseness, requiring multiple re-reading on the part of the evaluator and/or editing to achieve text that is more directed and concise; 3) frequent errors in spelling, grammar, etc., are evident (i.e., found on majority of report pages); 4) illustrated with figures and tables, that convey appropriate information but need improvement</p>	<p>Document is 1) poorly organized and illogical (e.g., two or more essential parts missing; extensive issues with logical flow of text); 2) difficult to follow and contains abundant errors in grammar, spelling, etc., that are distracting; 4) illustrated by inappropriate figures and tables that are difficult to understand or fails to include appropriate illustrations.</p>										
COMMENTS:														
SCORE:	100	97	94	90	87	84	80	77	74	70	67	64	60	Enter value:
	A+	A	A-	B+	B	B-	C+	C	C-	D+	D	D-		
OVERALL SCORE (average all component scores):	Enter value:													

Grading Rubric for Non-Thesis Comprehensive Exam Part 2 Writing Assignment derived from Directed Research Course Requirement

Student: \_\_\_\_\_ Committee member: \_\_\_\_\_

	<u>A level</u> A+ = 3 of 3 descriptors apply to equal degree; A = 2 of 3 descriptors apply without qualification but third requires minor improvement within A level; A- = 1 of 3 descriptors applies but others require minor improvement within A level	<u>B level</u> B+ = only item 3 applies; B = Item 3 applies plus 1 or 2; B- = all descriptors apply	<u>C level</u> C+ = 1 of descriptors applies; C = 2 descriptors apply; C- = 3 of 3 descriptors apply	<u>D level</u> D+ = 1 of descriptors applies; D = 2 of descriptors apply; D- = all descriptors apply
<b>Background Research</b>  <i>Instructions:</i> select the grade level that best represents the quality of the work	1) A thorough background of the research topic/problem presents current state of knowledge; 2) unknowns/gaps in knowledge are identified to which the research project aims to contribute; 3) hypothesis or problem statement based on this knowledge is formulated	1) Background of the research topic/problem presents current state of knowledge but connection to unknowns/gaps in knowledge to which the research project aims to contribute is not well defined; 2) gap in knowledge is well articulated and explained but background research is somewhat incomplete. 3) hypothesis or problem statement is articulated but its derivation from background research is somewhat weak	1) Background knowledge for the research is presented but is not thorough 2) background research is not connected to a defined gap in knowledge. 3) No hypothesis is provided or it does not derive from the background knowledge presented.	1) Inadequate background knowledge (i.e., not up-to-date or focused enough) with 2) little to no connection to the research activities and 3) absence of hypothesis
COMMENTS:				

SCORE:	100	97	94	90	87	84	80	77	74	70	67	64	60	Enter value:
	A+	A	A-	B+	B	B-	C+	C	C-	C+	D	D-		

Grading Rubric for Non-Thesis Comprehensive Exam Part 2 Writing Assignment derived from Directed Research Course Requirement

	<p><b>A level</b>                      A+ = all descriptors apply equally;                      A = 1 to 2 items requires minor improvement within A level;                      A- = 3 to 4 items require minor improvement</p>	<p><b>B level</b>                      B+ = 3 of 4 descriptors apply;                      B = 4 of 4 descriptors apply;                      B- = 4 of 4 with at least one being particularly severe</p>	<p><b>C level</b>                      C+ = 3 to 4 descriptors apply;                      C = 4 of 4 apply;                      C- = 4 of 4 with one being particularly severe</p>	<p><b>D level</b>                      D+ = 3 of 4 descriptors apply;                      D = 4 of 4 apply;                      D- = 4 of 4 apply with one being particularly severe</p>																				
<p><b>Writing</b></p>	<p>Document is 1) well-structured with logical flow of all text; 2) clear and concise; 3) grammatically correct with correct spelling and usage of notation and terminology; 4) illustrated with clear and appropriate figures and tables</p>	<p>Document is 1) structured and text logical so that it can be followed, but could use some improvement; 2) generally clear and concise but text in a few parts of the report could be clearer or more concise; 3) mostly free of grammatical, spelling, notation and/or terminology errors (i.e., not enough to be distracting); 4) illustrated with appropriate figures and tables but a few could use minor improvements</p>	<p>Document is 1) structured so it can be followed but is somewhat confusing (e.g., one part is missing or logical flow of text is a repeated problem); 2) deficient in clarity and conciseness, requiring multiple re-reading on the part of the evaluator and/or editing to achieve text that is more directed and concise; 3) frequent errors in spelling, grammar, etc., are evident (i.e., found on majority of report pages); 4) illustrated with figures and tables, that convey appropriate information but need improvement</p>	<p>Document is 1) poorly organized and illogical (e.g., two or more essential parts missing; extensive issues with logical flow of text); 2) difficult to follow and contains abundant errors in grammar, spelling, etc., that are distracting; 4) illustrated by inappropriate figures and tables that are difficult to understand or fails to include appropriate illustrations.</p>																				
<p>COMMENTS:</p>																								
<p>SCORE:</p>	<p>100</p>	<p>97</p>	<p>94</p>	<p>90</p>	<p>87</p>	<p>84</p>	<p>80</p>	<p>77</p>	<p>74</p>	<p>70</p>	<p>67</p>	<p>64</p>	<p>60</p>	<p>Enter value:</p>										
													<p>A+</p>	<p>A</p>	<p>A-</p>	<p>B+</p>	<p>B</p>	<p>B-</p>	<p>C+</p>	<p>C</p>	<p>C-</p>	<p>D+</p>	<p>D</p>	<p>D-</p>

Grading Rubric for Non-Thesis Comprehensive Exam Part 2 Writing Assignment derived from Directed Research Course Requirement

	<p><b>A level</b></p> <p>A+ = 3 of 3 descriptors apply;                  A = 2 of 3 descriptors apply but third requires minor improvement within A level;                  A- = 1 of 3 descriptors applies but other two require minor improvement within A level</p>	<p><b>B level</b></p> <p>B+ = 1 of 3 descriptors apply;                  B = 2 of 3 descriptors apply;                  B- = 3 of 3 descriptors apply</p>	<p><b>C level</b></p> <p>C+ = 1 of 3 descriptors apply;                  C = 2 of 3 descriptors apply;                  C- = 3 of 3 descriptors apply)</p>	<p><b>D level</b></p> <p>D+ = item 1 applies;                  D = items 1 and 2 apply;                  D- = all descriptors apply</p>										
<p><b>Critical thinking</b></p> <p><i>Instructions:</i>                  select the grade level that best represents the quality of the work</p>	<p>Presents 1) sound interpretation of data and analysis in light of existing knowledge in the field that is comprehensive in terms of breadth and depth; 2) provides reasonable alternative hypotheses where appropriate; 3) demonstrates consideration and clarity about assumptions and/or qualifications of results</p>	<p>Presents 1) reasonable interpretation but lacks strong connections to existing knowledge or is somewhat limited in breadth and/or depth; 2) does not provide reasonable alternative hypothesis where appropriate; 3) mentions some assumptions and/or qualifications of results but does not discuss all of them or to a sufficient level</p>	<p>Presents 1) some unreasonable interpretations and/or makes little connection to existing knowledge and/or is too narrow in scope; 2) no alternative hypotheses discussed where appropriate; 3) fails to address or discuss assumptions and/or qualifications to results</p>	<p>1) Interpretations are incorrect and show little to no connection to existing bodies of knowledge; 2) fails to discuss assumptions and/or limitations to results; 3) no alternative hypotheses are considered;</p>										
<p>COMMENTS:</p>														
SCORE:	100	97	94	90	87	84	80	77	74	70	67	64	60	Enter value:
	A+	A	A-	B+	B	B-	C+	C	C-	C+	D	D	D-	

OVERALL SCORE (average all component scores):