

## **Guidelines For M.S. Students**

**Department of Geoscience**

**University Of Nevada, Las Vegas**

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## **1.0 Introduction**

This document describes the policies and procedures under which M.S. students function within the Department of Geoscience (“the Department”). The Department recognizes that graduate study is much more than the meeting of mechanical deadlines, and the scholarly development of graduate students is of paramount concern to the faculty. Each student's growth is cultivated individually throughout the graduate experience as one attains the foundation, independence, intellectual curiosity, and self-discipline necessary to be a productive scientist. The awarding of the M.S. in Geoscience recognizes the achievement of these goals.

### ***1.1 Graduate Program Administration***

The Graduate Affairs Coordinator of the UNLV College of Sciences is a valuable contact for navigating graduate school and serves as a liaison with the Graduate College. The coordinator can help answer questions about forms and policies. The current Coordinator's contact information is available on the UNLV College of Sciences webpage ([sciences.unlv.edu](http://sciences.unlv.edu)). The Graduate Program in the Department of Geoscience is administered by 1) A Graduate Admissions Coordinator, who's responsibility is to oversee student inquiries about graduate school in the Department and the admissions process, and B) the Graduate Program Coordinator, who's responsibility is to guide students through the regulations of their graduate program in the Department at UNLV. The two graduate coordinators are typically Graduate Faculty members in the Department of Geoscience.

### ***1.2 Graduate College Policies***

The UNLV Graduate College sets forth policies and deadlines in the Graduate College Catalog, which governs all graduate students at UNLV. New graduate students will follow the edition of the Graduate Catalog current for their year of entrance to UNLV. With Department and Graduate College approval, the Graduate Catalog in effect during the semester in which degree requirements are completed may be used. In addition, the Department of Geoscience has developed the following guidelines, which are in some cases more rigorous and rigid than those of the Graduate College. These guidelines were generated in order to establish a framework that will assure uniformly high standards throughout the Department and to permit the best possible education for Geoscience M.S. students. Each student is obligated to be aware of both sets of policies and to review them periodically so that they are followed to the best of each student's ability.

### ***1.3 Petitions For Departures From The Rules***

It should be understood that the policies of both the Graduate College and of the Department are somewhat flexible and written petitions for exceptions may be submitted for special cases in which extenuating circumstances occur. However, petitions for departures from the rules and guidelines must be approved in writing by the advisor, committee, Graduate Program Coordinator and Department of Geoscience Chair. The Petition must also be approved by the College of Science and Graduate College Deans. Use the UNLV Graduate College Appeal Form available on their website. If the petitions

are granted, the policies may be modified, but students should not and can not rely on such a mechanism to circumvent the regulations. Questions regarding any of the policies can and should be addressed by the student's advisor, the Department Chair or the Department Graduate Program Coordinator. If the information provided by these sources within the Department is not satisfactory, M.S. students should make an appointment with either the Dean or Associate Dean of the Graduate College in order to have questions answered. Do not rely on hearsay information: see it in writing.

### ***1.4 Useful Resources***

Students are responsible for their own graduate education, and are expected to consult all relevant rules and regulations available at UNLV and in the Department of Geoscience. Below are some useful links that include policies and procedures relevant to Graduate School. As web addresses frequently change, the student should stay up to date with the most recent sites, and is responsible for contacting the relevant offices directly.

1. UNLV Graduate College: <http://graduatecollege.unlv.edu>
2. Apply Yourself (AY): <https://webcenter.applyyourself.com>
3. UNLV Department of Geoscience web page: <http://geoscience.unlv.edu/>
4. College of Sciences: <http://sciences.unlv.edu>
5. MyUNLV for course registration: [my.unlv.nevada.edu](http://my.unlv.nevada.edu)
6. Financial Aid and Scholarships: <http://www.unlv.edu/finaid>
7. Graduate and Professional Student Association (GPSA): <http://gpsa.unlv.edu/>
8. Office of Student Conduct: <http://studentconduct.unlv.edu>.
9. Office of International Students and Scholars (OISS): <http://www.unlv.edu/iss>

## **2.0 Admissions to the Geoscience M.S. program**

The establishment of standards of admission to graduate programs at UNLV is largely the responsibility of the Graduate College. Therefore, M.S. students should refer to the appropriate general section in the Graduate Catalog, but also be cognizant of the introductory section to Geoscience. The Graduate College receives the credentials of applicants and the Department recommends that an applicant either be denied admission or admitted with one of the following classifications: (1) Full Graduate Standing, (2) Graduate Provisional, (3) Conditional Admission, and (4) Non-Degree Seeking Student. For either of the first two classifications there may be deficiencies listed or graduate course work specified.

### ***2.1 Admission Requirements***

Review of applicants for admission includes evaluation of previous grade point average (GPA), courses taken, Graduate Record Exam (GRE) General Test scores, letters of recommendation, and students' statements of interests. The Department generally requires a grade point average of "B" or better for admission with graduate standing. Students with less than a "B" average may be admitted if supporting data (letters of recommendation, Graduate Record Examination, publications, etc.) are sufficiently strong. GRE General Test scores should be average or better and letters of recommendation should be positive. Applicants must have completed a Bachelor's

Degree in Geoscience or a related discipline.

The requirements for admission without deficiencies are listed in the Graduate Catalog (at [graduatecollege.unlv.edu](http://graduatecollege.unlv.edu)). The Geoscience Department requires that, at minimum, the student has taken at least six of the following eight classes or their equivalent: GEOL 220/221 Mineralogy/Optical Mineralogy, GEOL 301, Fossil Record, GEOL 330 Geochemistry, GEOL 333 Geomorphology, GEOL 341 Structural Geology, GEOL 348 Field Geology I, GEOL 426 Igneous and Metamorphic Petrology, and GEOL 462 Stratigraphy and Sedimentology. In addition, a student must have taken an introductory geology class or they may be required to attend GEOL 101 lectures and serve as a Teaching Assistant (T.A.) for GEOL 101 after admission. A student also must have taken at least 22 semester credits in supporting sciences, which include Chemistry, Computer Programming, Mathematics (Calculus or a higher level), Physics and Statistics.

The admissions recommendation made by the Department to the Graduate College may be rejected if it is judged to conflict with Graduate College standards. Students with a field(s) of interest that is consistent with a field of research emphasized by a departmental faculty member will be considered for admission, if that discipline currently does not have enough participating graduate students to be considered filled.

In order for a currently admitted graduate student to change from one department to another department or program, the student must submit a new application for admission, the required application fee, and all necessary credentials to the Graduate College. Upon admission, the student must withdraw in writing from the original department.

## ***2.2 Admission Contingencies***

Conditional Admission is given when additional admission materials are needed. It is the student's responsibility to comply with the terms of admission. Admission contingencies vary with each student and many students have none. The Department and Graduate College must receive all materials required at the time of matriculation no later than the end of the first semester. Progress toward completion of deficiencies noted at the time of matriculation should start in the first semester and be continuous until completed. Deficiencies must be completed as soon as possible. Questions should be addressed to the Department's Graduate Admissions Coordinator. Students must make their potential advisor aware of admission conditions.

## ***2.3 International Students***

The Office of International Student and Scholars (OISS) at UNLV provides expert help on navigating visa and other issues. International students in the Department of Geoscience should work closely with the OISS, their faculty advisor, and the Graduate Admissions and Program Coordinators to ensure a smooth transition into UNLV Department of Geoscience graduate program.

# **3.0 Financial Support**

## ***3.1 Introduction***

Financial support may be obtained from a variety of sources: (1) Assistantships granted by the Graduate College upon the recommendation of the Department, (2)

Fellowships and Scholarships awarded by the Graduate College or UNLV, (3) Fellowships, Scholarships, and Assistantships sponsored by extra-university individuals and organizations that are awarded directly by the Department, Desert Research Institute (DRI) or other institution, (4) grants-in-aid of research awarded by both on-campus and off-campus organizations, (5) Research Assistantships provided to support funded research, and in rare cases (6) student can be admitted as self-funded. New students desiring financial support as a Teaching or Research Assistant must have applications on file in the Graduate College by February 1st in order to be considered for support during Fall semester and students wishing to be supported in Spring semester must have applications on file by October 1st of the preceding year. Continuing students who have already been granted financial support and desire to have their support renewed must notify the departmental Graduate Coordinator. It is the responsibility of the M.S. student to follow all guidelines related to their financial support.

### ***3.2 Teaching Assistantships***

The Graduate College allocates state-funded graduate assistantships to the colleges, which are then distributed to the departments. Because the Geoscience Department has a small number of these assistantships, positions are commonly used for M.S. students teaching in undergraduate laboratory sessions. Once students have applied for the assistantships, it is the responsibility of the Department to recommend to the Graduate College which applicants should receive available positions. The initial award of an assistantship does not assure the recipient of continuous support until a degree is attained. However, the Department attempts to continue support for initially funded M.S. students for two academic years under the conditions that a student performs duties satisfactorily, as determined by the student's academic advisor, thesis committee, or T.A. supervisor (e.g. the GEOL 101 coordinator or class Professor), and maintains satisfactory academic progress, and as long as the department has positions and funds. The expected performance of Graduate Assistants is described subsequently. See the Graduate Catalog for additional guidelines on assistantships.

### ***3.3 Fellowships***

At present all UNLV fellowships available to M.S. students are awarded by the Graduate College and the UNLV President's Office. Applications are typically due in the Graduate College or President's Office around February 1st. Students who receive these awards usually have a 3.5 minimum GPA, high scores on the GRE and strong letters of support from faculty. If awarded a fellowship, a student receives a full academic-year stipend and tuition waiver, must enroll for at least 9 credit hours each semester of the Fellowship year, and must devote full time to academic studies. Additional guidelines for fellowships are listed under Scholarships in the Graduate Catalog and on the UNLV web pages.

### ***3.4 Research Assistantships***

Typically Research Assistant positions are funded by extra-university agencies, such as the National Science Foundation, through grant applications by Geoscience faculty members, but are administered through the Graduate College. The duties are controlled directly by the grantee, usually a graduate faculty member. The grantee and

the Graduate Program Coordinator review graduate applicant files and the work of continuing students in the field of interest and select whom to award the positions. These positions carry the same rules and regulations as Teaching Assistantships, but the type of work required depends on the research project. The student is directly responsible to the grantee whether in the Department or at research units such as DRI. Students working as Research Assistants may be fortunate enough to work directly on their thesis project but commonly may work on research not directly related to their thesis. Because of the uncertainties of extra-university funding, Research Assistantships may be granted on a semester-by-semester basis. See the Graduate Catalog for more guidelines.

### ***3.5 Other Financial Support***

Funding is available from a variety of other sources to supplement student income and to defray some of the costs of thesis research and preparation. Students may apply for scholarships through the Graduate College. Students must submit the FAFSA form to Financial Services each year in order to be considered for these scholarships. The UNLV Graduate and Professional Student Association (GPSA) awards grants-in-aid of research twice a year. Students must contact the organization directly. Additional forms of financial aid are listed in the Graduate Catalog.

Additional sources of funding, to which students may apply, include those from Sigma Xi, the American Association of Petroleum Geologists (AAPG), the Society of Sedimentary Geology (SEPM), and the Geological Society of America (GSA), all of which award grants-in-aid of student research in Geoscience. The student should independently seek information regarding these applications from on-line resources. Many of them require a short proposal regarding the project and deadlines occur throughout the year.

Scholarship money is also available within the Department. These awards are typically given to students in the earlier stages of their program (i.e. approximately the initial year for M.S. students) and are intended primarily to support fieldwork and data collection phases of research. Award of these scholarships is based on a balance of academic performance, research progress and financial need. Scholarships are designed to provide partial support; students are expected to also pursue other funding. To be eligible for one of these scholarships, a M.S. student must file a departmental application and have filed a FAFSA with financial services. Other requirements are spelled out on the application form. For questions related to scholarships communicate directly to the faculty chair of the committee. The deadline for applying is approximately November 6 for the following year.

## **4.0 Academic Policies**

### ***4.1 Graduate Student Responsibilities For Deadlines And Forms***

The Department of Geoscience adheres to the academic policies outlined in the Graduate Catalog and each student should be thoroughly familiar with them. Further, students must adhere to the Department of Geoscience M.S. policies and guidelines as described in this document. It is the student's responsibility to be informed of and to meet all deadlines for forms and exams, and to fulfill all degree requirements. The Graduate College maintains an online Calendar containing relevant dates. Students will be dropped

from the program and separated from the Graduate College if they fail to fulfill these requirements.

#### ***4.2 Adherence to Student Academic Misconduct Policy***

A key policy that all graduate students in Geoscience must adhere to is the current Student Academic Misconduct policy available on the website of the Office of Student Conduct. Students must understand and accept the Student Academic Misconduct policy, and adhere to it at all times. This adherence includes in all drafts of the proposal and thesis: there are no circumstances in which the student can waive adherence to this policy. Failure to adhere to this policy may result in disciplinary action, including and up to separation from the program, even if the infraction is claimed to have been unintentional.

#### ***4.3 Required And Expected Performance Of Graduate Assistants***

Details regarding Graduate Assistantships (Teaching and Research Assistantships) are outlined in the Graduate Catalog, and students are responsible for knowing the requirements and expectations. Graduate Assistants are required to begin work from one week prior to the start of Fall classes through the end of Fall semester final exam week, and from the day after the New Years holiday through the end of Spring semester final exam week. Graduate Assistants should expect to work on average 20 hours per week.

New Graduate Assistants are expected, as part of their contractual obligations, to attend all orientation events that pertain to them (the Graduate Program Coordinator will notify them in advance). These sessions are offered at the beginning of each fall semester. Also, helpful suggestions sometimes can be obtained through the GPSA. If a student is supported as a Teaching Assistant they must keep in contact with the professor in charge of the assigned class and with the Graduate Program Coordinator of the Department who may assign additional tasks within the scope of the T.A. position. Research Assistants must contact the graduate faculty member in charge of funding the assistantship. Research Assistants are guided by the same rules and regulations as Teaching Assistants, and consequently they may be asked to perform departmental duties as well as research.

Graduate Assistants, in particular Teaching Assistants, are expected to act professionally while representing the Department of Geoscience and UNLV. Failure to act professionally could result in an unsatisfactory semester evaluation. Examples of professional behavior including arriving on time to all classes and teaching assignments, presenting a professional demeanor and appearance, professional use of NSHE facilities and resources, and providing full attention to students and to the assistant's contractual obligations.

#### ***4.4 Course Grades***

Satisfactory progress includes maintaining a minimum of a 3.00 GPA in all graduate- level courses. One grade of B- is permitted in the courses listed on the Degree Program as long as the overall graduate GPA remains at or above 3.00. Receiving two grades of B- or one grade of C+ or lower will place a student on academic probation even if the GPA remains above 3.00. The student will be removed from probation when the C+ or one B- is replaced with a B or higher grade in that course or that course is replaced on



the degree program with a course having a grade of B or better, providing the GPA remains above 3.00. Receiving two grades of C+ or lower during the period of M.S. study will be grounds for automatic separation of the student from the M.S. program.

Any grade of incomplete received by an M.S. student must be completed within one semester or the student will be put on probation. If there are extenuating circumstances, an extension may be received in writing from the Graduate Program Coordinator or the chair of the department, with approval of the Graduate College.

#### ***4.5 Student Evaluations***

The graduate faculty members of the Department of Geoscience review each M.S. student, and the students and their advisor receive an evaluation from the Graduate Program Coordinator after the end of each semester. The objective of these semester reports is to acknowledge significant honors and awards, recent research advances, and to convey to the student their overall progress as a graduate student and GA. Every student is individually notified regarding his or her progress in the M.S. program. Students should be familiar with both the Graduate College and the Departmental policies that the faculty will follow in making their decisions. Any incomplete tasks/classes or unsatisfactory remarks must be addressed.

Evaluation of a student's progress is in the following areas: contingencies/deficiencies at the time of matriculation; filing of a degree program, committee form and thesis prospectus with the Graduate College; filing a thesis proposal with the department; course grades; thesis work; and performance as a Graduate Assistant, if funded. Specifics regarding each of these topics are contained in the following sections of this document.

If a student is making unsatisfactory progress, the student may be separated from the program or put on probation. The problems or requirements stated in the letter to the student must be corrected or fulfilled during the first semester of probation. If they are not, or if there is further unsatisfactory progress during any subsequent semester, the student will be placed on a second semester of probation during which time the student is not eligible for an assistantship or scholarship from the department or university. If, at the end of the second semester of probation, the student's progress remains unsatisfactory, then the student will be separated from the program.

If a student regards the faculty's decision or treatment as unjust, a request may be made of one's advisor, the department chair, or the Graduate Program Coordinator to call a meeting of the graduate faculty. The student will present the case in writing to the faculty one week prior to the meeting and may choose to be present at the beginning of the meeting for discussion of the situation. The graduate faculty members will deliberate the case without the student being present and, within one week, render their decision in writing. If a student continues to reject the faculty's findings, a grievance may be pursued through University channels. Additional guidelines on Probation and Separation can be found in the most recent version of the online Graduate Catalog.

#### ***4.6 General Timeline***

Although there is no single time frame for students seeking to complete a M.S., a full-time graduate student seeking a Master of Science degree (particularly if a student is funded through the Department, DRI, HRC, or the Graduate College), each student's goal

should be to complete the M.S. degree within two years. The regulations are structured for a two-year degree program, as are departmental funding and assignment of office space. If a student enters the program with deficiencies or works full-time, it is likely that additional time will be needed to complete the requirements. However, departmental funding may not be automatically extended. Therefore, the departmental advisor for each student will strive to provide two academic years of support. The degree must be completed within six years, or credit for course work completed will be lost.

Our two-year limit on office space and M.S. student funding is a reflection of this two-year program and may be extended only with special permission from the Department Chair, Graduate Program Coordinator, and the student's entire committee. Therefore, if a M.S. student is active in the department and is or working on a thesis, they should enroll in thesis credit hours every semester. The number of credits should reflect the amount of time the student is working on the project, the use of university facilities, and advisor's time.

Also, all students (whether full time or part time) must be continuously enrolled in accordance with Graduate College guidelines, as outlined in "Academic Policies" section of the Graduate Catalog. If for some reason the student can not actively participate in course work or thesis research, or if the student is off-campus on an external Fellowship (e.g. a Fulbright Fellowship), then the student should complete a Leave of Absence form from the Graduate College. As stated in the Graduate Catalog, "during the leave of absence, the student should remain in contact with the Department. However, all degree requirements must be completed within the six- and/or eight-year policy as stated previously in the Graduate Catalog".

Before enrolling for thesis credit hours, the student's advisor must be consulted to determine the amount and type of work to be completed for a specified number of credits during any given semester. This should be viewed as a contract, and each semester the advisor will judge whether the stated work was completed. If the work was either not completed or was of an unsatisfactory quality, then the student may be placed on probation.

## **5.0 Degree Progression Procedures**

### ***5.1 Upon Admission: Select Thesis Advisor***

New M.S. students generally enter the program after consultation with a faculty member who agrees to be the advisor. This person may remain the student's advisor, but the student or the advisor may elect to change this arrangement. Each student should talk to faculty members prior to the first semester to determine with whom they would like to work, and who wishes to supervise a specific student's research. During a student's graduate study, the student or the advisor may choose to discontinue the relationship. Depending on the timing or cause for this change, the student may have to also change thesis topics and resubmit a new thesis proposal. In this case, the student needs to formally present the new proposal to their committee. Such changes are unusual, but do occur due to illness, sabbatical leave, or other problems. A change of advisor or any member of the committee must be approved by the Department as discussed earlier and submitted to the Graduate College for approval using the Change in Advisory Committee form. No changes may occur during the final semester of the M.S. program, except in

case of unforeseen emergencies; a desire to graduate by a particular semester deadline does not constitute an emergency.

### ***5.2 Prior To And During The First Semester***

Prior to enrolling for the first semester, M.S. students must confer with the consenting advisor listed on their admission form that was chosen based on the student's statement of interest. During the meeting, it will be decided which courses should be taken during the first semester. GEOL 701 and 795 must be taken during the first year (GEOL 701 for Fall admission and GEOL 795 for Spring admission), as well as some of the deficiencies or graduate courses that may be listed on a student's admission form. These should include GEOL 701 and some of the deficiencies or graduate courses that may be listed on the admission form. Students admitted in Spring must take GEOL 701 in their second semester. Before the end of the first semester, M.S. students must select an advisor who consents to supervise the research.

The advising committee should be established prior to the end of the 2nd semester. The M.S. student and the advisor need to identify additional committee members that will best augment the research requirements. Both breadth and related expertise need to be balanced. The thesis advising committee will normally consist of the advisor (committee chair); two additional members from the graduate faculty of the Department of Geoscience; and a graduate faculty member from another department to serve as the Graduate College Representative. According to the Graduate College, *"The Graduate College Representative is a neutral, outside faculty member with full graduate faculty status who participates on the committee to ensure that all graduate college policies are followed, to make sure that all milestones in the student's progression are met appropriately, and to witness rigor, quality, and fairness throughout the student's culminating experience and defense."*

If the identified faculty members are willing to serve, then the student should have them sign the Appointment of Advisory Committee from the Graduate College. Students must submit the Appointment of Advisory Committee form to the Graduate College before establishing the degree program. The name of the advisor, committee members, and external member must be submitted to the Graduate College. The Graduate College must approve the Graduate College Representative suggested by the student and the advisor. The student should talk to this person and ask to what extent they wish to be involved in the student's program and progress. The M.S. student must not ignore this person during the years spent in the graduate program, or there may be repercussions that delay completing the degree.

### ***5.3 During The 2nd Semester***

Prior to the end of the second semester after admission to UNLV, M.S. students must (1) establish a thesis advising committee; (2) identify a thesis topic, (3) meet with the committee to provide recommendations for the Degree Program; (4) submit to the Graduate College an approved Degree Program and Appointment of Advisory Committee Form. The Appointment of Advisory Committee form must be submitted to the Graduate College not later than the last day of instruction of the 2nd semester of enrollment (see section on selecting an advisor and thesis committee).

#### **5.4 During All Semesters Prior To The Final One**

Each student is expected to register for a minimum of three semester hours of graduate credit each semester (summers excluded). However, students intending to complete, defend, submit a thesis to the Graduate College, and/or graduate during the summer term must be registered for a minimum of 3 credits. Students who hold graduate assistantships are required by the Graduate College to register for a minimum of 6 semester hours of credit each semester; the department of Geoscience recommends that graduate assistants register for 9 credits, including thesis credits, each semester. Graduate students who are working on a thesis must register for a minimum of 3 semester hours of credit each semester (these may be non-thesis credits) until the thesis is completed, submitted to the Graduate College, and the student graduates. In rare cases a student may be permitted to complete the thesis in absentia waiving the registration requirement. Students must petition the Graduate College for approval. If approved, the advisor, Graduate Dean, along with the student will determine the requirements for completion of the work. A minimum of 6 thesis credit hours is required for graduation. Important thesis information is available in the "Academic Policies" section of the Graduate Catalog. Students are expected to maintain continuous enrollment while working on their degree. According to the Graduate College:

*"After admission to a graduate program, students must register for and complete a minimum of six hours of graduate degree program credits per rolling three semesters (including summer). Students working on a thesis or dissertation must register for three semester hours of credit each semester (excluding summer), until the document has been completed and has been given final approval."*

If for some reason the student can not actively participate in course work or thesis research, then the student should seek a "leave of absence" from the Graduate College. Students who are not registered for academic work within a calendar year are separated from the graduate program and will need to reapply for admission to the Graduate College should they wish to continue. Exceptions to the above policy, as with a request for a leave of absence, are made only in advance with the approval of the student's advisor, Department Chair, Academic Dean, and the Graduate Dean. Such a leave does not extend the six-year completion date, but may serve to avoid probation or separation from the program because of unsatisfactory progress. Additional guidelines on Probation and Separation are provided in the Graduate Catalog.

Whether completing a thesis within two or six years, if a student anticipates consultation with departmental faculty or use of Department facilities to conduct research or for the preparation of a proposal, then the student must enroll in thesis credit hours reflecting the amount of faculty time and facility use. Before enrolling for thesis credit hours, the student's advisor must be consulted to determine the amount and type of work expected to be complete for a specified number of credits during a given semester. This should be viewed as a contract, and the advisor will judge each semester whether or not the stated work was completed. Such work will be a criterion used in the evaluation of satisfactory or unsatisfactory progress of a graduate student.

### ***5.5 During the Final Semester***

Each student must (1) apply for graduation and pay fees prior to the deadline listed in the class schedule for each term; (2) allow at least two weeks for the committee to examine the thesis, prior to scheduling the final examination (thesis must be submitted to the committee no less than eight weeks prior to the last day of instruction in the term in which the student will graduate); (3) obtain a statement from all committee members that they deem the written thesis defensible; all members of the committee must be satisfied with the thesis prior to scheduling the defense; (4) schedule the final examination (defense) with the committee; (5) deposit a copy of the defensible thesis in the Department office at least one week prior to the exam, and notify the faculty of its presence and the date, time, and place of the exam; (6) pass the final examination no later than three weeks before the end of classes; (7) submit two unbound copies of the thesis (one on high-quality paper) and the information required for GEOREF to the Department office staff; and (8) deposit two signed, unbound copies of the thesis in the Graduate College two weeks before the end of classes.

Students who are graduating with an M.S. degree are encouraged to participate in the university commencement ceremony. However, you may not participate in commencement prior to completing all degree requirements.

Students are advised to determine these deadline dates, verify them, and mark them on a calendar. Students must be highly organized during their final semester. The most difficult deadlines for most M.S. students to meet are (1) the completion of a defensible draft of the thesis and (2) the completion of the thesis for deposition in the Graduate College. Students must remember that they are not working on this alone, and are relying on the efforts of four other very busy people: the committee. Therefore, students must discuss plans with the committee early.

## **6.0 Description of M.S. Student Requirements**

### ***6.1 M.S. Degree Program***

The Degree Program form outlines the courses the student will complete for the M.S. degree. It must be submitted to the Graduate College prior to the end of the second semester. The student, the advisor and the entire thesis advising committee will design the degree program during a committee meeting. It is strongly suggested that M.S. students establish and submit the Degree Program form to the Graduate College during their 2nd semester. It is required by the Graduate College that this be done prior to completing 16 credits of course work toward the degree (See Graduate Catalog on The Degree Program). The student may make minor changes in the Degree Program with advance approval from the Department and the Graduate College. Any changes in the Degree Program require filing of a Change to Degree Program Form. The Degree Program does not include deficiencies listed at the time of admissions, although a student must take those classes.

Different rules pertain if the student is requesting that 12 or more graduate credits be accepted toward the degree program from studies prior to matriculation. In the latter case, the program must be submitted within six weeks of the beginning of the first semester (see associated form and review the Graduate Catalog). In addition, the Department requires that every student's advisor, in conjunction with the Graduate

Coordinator, approves a student's first semester classes before enrollment and that the assigned advisor or chosen thesis advisor approve the courses to be taken during the second semester. By the end of the second semester, the student must have an approved Degree Program signed by the advisor, approved by the examining committee, and submitted to the Graduate College to be sure you are making satisfactory progress as a full-time M.S. student. The Department and the Graduate College may make minor changes in the Degree Program with advance approval.

The Degree Program must include 30 credit hours of graduate course work, some of which may be transferred from other colleges. They must include GEOL 701, GEOL 795, and six hours of GEOL 797 (thesis research and preparation). A student may enroll for more than six credit hours of GEOL 797, but a maximum of six can be counted on the Degree Program. All other course work must be 600 level or above to count toward the M.S. degree. M.S. students may take graduate-level courses offered by departments other than Geoscience. However, only a maximum of 6 non-Geoscience courses may be used toward a M.S. degree program.

### ***6.2 Annual Committee Meetings***

M.S. students must meet with their committees on at least an annual basis, and semester meetings are suggested. Meetings with the committee for the proposal defense satisfies this requirement. It is strongly advised that if any modifications of proposed work are anticipated at other times during the year (particularly if these changes are major), that a committee meeting be scheduled at the first opportunity, without waiting for the annual meeting. By agreement of the full thesis committee, the annual meeting may take place via electronic mail, where the student fully informs the committee of progress and the committee has a chance to respond.

### ***6.3 Thesis Proposal***

All M.S. students are required to write and defend a Thesis Proposal, which outlines the scientific problem, hypotheses, and methods to be used. The selection of the research problem is the responsibility of the individual student, not that of the faculty member with whom the student desires to work. However, input from a faculty member is required. Students are helped through the initial phases of the proposal in GEOL 701 and by working with their advisor. The proposal should be submitted to the student's advisor as early as possible, certainly before beginning the actual project, and well before the end of the student's second semester. While taking GEOL 701 and working on their proposal, students should submit at least one draft of the proposal to their advisor.

In addition, a faculty member may decline to direct any individual's project. A thesis proposal must be written by the student and approved by the Department. An approved abstract of the thesis project and a course of study must be submitted to the Graduate College as part of the Thesis Prospectus at the same time the Degree Program is submitted. Both the Prospectus and the Degree Program forms must be submitted to the Graduate College before the end of the second semester. Any changes in Degree Program or thesis must be approved in advance by the student's committee and filed with the Graduate College.

A student's committee should meet in the second semester to hear a formal presentation of the proposal and to discuss the project, after having received the

written proposal for comments at least one week prior to the meeting. Following the committee meeting, a student should revise the proposal, following the suggestions of the committee members.

The written thesis proposal, when approved by the student's committee, must be duplicated and deposited in the department office for a two-week period excluding holidays and summer. The student must notify the Geoscience faculty members in writing that the proposal has been deposited for their review. Any faculty member may notify the student's committee in writing of any suggestions or why the faculty member does not believe the proposal should be approved. If a request for discussion is not received within two-weeks, the proposal is automatically approved. If any individual's objection to a proposal cannot be satisfied through the committee, the objection must be brought before the graduate faculty of the Department.

The adviser and the advisory committee should assist students in writing concise proposals and should consider proposals carefully before endorsing them. The proposal must outline the problem(s) concisely and clearly, with a statement of the problem(s) or hypotheses to be addressed and the importance to the discipline, proposed methods of approach, and expected results or contribution to Geoscience. A thesis proposal submitted by a M.S. student in the Department of Geoscience should normally include a 250 word abstract, and a main proposal body that clearly and concisely defines the problem to be solved and hypotheses to be tested. The text may include preliminary results from the student's, advisor's, or others' work, but should not contain final data sets. A complete proposal will typically consist of about 3000 words in the main text (exclusive of Figure Legends, tables, and references cited). The text should be double spaced with standard margins, in a readable 10 or 12 point font (e.g. Times New Roman). The proposal should be sufficiently well documented with citations from pertinent literature to assure the faculty that the student is aware of the work of other investigators in the proposed and related fields. The references cited section should be in Geological Society of America Bulletin format (see guide for authors of GSAB at [www.geosociety.org](http://www.geosociety.org)). It is recommended that students use an appropriate citation software package, like RefWorks, available for free through the UNLV Library website, or commercial software like EndNote. Typically, the bibliography of a complete proposal will include at least twenty citations, but more is common. All proposals must include a realistic budget and time schedule.

#### *6.3.1 Suggested Format Of Thesis Proposal*

1. Cover Sheet required
2. Abstract - 250 words.
3. Main proposal text:

The text should clearly contain the following components:

- a) What is the hypothesis to be tested or geologic problem to be solved? Simply generating new data that does not solve a geologic problem is rarely enough to justify proposed work.
- b) Why is the subject significant?
- c) How will the hypothesis be investigated or the geologic problem be solved?
- d) Figures pertinent to the proposal, either in-line inside textboxes with legends, or after References cited.

4. References Cited
5. Estimated Budget
6. Estimated Time Schedule

#### ***6.4 Proposal Defense Examinations***

The Department of Geoscience requires the successful completion a thesis Proposal Defense Examination. The Graduate College requires a unanimous decision by the committee to pass the proposal defense exams. Students must be enrolled in the semester in which they defend the proposal. The Proposal Defense Examination is usually completed prior to the end of the second semester. The Graduate College requires that this exam be taken at least three weeks before the end of the semester. The Proposal Defense Examination focuses on the thesis proposal and the student's ability to perform the research. It includes a formal oral presentation of the student's thesis proposal (about 25 minutes long), research to date, and questions by the thesis advisory committee on the thesis topic. After the committee agrees that the student has passed the Proposal Defense and have made all necessary revisions to the proposal, the committee will sign, and the student will submit, the Department Proposal Defense Form.

#### ***6.5 Theses***

Students are urged to download the Guide to Preparing & Submitting a Thesis or Dissertation manual from the Graduate College's web page when the thesis is about to be written. Each student must follow these guidelines to the letter or the Graduate College will not accept the thesis. Questions may be addressed to the student's adviser or the Thesis Director at the Graduate College.

M.S. students should have extensive discussions with their advisor and possibly their committees before embarking on writing a thesis. Every advisor follows a different procedure depending on the project undertaken and the capabilities of the student. Remember that a thesis need not be a long document. M.S. thesis lengths are variable, but as a guide, about thirty-forty double-spaced type written pages with additional space for figures, references, and appendices are typical. The Geoscience Department faculty will consider manuscripts suitable for submittal to a journal for a M.S. thesis as well. The writing style should be equivalent to one in a professional journal: the department requires GSA Bulletin format style for non-manuscript theses. Recently completed theses can be used as guides, but realize that they are of variable quality.

For guidance, we suggest that students have a completed first draft of the text, figures and maps to the advisor no later than February 1st for May graduation, no later than March 1 for an August graduation, and no later than September 1st for a December graduation. A student's advisor may have read sections of text prior to those dates, but these deadlines are aimed at a completed draft. The advisor should have at least two weeks to read and comment on the student's work. Remember that the faculty members have other teaching and research commitments, and other graduate students. Each student must be prepared to make numerous revisions quickly and return the revised drafts to the advisor until achieving a draft that the advisor deems acceptable to be distributed to the committee members. Remember that the advisor may need two weeks to reread each draft submitted. Depending on the advisor's comments, it may be



helpful to set a tentative defense date with all committee members to obtain a realistic view of their schedules. Also at this time, the M.S. student should advise committee members of progress so the committee can be aware that they may soon receive a draft of the thesis. Committee members may outline their time constraints to the student (i.e. meetings, field trips, etc.). The Graduate College representative committee member may choose to see the first draft or perhaps only the defendable copy: ascertain their input and keep them apprised as appropriate. Once a student's committee has read the thesis, which includes nearly final figures, maps, and text, they may suggest revisions and wish to see revised drafts before they move to approve it as a defendable thesis. Any suggested revisions should be discussed with the committee member and advisor. It is the obligation of the committee chair to reconcile differences of opinion with regard to content and organization of the thesis. This is achieved most constructively through meetings of the candidate with the committee.

Students writing a thesis that is a manuscript to be submitted to a journal for publication must have the thesis reviewed and approved by the thesis committee **prior** to submitting the manuscript to the journal. Committee approval may require editing and revisions. Two weeks should be provided to the committee to review the manuscript. Once the committee has deemed a draft as defendable, the student must make any final changes and display the draft in the Department office for one week prior to the final examination. This displayed copy should be nearly a final version. The text should be free of grammatical and typographical errors, and figures and maps should be drafted and very near their final form, so that any person who wishes to read it before the exam can do so easily.

After all committee members are satisfied with the thesis, the student should notify the Graduate College of the examination date. Remember that this must be done two weeks prior to the exam, and that two weeks must be allowed for the committee to evaluate the thesis prior to scheduling the exam. The final exam is open to all UNLV graduate faculty members. At least one week prior to the final exam and defense put the best and most complete copy of the defendable thesis in the departmental office for review by any faculty, student, or community member. Be sure to notify the Department faculty members in writing of its presence, and ensure that the date, time, and place of the exam are posted. While the thesis is available for review in the office, the student should make final preparations for the final exam. The student should have been studying and preparing long before this week.

## ***6.6 Thesis Defense***

The regulations for the final examination, or defense, for Masters candidates are discussed in the Graduate Catalog and should be read by every candidate. The Department adheres to the general guidelines of the Graduate College. The exam must occur no later than three weeks before the end of classes in the semester in which the student wishes to graduate. It should not be scheduled during school holidays, weekends, or the summer unless all committee members agree in advance. The composition of the committee shall not be changed to facilitate scheduling during these periods.

In detail, the format of the final examination in Geoscience is as follows. During the time in which the final exam is scheduled, the candidate presents, in a

professional manner, an oral summary of the thesis stressing the major conclusions of the research. The presentation should be about 25 minutes in length and may not exceed 45 minutes. This presentation must be open to a public audience including non-graduate faculty, students, and interested people from the community. All members of the Advisory Committee must be present during the oral defense. Following the presentation, the public audience may ask questions related to the thesis. During this time, the graduate faculty and particularly the examining committee should refrain from questioning the candidate. At the end of this brief discussion period, the public audience will be excused. As specified in the Graduate Catalog, the candidate will be fully examined with only graduate faculty members present unless the student's committee has unanimously approved the presence of other individuals. It is during this questioning period that the student must be able to defend the findings and methodology of the thesis and to demonstrate a comprehensive understanding of a broad field of study as well as a detailed understanding of a more limited field.

After completion of the question and answer period, the student will be dismissed, and the examination committee will evaluate the student's performance with the advice and consultation of any other graduate faculty members that may be present. As noted in the Graduate Catalog, *"The advisory committee must unanimously pass the student. If the committee votes unanimously to fail the student or the vote is not unanimous to pass, the student, in conjunction with his/her advisor, may request the committee to administer a second examination. The student must wait at least three months before taking the second examination. The Department may require additional course work, substantial reworking of the thesis or whatever is believed necessary to prepare the student for the second examination."* At the conclusion of the committee deliberation, the committee should complete and sign the "Final Examination for Advanced Degree" form for the Graduate College and discuss their conclusions with the student.

To prepare for this examination, a student is advised to review all graduate course work, all details of the thesis, and all current literature related to the thesis and their field of interest. The committee will be examining to ascertain whether the student has developed a sufficient foundation with both depth in their research and breadth in Geoscience. The student may be called upon to extend one's knowledge beyond "what one knows" by testing the use of sound scientific reasoning, or the candidate may be asked to state an opinion regarding particular papers or theories to test whether the candidate possesses the ability to be critical of our science. An M.S. student should be in his/her most alert and educationally honed state to pass this final examination, which is only in part a thesis defense.

After passing the final exam (which includes the defense of research), where yet other changes to the thesis may be suggested, the final document should be quickly prepared. Present this document with additional cover sheets to all committee members for their final approval and signature. Upon passing the final exam, the student must make any needed changes in the thesis and submit the final document to the department and to the Graduate College. The student must also verify at this time that the Graduate College holds a "Final Examination for Advanced Degree" form that should have been submitted after the exam was passed and the final draft was approved. If they do not have this form, the student must see that it is submitted

immediately or the student will not graduate.

Many of our M.S. students do not meet the deadlines for Spring graduation. If a student applied for Spring graduation and missed the deadlines, the student must reapply for August or December graduation and pay additional fees. If it is anticipated that a student will not finish in time for a Spring graduation, then the initial filing should be for August. Functionally, this change only provides an extra month to work on the thesis. The student must discuss the expected schedule of events with the committee, and they must approve it. It is best if final exams for Fall graduation can be taken prior to the end of the Spring final exam period and a final draft of the thesis is ready for the committee to sign shortly thereafter. Remember, the University does not employ faculty members during the summer and many are away at meetings or doing field research on externally funded grants. Committee members may not be changed just to achieve an August graduation.

Students may not participate in Commencement prior to completing all degree requirements.

Two copies of the thesis, unbound and signed by all members of the examination committee, must be deposited in the Graduate College office in final form at least two weeks prior to the end of instruction within the term in which the student will graduate. The Graduate Dean must give permission for extension of this deadline in writing. The Department strongly recommends adhering to the deadline and only under exceptional circumstances will it support the request to the Dean.

In addition to the two copies of the final thesis required by the Graduate College, the Department requires that two unbound copies be submitted to the Department Chair or office staff when the document is submitted for the Chair's signature. One of these copies should be on high-quality paper. These copies will remain in the Department office for immediate use and photocopying. It is considered proper conduct to also give a bound copy to the advisor at this time. The Department usually pays the cost of binding departmental copies.