This handbook is intended to help you meet all Departmental and Graduate College requirements for the Master’s degree in Geosciences. It is important that you acquaint yourself with these requirements and deadlines and remain informed throughout your academic career.

Geosciences Graduate Policy Committee
The Graduate Policy Committee, composed of five Geosciences faculty members, formulates and monitors departmental policy governing your graduate studies. This committee is responsible for evaluating your academic progress and administering financial support throughout your academic career.

Geosciences Graduate Office
The Graduate Office is responsible for monitoring your academic progress and assisting you in meeting all departmental and Graduate College degree requirements. This office is your primary contact. All paperwork towards your degree must be submitted to the Geosciences Graduate Office for approval.

Graduate Degree Certification Office, Graduate College
The Graduate Student Academic Services Office in the Graduate College is responsible for overseeing all Graduate College degree requirements and for the final posting of your degree.

General Information
Information on general requirements for the MS degree is available on-line through the Graduate College (http://grad.arizona.edu/) and Geosciences (http://www.geo.arizona.edu/?q=node/35). The Graduate College sets basic degree requirements, and there are additional Geosciences requirements which are outlined in this handbook.

Minimum GPA Requirement
Geosciences students must maintain a minimum cumulative GPA of 3.0. Should a student’s cumulative GPA fall below 3.0, the student will be placed on academic probation. If at the end of the following semester the student has not raised his/her GPA to 3.0 or higher, the Graduate College will academically disqualify the student. No student on academic probation may hold a scholarship, fellowship, or assistantship.

Deficiencies
A deficiency is a lack of coursework or knowledge in a basic area which may be critical to a student’s graduate and professional work. A student’s advisor may require that she or he satisfy these deficiencies through further coursework. A grade of C or better will satisfy deficiency requirements, but no deficiency will be eliminated on a pass/fail basis.

MS Course Units and Time Limitation
A minimum of thirty units of graduate-level courses (500 or above) are required for a Master’s degree, fifteen of which must be graded course work. In addition, two to six of the required thirty units must be Master’s Report (Prepublication) (GEOS 909) or Thesis (GEOS 910) credits. First-year Geosciences students are required to take two semesters of GEOS 595A, Topics in Geosciences Colloquium. The MS Plan of Study (filed second semester) will detail your 30 coursework units. All requirements, including transfer work, must be completed within six years. It is expected that a Master’s degree will take two years to complete.

Minimum Enrollment Requirement
The Department of Geosciences requires that students on scholarship, fellowship, or assistantship support must register for a minimum of 9 graduate units per semester.
Continuous Enrollment Requirement
MS students are required to be enrolled each fall and spring semester for a minimum of 3 graduate units (9 graduate units if on scholarship, fellowship or assistantship) from original matriculation until all degree requirements are met. If degree requirements are to be completed in the summer, students must register for a minimum of one unit of graduate credit during that term. Unless excused by an official Leave of Absence (which may not exceed one year throughout the student’s degree program), all graduate students are subject to the Continuous Enrollment Policy and must pay in-state and out-of-state tuition in order to remain in the program. If the student fails to obtain a Leave of Absence or maintain continuous enrollment, he or she will be required to apply for re-admission to the program, pay the Graduate College Application fee, and pay all overdue tuition and fees, including cumulative late penalties. No tuition or registration waivers will be applied retroactively.

Academic Progress
Satisfactory academic progress consists of maintaining full-time graduate status, maintaining a minimum grade point average of 3.0, submitting annual progress reports, and making adequate progress in taking exams and completing other requirements for the degree. Students not making satisfactory academic progress are not eligible for departmental support or departmental office space, and continued unsatisfactory progress will result in Geosciences requesting that the Graduate College academically disqualify the student.

Dismissal and Appeal Policy
Students may be dismissed from the Geosciences graduate program due to insufficient progress towards completion of the degree. The Graduate Policy Committee (GPC) monitors student progress and periodically notifies students who are not making satisfactory or timely progress. This notification is a written warning and requires the student to propose a schedule for degree completion which has been approved by the student’s advisor. Once the GPC accepts the proposed schedule, further noncompliance prompts a written notification that the student will be academically disqualified by the Graduate College at the start of the next semester. The student may appeal this status conversion in writing to the GPC chairperson, but this appeal must be received before the date of the status conversion. The student may appeal the GPC chairperson’s decision to the Geosciences Department Head.

Degree Requirements

Research Committee
Upon admission to the MS program, you are assigned a temporary advisor, who has expressed an interest in serving as your Major Advisor. Prior to your second semester you will have the opportunity to formally select a Major Advisor and two additional committee members to form your Research Committee. The majority of your committee must be tenure-track faculty in the Department of Geosciences. Tenure-track faculty in the Department of Geosciences must direct or co-direct all MS research. With special permission from the Graduate Policy Committee and the Graduate College, scholars without a University faculty appointment may also be considered for committee membership. At most, one such scholar may be considered for committee membership.

Meeting with Advisory Committee
The Geosciences department requires that you meet with your advisory committee (MS committee) at least once a year. In preparation for that meeting you are required to prepare a brief (no more than one page) written report that summarizes your progress during the past year and outlines your goals for the coming year. The advisory committee meeting is not supposed to be a mini-oral exam; your advisory committee should benefit you by providing advice and support. The meeting (30-60 minimum) is an opportunity to discuss progress and goals as a group, identify relevant courses, provide advice, schedule events such as prelims and defenses, and consider funding opportunities. Your prepared progress report should be signed by each member of the committee and a copy is due in the Geosciences Academic Affairs office (GLD-S 210) on May 1 of each year that you are enrolled in a Geosciences graduate degree program. You should contact the members of your advisory committee to schedule a meeting and prepare your progress report in advance of the meeting. Students without committees should plan to meet with their advisor to discuss choosing a committee before the May 1 deadline.

Public Presentation
Near the end of your MS program you must give a public presentation of your research. The thesis or prepublication manuscript does not have to be in final form when this presentation is given. The presentation should be public and announced in advance, and be in whatever format is acceptable to your Research Committee. These presentations are generally made at national meetings (AGU, GSA), the GeoDaze Symposium, or a departmental brown bag.
**Thesis/Prepublication Option**

The culmination of your degree program is the submission of either a professional prepublication manuscript or a formal thesis. By the end of your second semester, you must prepare a written proposal for the research required for a thesis or prepublication manuscript, discuss this proposal with your committee and obtain their approval of the proposal. MS candidates who have not had research proposals approved by the end of their second semester are not making satisfactory academic progress towards their degree and therefore may not eligible for departmental support.

---

**Thesis Requirements**

**910 Units**

Two to eight units of GEOS 910 are required for the thesis option.

**Thesis Format Guidelines**

General thesis format guidelines are outlined in the *Manual for Theses and Dissertations* (available on-line at [http://grad.arizona.edu/degreeecert/formattingguide](http://grad.arizona.edu/degreeecert/formattingguide)) and must be strictly followed for thesis submission. The format check will be performed by your Major Advisor. Your Major Advisor must be given sufficient time to complete the format check and return the manuscript to you for corrections. In addition to other specifications, every thesis must also include a Title page and Approval By Research Committee page (examples on following pages) and have page numbers.

**Submission of Thesis**

If your advisor requires microfilming, one copy must be submitted electronically ([http://www.etdadmin.com/cgi-bin/school?siteId=63](http://www.etdadmin.com/cgi-bin/school?siteId=63)) to the Graduate College by the posted deadline. Every student must give the following to the Geosciences Graduate Office: one CD containing a PDF of your thesis, and a PDF or JPG of your signed Approval By Research Committee page, along with a change of grade form for 910 units signed by your advisor. This copy will made available to the public through the Antevs Library.

**Microfilming**

The Department of Geosciences recommends that you submit your thesis for microfilming, but microfilming is at the discretion of you and your major advisor.

---

**Prepublication Requirements**

**909 Units**

Two to eight units of GEOS 909 are required for the prepublication option.

**Prepublication Manuscript**

Research for the Master’s degree should be of such nature and quality that it is worthy of publication. As an alternative to the formal thesis, you may present your research in the form of a manuscript suitable for submission to an appropriate professional journal. The department will accept the prepublication manuscript in fulfillment of the degree requirement and expects the manuscript to be submitted to a regional, national or international peer-reviewed journal or series.

**Prepublication Format Guidelines**

While you may follow any single journal format acceptable to your committee, every prepublication must include a Title page and Approval By Research Committee page (examples on following pages) and have page numbers.

**Submission of Prepublication**

Every student must give the following to the Geosciences Graduate Office: one CD containing a PDF of your prepublication manuscript, and a PDF or JPG of your signed Approval By Research Committee page, along with a change of grade form for 909 units signed by your advisor. This copy will made available to the public through the Antevs Library. The Graduate College does not receive a copy of the prepublication manuscript.
TEMPERATURE VARIATIONS ACCOMPANYING THE FORMATION OF SKARNS NEAR PATAGONIA, ARIZONA

by

Wille E. Coyote

A Thesis Submitted to the Faculty of the

DEPARTMENT OF GEOSCIENCES

In Partial Fulfillment of the Requirements
for the Degree of

MASTER OF SCIENCE

In the Graduate College
THE UNIVERSITY OF ARIZONA
2008
(Sample Approval Page for Thesis)

STATEMENT BY THE AUTHOR

This thesis has been submitted in partial fulfillment of requirements for the Master of Science degree at The University of Arizona and is deposited in the Antevs Reading Room to be made available to borrowers, as are copies of regular theses and dissertations.

Brief quotations from this manuscript are allowable without special permission, provided that accurate acknowledgment of the source is made. Requests for permission for extended quotation from or reproduction of this manuscript in whole or in part may be granted by the Department of Geosciences when the proposed use of the material is in the interests of scholarship. In all other instances, however, permission must be obtained from the author.

(author's signature) (date)

APPROVAL BY RESEARCH COMMITTEE

As members of the Research Committee, we recommend that this thesis be accepted as fulfilling the research requirement for the degree of Master of Science.

Major Advisor (type name) (signature) (date)

(type name) (signature) (date)

(type name) (signature) (date)
TEMPERATURE VARIATIONS ACCOMPANYING THE FORMATION OF SKARNS NEAR PATAGONIA, ARIZONA

by

Wille E. Coyote

A Prepublication Manuscript Submitted to the Faculty of the

DEPARTMENT OF GEO SCIENCES

In Partial Fulfillment of the Requirements
for the Degree of

MASTER OF SCIENCE

In the Graduate College
THE UNIVERSITY OF ARIZONA
2008
(Sample Approval Page for Prepublication Manuscript)

STATEMENT BY THE AUTHOR

This manuscript, prepared for publication in the (insert the name of journal, series, etc.) has been submitted in partial fulfillment of requirements for the Master of Science degree at The University of Arizona and is deposited in the Antevs Reading Room to be made available to borrowers, as are copies of regular theses and dissertations.

Brief quotations from this manuscript are allowable without special permission, provided that accurate acknowledgment of the source is made. Requests for permission for extended quotation from or reproduction of this manuscript in whole or in part may be granted by the Department of Geosciences when the proposed use of the material is in the interests of scholarship. In all other instances, however, permission must be obtained from the author.

(author’s signature) (date)

APPROVAL BY RESEARCH COMMITTEE

As members of the Research Committee, we recommend that this prepublication manuscript be accepted as fulfilling the research requirement for the degree of Master of Science.

Major Advisor (type name) (signature) (date)

(type name) (signature) (date)

(type name) (signature) (date)

(type name) (signature) (date)
The Department of Geosciences is committed to the concept of building, supporting, and encouraging an active mentoring program between faculty and graduate students. To that end, the Department supports the definition of mentoring provided in the January 1991 Graduate Council position paper on mentoring:

Mentors are advisors, people with career experience willing to share their knowledge; supporters, people who give emotional and moral encouragement; tutors, people who give specific feedback on one’s performance; masters, in the sense of employers to whom one is apprenticed; sponsors, sources of information about aid in obtaining opportunities; models, of identity, of the kind of person one should be to be an academic.” Zelditch, M., 1990, “Mentor Roles”, Proceedings of the 32nd Annual Meeting Western Association of Graduate Schools.

The Department understands that the relationship between mentor and student is a very personal one, but recognizes that it is important to develop appropriate departmental infrastructure to support mentoring relationships. Thus, the Department adopts, as a definable graduate Mentoring Program, the following guidelines and expectations:

• The Department will provide clear indications of the requirements for graduation from the program, including all examinations and foreign language requirements, Graduate College requirements, and expected time to complete each step toward the degree. Much of this information will be made available through the departmental Graduate Academic Advisor.

• Evaluation of student progress and performance will be provided by the departmental Graduate Policy Committee and Graduate Academic Advisor, which will provide at least annual written documentation of student progress. The Graduate Policy Committee will set a clear and reasonable policy regarding the norms for time-to-degree and student progress and will take appropriate action on the basis of this policy to assure that students meet these requirements. The Graduate Policy Committee will formulate explicit, well-publicized dismissal and appeal procedures.

• Advisors (mentors) are expected to help students develop their writing skills, both for scholarly publications and grant writing. In addition, from time to time, the Department will offer special courses or seminars on technical and grant-writing skills.

• The Department encourages timely initiation of research by making an initial assignment of a temporary faculty advisor for each graduate student. Thus, even during the first semesters here, students are encouraged and enabled to initiate research.

• The Department actively encourages graduate student involvement in Departmental affairs in terms of committee representation wherever appropriate.

• It is the expectation that students will participate in professional meetings. To this end, the Department has a long-established annual Geoscience Symposium organized by graduate students that provides the opportunity for student (graduate and undergraduate) presentations in the format used in national meetings. It is also a departmental degree requirement that graduate students will give a public presentation of their research, supported to the extent possible by research and departmental resources. Numerous (typically several per week) brown-bag seminars are offered, with the expectation of active student participation.

• The Department encourages student teaching opportunities. The Department offers interested students, to the extent possible under funding limitations, the opportunity to teach laboratory sections under carefully supervised and structured conditions. Each GTA is evaluated at the end of the semester by both students and a faculty supervisor. The Department is committed to promoting interest in, and proficiency at, teaching.

• The Department recognizes that the graduate student body represents a diverse and changing population in terms of ethnicity and gender. The Department is committed to supporting diversity, and actively recruits minority and under-represented students.

• The Department endeavors to create an atmosphere of collegiality that values and supports graduate students. To that end, the Department encourages graduate student organizations within the Department, sponsors social events that allow students, faculty and staff to interact as a community, and provides common student work space to the extent possible.

The Department acknowledges that effective mentoring (advising) is a consideration in performance and promotion/tenure evaluations of faculty. Further, the Department recognizes that a departmental commitment, and individual commitment on the part of each faculty member/advisor/mentor, is necessary for a successful mentoring program.
FINANCIAL SUPPORT POLICY

•This Financial Support Policy is provided for students to inform them of departmental policy regarding graduate sent support. The policies outlined below are intended to be consistent with four semesters in residence (two years) for an MS degree and eight semesters in residence (four years) for a Ph.D. degree.

1. Period of Eligibility
Contingent upon availability of state funds, students admitted with support will be eligible for departmental support at the half-time level (20 hours per week) for four consecutive semesters (MS program) or eight consecutive semesters (Ph.D. program).

2. Support Commitment from Department
Departmental support may be in the form of a Teaching Assistantship (TA), Research Assistantship (RA), scholarship, or some combination thereof. Departmental RA and scholarship support will be provided if academic progress is satisfactory. Departmental TA support will be provided if both teaching performance and academic progress are satisfactory.

3. Student Without or Beyond Support
Students who are admitted to the program without support, or who have exhausted their period of eligibility, may be considered later for departmental support on a semester-by-semester basis, with no commitment for additional consecutive support.

4. Declining Departmental Support
If departmental support is not desired during the period of eligibility, a written notice must be filed with the Graduate Office. Failure to do so in a timely fashion may result in the cancellation of future support. Eligibility for committed support lasts for the periods stipulated above, regardless of whether the support is declined or accepted. Extensions to support eligibility are not given for semesters during which departmental support is declined, with the exception of semesters when students are on official Leave of Absence.

5. Additional Support During the Eligibility Period
During the period of eligibility, departmental support of less than the half-time level may be augmented by other forms of support such as scholarships, or fellowships (e.g., support may consist of a quarter-time TA plus a quarter-time scholarship). Students do not forfeit support by accepting external forms of aid (e.g., NSF or DOD Fellowships), unless their total value equals or exceeds the equivalent of a half-time assistantship.

6. Change of Status
Change in status from the MS program to Ph.D. program, without completion of the MS, does not automatically increase the period of aid commitment. Extensions may be granted at the discretion of the Graduate Admissions Committee. However, the total period of commitment may not exceed eight semesters from the original date of admission. Students who have completed their MS here and have been accepted into the Ph.D. program will be re-evaluated for support along with other incoming graduate students that year. Change in status from a Ph.D. program to an M.S. program may affect a student’s eligibility period for department support.

7. Satisfactory Performance and Progress
Satisfactory progress is defined by maintaining full-time status, maintaining a 3.0 GPA or better, and making timely progress in taking exams and completing other requirements for the degree program. MS students who have not filed their Proposed Research by the end of their second semester in residence will be ineligible for departmental support. PhD students who have not taken their Preliminary Oral Exam by the end of their fourth semester will be ineligible for departmental support. TAs and RAs must be on campus by the starting date of their contracts unless written permission to arrive late has been given by their supervising professor. Failure to obtain previous permission for absences may result in cancellation of TA or RA support.

| TAs/RAs are eligible for a salary increase upon completion of the following: |
| Ph.D. - Preliminary Comprehensive Exam |
## MS DEGREE CHECKLIST

All paperwork, including Graduate College forms, must be submitted to the Geosciences Graduate Office for approval. *MS degrees are expected to take two years to complete.* Students not following this schedule are at risk of making unsatisfactory academic progress.

<table>
<thead>
<tr>
<th>WHAT</th>
<th>WHEN</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Plan of Study</strong></td>
<td>2nd Semester</td>
</tr>
<tr>
<td>Choose Major Advisor and two Research Committee members. Submit <em>Plan of Study</em> form. List 30 units of course work.</td>
<td></td>
</tr>
<tr>
<td><strong>Master’s Committee Apppointment</strong></td>
<td>2nd Semester</td>
</tr>
<tr>
<td>Choose Major Advisor and two Research Committee members. Submit <em>Master’s Committee Appointment</em> form.</td>
<td></td>
</tr>
<tr>
<td><strong>Proposed Research</strong></td>
<td>2nd Semester</td>
</tr>
<tr>
<td>Meet with Research Committee and formulate research proposal. Submit <em>Proposed Research</em> form.</td>
<td></td>
</tr>
<tr>
<td><strong>Public Presentation</strong></td>
<td>4th Semester</td>
</tr>
<tr>
<td>Give a public presentation of your research. Submit <em>Public Presentation</em> form.</td>
<td></td>
</tr>
<tr>
<td><strong>Submit Thesis/Prepublication</strong></td>
<td>4th Semester posted deadline</td>
</tr>
<tr>
<td>Thesis: If required by advisor, submit one copy of the thesis electronically to the Graduate College. Submit one copy to the department by the posted deadline.</td>
<td></td>
</tr>
<tr>
<td>Prepublication: Submit one copy of the prepublication to the department (the prepublication is not submitted to the Graduate College) by the posted thesis deadline.</td>
<td></td>
</tr>
</tbody>
</table>
This page marks the place of the MS PLAN OF STUDY, available in UAccess Student through GradPath. It should be filed in your second semester.
This page marks the place of the MS COMMITTEE APPOINTMENT form, available in UAccess Student through GradPath. It should be filed in your second semester.
PROPOSED RESEARCH

· SUBMIT BY END OF SECOND SEMESTER

Name: ___________________________________________________________

CHECK ONE:  □ Prepublication Manuscript (GEOS 909)
□ Thesis (GEOS 910)

TITLE: ___________________________________________________________

_______________________________________________________________

_______________________________________________________________

STATEMENT OF RESEARCH PROBLEM: (attach separate page if necessary)

Major Advisor

_____________________________  __________________________  ____________________
print name  signature  date

Committee Member

_____________________________  __________________________  ____________________
print name  signature  date

Committee Member

_____________________________  __________________________  ____________________
print name  signature  date
Near the end of your MS program you must give a public presentation of your research. The thesis or prepublication manuscript does not have to be in final form when this presentation is given. The presentation should be public and announced in advance, and be in whatever format is acceptable to your Research Committee. These presentations are generally made at national meetings (AGU, GSA), the GeoDaze Symposium, or a departmental brown bag.

Name: ____________________________________________

Public presentation: □ GeoDaze Symposium
□ Brown Bag
□ National Meeting (___________)

Title of talk: ____________________________________________________________
__________________________________________________________
__________________________________________________________

Major Advisor
signature ____________ date ____________