



DEPARTMENT OF
GEOGRAPHY
COLLEGE OF EARTH AND
MINERAL SCIENCES

2008-2009 Graduate Student Handbook



GEOGRAPHY
2008-2009
GRADUATE STUDENT HANDBOOK

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PROGRAM REQUIREMENTS FOR ALL DEGREES

Advisor

Each incoming graduate student is assigned to an entry committee by the Associate Head. Students will meet with their entry committee before classes start. Before the end of the first semester, the student selects a permanent advisor (gold form). Students may request a change of advisor at any time (purple form).

Entry Interview

The entry interview is a meeting of the student with their entry committee, consisting of three or four faculty members who, as a group, represent the breadth of the discipline of geography. The purpose of the meeting is to discuss student goals, to help plan a course of study, to anticipate timing for important exams, and to evaluate the student's breadth of knowledge of geography. Study plans arising from the meeting may include enrolling in or auditing courses, arranging less formal directed readings or individual study (GEOG 596) with particular faculty, and registering for thesis research credits (GEOG 600).

The entry interview is scheduled by the Associate Head before classes begin in the first semester. The student will complete a Summary form before the entry interview and bring four photocopies to the meeting to aid in discussion of his/her background and plans. After the meeting, the committee will complete the Report form (the second page of the entry interview form) that describes recommendations for the student's course of study. Copies of the committee's Entry Interview Report and the student's Summary will be placed in the student's file. A copy of the report will be given to the student by the Graduate Staff Assistant.

Full-Time Academic Status & Course Credits

Full-time academic status is normally considered to be nine credits (which may be a combination of courses, independent study and thesis credits). The *Graduate Degree Programs Bulletin* ([http://www.psu.edu/bulletins/whitebook/\\$acadinfo.htm](http://www.psu.edu/bulletins/whitebook/$acadinfo.htm)) states that for graduate assistants on half-time appointments (20 hours per week) the minimum credit load is nine credits and the maximum credit load is 12 credits for full-time status. All other students (e.g., self-supported, fellowship) should take at least nine credits and no more than 15 credits to retain fulltime status and to have a semester count towards residency for the PhD.

All courses at and above the 400-level qualify for graduate credit. In some cases students may wish to take a lower level course as an independent study (e.g., 496) and do extra work for graduate credit. GEOG 596 is normally used to register for graduate independent studies. Concurrent independent studies (with different faculty members) are permitted for up to nine credits each semester. Students may enroll in GEOG 600/610 credits while researching and writing their MS thesis/papers or PhD dissertation.

Students must enroll during the semester in which they plan to take an exam. This includes the summer semester.

The updated *Graduate Degree Programs Bulletin* is available at:
<http://www.psu.edu/bulletins/whitebook/>

Core Courses

Geography 500 and 502 are a required six-credit sequence taken over two semesters in the first year of study. They constitute the core curriculum for graduate work in geography.

- All master's students must take the full sequence of courses.
- Students entering the PhD program with a master's in geography from another institution will normally take the full sequence unless the entry interview committee recommends otherwise.

FALL GEOG 500: Introduction to Geographic Research 3 credits

The purpose of Geography 500 is to help the student take a major step in their development as a professional geographer, moving from a role of a consumer of geographical knowledge to a position in which they are poised to contribute to that knowledge. GEOG 500 is about surveying the field selectively, sub-discipline by sub-discipline; it is about contemporary and historical debates that have shaped the field. At a broader level, it is about major debates in the philosophy of science and how we conduct research today in a multi-faceted world in which no single point of view dominates. Students are responsible for organizing and synthesizing material and presenting it in class, overseeing class discussions, and contributing to classroom dialogue. It is a chance to join together to see what the field holds in common and how we, as individuals, situate ourselves within geography. Along the way, students become acquainted with Penn State's research resources and, through supportive interactions, help each other prepare for their programs of study. Students will receive a letter grade for this course.

SPRING GEOG 502: Research Scholarship in Geography 3 credits

Graduate students are expected to make a significant research contribution as part of the requirements for a MS or Doctoral degree in Geography. The *Research Scholarship in Geography* course provides students with the basic understanding of the craft of scholarly geographic research. It does so by setting research into a tradition of commonalities that shape expectations (e.g., disciplinary and federal IRB ethics standards; ideas of academic freedom and responsibility) and by focusing on the mechanics of key steps in the research process (identifying problems, developing questions and proposals, designing programs

of research, executing a systemic program of research, responding to criticism and to opportunities, preparing and delivering oral presentations, and writing and publishing research reports). The course emphasizes important skills in developing research proposals, seeking research funding, writing manuscripts, giving presentations, and publishing research results.

Oral presentations will be scheduled in the second half of the semester and are intended to be a preliminary rather than final discussion of intentions and ideas. Students should invite their advisors as well as prospective committee members to attend their presentations. Students will receive a letter grade for this course.

FALL GEOG 501: Research Perspectives

1 credit each

Geog 501 A, B, C and D are a set of four one-credit courses that provide a thorough overview of current perspectives in geographic research. Geography master's students are required to take at least three of the four courses over the fall semester the first year. Please take the three outside your primary area of research and take advanced 3-credit seminars in your area of research.

PhD students are also welcome to enroll in 501 to fill gaps in their breadth of knowledge in preparation for candidacy exams.

501A: Research Perspectives in Physical Geography

The contemporary study of Physical Geography unites all sub areas of Earth's physical environment—biogeography and ecology, climatology, and geomorphology—according to five cross-cutting themes: water and mass in the environment; energy; scale and scale interactions; systems approach; and historical perspective.

501B: Research Perspectives in Human Geography

The course comprises reviews of the history and current debates within sub-disciplines of Human Geography: economic, cultural, historical, political, regional and social geography. Broad paradigm shifts over the last century and issues of scale are addressed in each area.

501C: Research Perspectives in Human-Environment Geography

The course is organized around five themes in contemporary human-environment research of: 1) nature as inspiration, 2) nature as hazard, 3) nature as resource, 4) nature as driving force, and 5) nature as coupled human-environment system. These themes are woven into a sequence of topics that begins with an historical overview of the environment in human discourse and follows a historical thread of how human development and the environment intertwine. The sequence continues with the co-evolution of institutions with the environment at household to geo-political scales. Contemporary issues of the environment as a formidable hazard and source of risk are explored. Regional land change and global scale human transformation of Earth systems

are considered next. The course concludes with a broad treatment of sustainable development leading to the proposition of a new sustainability science.

501D: Research Perspectives in GIScience

The course comprises the three broad integrative themes of contemporary research in GIScience, which include cognitive, computational, and social issues. All of these are woven throughout the following sequence of topics: Spatial data acquisition and integration; geographic data and knowledge representation; geographic visualization, interaction and visual analytics; geocomputational techniques for knowledge discovery, analysis and modeling; communicating geographic information; the geospatial information infrastructure; and the societal context for development and application of geographic information technologies.

FALL AND SPRING GEOG 590: Colloquium

1 credit each semester of first year

For the Colloquium, new graduate students host the Geography community and public at weekly “Coffee Hour” presentations by invited speakers from other universities, industry, and government; other Penn State departments; and the department’s own faculty and senior PhD students. New grads advertise each speaker and organize refreshments to welcome attendees before each presentation. They also bring a critical ear to the varied topics presented, with brief group discussion in GEOG 500 and 502. Students will receive an ‘R’ grade in this course.

FALL GEOG 602: Experience in College Teaching

1 credit (1st semester)

This course is required of all Geography graduate students who are teaching assistants. GEOG 602 is offered in the Fall semester and is taken as partial fulfillment of the Communication requirement. Credit for GEOG 602 does not count toward the minimum number of credits required for the MS degree, although it does count toward the residency requirement for the PhD degree. Students will receive a letter grade for this course.

Alternatives to GEOG 602 are offered by the Schreyer Institute for Teaching Excellence:

1) Course in College Teaching or 2) the online New Instructor Orientation workshop.

Students may register for either option online:

<http://www.schreyerinstitute.psu.edu/Events/>

Students may choose one of these Schreyer Institute options if they have a schedule conflict with GEOG 602, if they become a TA in the spring and did not take the fall GEOG 602 offering, or if 602 is not offered by the department.

Registration and Exams

Students must be registered for any semester (including summer) in which they take an exam.

Some people simply forget to register! Please remember to do so because registering late will cost you time and a \$250 late registration fee.

EMS College pays summer tuition for a limited number of graduate assistants, so watch for a March deadline for tuition assistance applications.

Communication Requirement

Development of communication skills is central to the graduate program in Geography. Whether one pursues a career in government service, private research, or teaching, the ability to synthesize information, communicate research results, and complete written and oral presentations are vital to successful professional activities.

Competency in communication skills is required of all MS and PhD students, regardless of whether they hold fellowships, assistantships, or rely on their own funding once they are enrolled in the program. The Department expects and encourages all students to participate in teaching and research activities associated with particular courses or projects during two or more semesters in order to build skills essential in future professional activities.

Competency in communication will be developed and refined by:

- a) Classroom, seminar, and formally-funded research activities;
- b) Preparation of reports summarizing research activities;
- c) Oral communication through teaching (as a teaching assistant, instructor, and/or volunteer activities such as guest lecturer in courses), and seminar presentations; and
- d) Thesis and dissertation research and writing.

Each student is responsible for participating in sufficient activities to meet the communication requirement. Completion of the requirement will be judged by the academic advisor and graduate committee. The advisor's certification of a student's progress toward accomplishing an appropriate level of ability is made at the proposal defense meeting.

Each student prepares an Annual Report early in the spring semester. This report will become part of the student's permanent record and will be used in the

continuing evaluation of the student's academic status and eligibility for scholarships, fellowships, assistantships, and awards. The due date for the completed annual report is **January 31**.

Teaching and Research Assistants

The Associate Head will ask students in residence about their TA and RA preferences before the start of each semester, but assignments are made based on a balance of Department needs, student skills and wishes, and schedules. RAs are selected according to specific research needs and the availability of research funds. Assistantships are 18 weeks in length each semester and duties begin one week before classes begin and conclude one week after the last day of class. TAs and RAs should make travel plans that accommodate these responsibilities occurring before and after classes meet (TA course responsibilities and grading must be complete prior to departure at the end of the semester).

International students who will serve as TAs need to take the Penn State American English Oral Communicative Proficiency Test. In order for students to actively serve as a TA, they must receive a score of 250-300. If this score is not met, the students are required to fulfill language requirements by taking specific English courses. Please refer to <http://aplmg.la.psu.edu/academicPrograms/itaProgram.php> for the specific details of the requirements.

Funding is limited to two years for MS students and is limited to four years for PhD students. Satisfactory completion of TA/RA responsibilities is required for continued funding. Half-time RA's are expected to work 20 hours a week and complete tasks effectively and efficiently, bringing analytical insight to the research.

TAs are expected to meet classes on time and well prepared, guide and grade students respectfully and accurately, prepare course materials with care, and support the course instructor's goals.

Satisfactory progress on program milestones, such as proposal and exam deadlines, is also required to continue funding.

Exit Interview and Final Thoughts

At the end of your program you will be asked to take part in an exit interview. The exit interview is your opportunity to evaluate your experience of attending Penn State.

Upon graduation, please leave your forwarding address with the graduate student staff assistant in 302 Walker Building or by sending an email to geoggradsec@psu.edu. Please note, however, that it is your responsibility to have your mail forwarded to your new address. The Geography department will not forward your mail. Also, before leaving Penn State, please be sure to **clean out your office** and **return all keys** to the department office.

Academic Integrity

Earth and Mineral Sciences Academic Integrity Statement

Academic integrity is the pursuit of scholarly activity in an open, honest and responsible manner. Academic integrity is a basic guiding principle for all academic activity in the College, and all members of the College are expected to act in accordance with this principle. Consistent with this expectation, all students should act with personal integrity; respect other students' dignity, right and property; and help create and maintain an environment in which all can succeed through the fruits of their efforts.

The highest standards of academic integrity are an absolute necessity for the successful pursuit of scholarly activities and research. Any violation of honesty in the EMS College will not be tolerated and will be evaluated and punished in an appropriate and timely manner. Forms of academic dishonesty include, but are not limited to, cheating and copying on examinations, inappropriate collaboration on assignments, and tampering with another person's work. In addition, we are particularly concerned about violations of the research integrity of the College, such as all manners of plagiarism, the submission of previous work, the alteration or omission of relevant data, and electronic theft. A more complete list of dishonest acts may be found in the *Precedent Guidelines for Academic Integrity Violations*

(<http://www.ems.psu.edu/students/integrity/tables.html>)

Academic integrity includes a commitment not to engage in or tolerate acts of falsification, misrepresentation, or deception. Such acts of dishonesty violate the fundamental ethical principles of the EMS community and compromise the worth of work completed by others. It is to protect the work of others and our own reputation that we will pursue and impose sanctions on the perpetrators.

Sanctions

Violations of academic integrity in the EMS College are first dealt with at the prerogative of the individual course instructor, the chair of the graduate program, and the department head, in consultation with the student. Typical sanctions range from zero on the assignment or examination in question for a first occurrence or minor offence, to failure in the course for more serious or repeated occurrences. (Students are also cautioned that failure in certain courses can lead to termination of the perpetrator's program of study.) A more extensive list of sanctions relevant to specific violations may be found on the EMS website (<http://www.ems.psu.edu/students/integrity/tables.html>). Should the course instructor or student wish to appeal or pursue that matter further, including the awarding of the XF grade, the violation may be brought before the EMS Academic Integrity Committee. The procedure for such action may be found in the *EMS College Academic Integrity Rules and Procedures*. Note that the final award of an XF grade, which is a disciplinary sanction, must include the concurrence of the individual course instructor, the EMS College Academic Integrity Committee, and the University Judicial Affairs Committee. It is assigned by the latter following a review of the case upon the request of the College Committee.

SELECTION OF PERMANENT ADVISOR:

Student Name: _____

With mutual agreement, I have selected _____ as my permanent advisor.

Advisor's Signature

Date

Please return to Grad. Staff Assistant in Geography Department office by last day of classes, your first semester.

CHANGE OF GRADUATE ADVISOR:

Student Name: _____

With mutual agreement, I have selected _____ as my new permanent advisor.

Advisor's Signature

Date

Dept. Head's Signature

Date

Masters Program

THE MASTER'S DEGREE

A master's degree in Geography is one stage in a process of lifelong learning. As a stage beyond the baccalaureate degree, the master's degree allows students to explore and to specialize in the domain of geography. The mode of instruction (e.g., seminars), the process of learning (e.g., the exercise of critical and independent judgment), and the responsibility for learning (e.g., self-motivated exercise of responsibility with the guidance of an advisor) reflect a qualitative change from the undergraduate experience. There are multiple outcomes of the master's degree including, but not restricted to: (1) continued graduate studies leading to a doctoral degree; or (2) professional service or employment with the possibility of continued graduate studies at some later date.

The key characteristics of the Penn State master's degree in Geography are proficiency in the knowledge base of geography and a capacity to undertake independent, scholarly research.

The knowledge base comprises: (1) the history and philosophy of modern geography; (2) quantitative and qualitative research methods, and (3) an area of specialization selected by the student. We expect the student to develop and demonstrate expert knowledge in their chosen area of specialization. This expert knowledge must include an understanding of the connections to cognate fields beyond geography *and* an understanding of how the specialization relates to the domain of geography as a whole. The key is thus depth within breadth. Exposure to the breadth of geography—its history, methods, concepts, and theories—is important, but the focus of the master's program is on the successful completion of a program of scholarly research. Breadth is therefore necessary to the student's program but it is not sufficient.

Depth within context underpins the research process that leads to either a master's thesis or two scholarly research papers. The student must be familiar with all stages of the research process from problem formulation through research design to analysis and writing. The resulting thesis or papers should be of a standard that could be published in a refereed journal (not necessarily in geography itself).

Throughout the program, students are expected to participate in multiple activities that will broaden and deepen their understanding of geography. Through teaching assistantships, students will be exposed to the fundamentals of teaching and the coordination of group and individual learning. Through research assistantships, they will be exposed to all facets of the professional research process. Through Geography 500, 501, and 502 students will gain an understanding of modern geography, including the role of Penn State faculty within the discipline at large. Through presentations in Coffee Hour and other fora, they will be exposed to current ideas in geography and in intellectual life more generally. As a consequence of completing the master's degree program, students are expected to: (1) have a clear area of professional focus within geography, thus allowing them to identify research questions, to select relevant methodologies and research designs, and to employ appropriate modes for the presentation of results; (2) set their specialization within the larger context of the domain of geography; (3) have

experience in independent, scholarly research; and (4) have developed skills for continuous learning and professional development. The entry committee and master's committee will facilitate this process.

Entry Committee

At the beginning of the first semester of residence, master's students will meet with a committee comprised of three or four faculty members. At this meeting, they will review knowledge of geography in human, physical, human-environment, and representation and analysis areas. Given the expectation of breadth, the committee will make written recommendations for appropriate remedial work to ensure breadth of knowledge. This remedial work must be completed prior to graduation from the master's program.

Master's Committee

By the end of the first semester, the student must select a master's advisor. The student then completes their master's program committee by selecting two additional faculty members during their second semester. The student will work with this committee throughout their master's program and the committee will guide them and monitor their performance. The committee will be appointed by the Associate Department Head with approval of a formal written statement, prepared jointly by the student and advisor, that outlines (a) the nature of the program of work and study, and (b) the expected role of the committee members throughout the program (form follows). Changes to this master's program committee can be made subject to the approval of the Associate Department Head who will consult with the existing committee members prior to making the requested changes. Requests will be made in writing to the Associate Department Head.

Throughout the remainder of the student's program, the master's program committee is charged with meeting with the student and with advising and evaluating the research proposal. The advisor and second reader evaluate the final thesis. The advisor and second reader must be members of the Geography Graduate Faculty. The third member may be a faculty member from outside geography or a special outside reader (non-Penn Stater approved by Graduate School). Masters students who select the two-paper option will have two committees of three people (see discussion in proposal section that follows).

Credits and Coursework

A student whose goal is an MS degree in geography may elect—with approval of his or her advisor—to take one of two options:

- 1) The MS *thesis* option requires completion of at least 30 graduate credits and the completion of a thesis.
- 2) The MS *two-paper* option requires completion of 35 graduate credits and two research papers. The master's research papers are usually expanded versions of course or seminar papers that are of sufficiently high quality to be submitted to scholarly journals.

Students who enter the MS program without a background in geography or with deficiencies in several systematic fields should expect to accumulate more than the minimum credit requirements. By Graduate School requirement, all MS programs must include at least:

- 12 credits of course work at 400- and 500-levels
- 18 credits of 500-, 600-, and 800-level work
- 6 credits must be 600/610

No more than 6 credits of the 600/610-level work can be assigned a letter grade. The remainder are graded on a “research” (R) credit basis. Almost all full-time students accumulate additional R-grade 600 credits. For grading purposes, please register in increments of 3 credits for GEOG 600/610. For example, a single semester's transcript may look like this:

Course	Credits	Grade
GEOG 600	3	A
GEOG 600	3	R
GEOG 600	3	R

Geography 500 and 502, 3 credits of 501, and 2 credits of 590, are required for all incoming master's students. Master's candidates also are required to register and complete work in at least one graduate-level seminar (500-level) among those offered by the Department of Geography. The seminar should carry at least three credits and result in a substantive paper. GEOG 500, 501, and 502 do not meet this requirement. This seminar requirement should be satisfied during the first four semesters of residence.

Masters Proposal

Thesis Proposal

Students submit their proposal by **September 1** and defend it before their committee by **October 1**. An earlier defense is strongly recommended for students doing research field work during their first summer.

By no later than September 1 of the second year of study, the student must submit a written thesis proposal to their master's program committee. The written proposal should meet normal scholarly standards for presentation and should not exceed **20 pages**. The proposal is evaluated in a formal but private defense. Committee members will have at least 10 days to evaluate the proposal before the defense date. The committee will assess the feasibility of the proposed research and the student's preparation to undertake the necessary work. The committee will approve the proposal and/or recommend changes to the topic itself or request additional preparation. If necessary, the committee can request that the student resubmit the research proposal. The advisor will also confirm progress on remedial and communication requirements. The advisor submits a written report to the Graduate Staff Assistant by October 1 (form follows) along with a copy of the proposal for the student's file.

Two-Papers Proposal

The proposal process for the two-paper option will be advised by **two committees** of three faculty each. The student's advisor will be on both committees. Two other faculty members with suitable expertise will be selected to advise each paper (the two committees may have the same members, reducing a potential of five members down to three). Selection and approval of the two committees will be made with the same form as for a three-person thesis committee (the green form). Two of the three committee members will sign off on the final papers. These final readers will be designated on the initial committee-approval forms, and they should be the two faculty members with expertise most closely related to the paper topic. Each final paper must be evaluated by at least two members of the Geography Graduate Faculty.

Master's paper proposals are due **September 1** of the student's second year. There are two options for paper proposals:

1. If a **draft paper** has been prepared before this date (often a draft exists as a seminar paper), then this draft may be considered to be part of the proposal. The draft paper will be augmented by a written **preface** that explains how the paper will be expanded and/or redirected to produce a publication-quality paper suitable for submission to a scholarly journal. This explanation is expected to be two pages long at most, and the draft paper with the preface will be submitted to the committee for evaluation by September 1. The committee will meet with the student after the committee members have had at least ten days to evaluate the proposal.

2. If a draft paper has not yet been prepared, then a **paper proposal** will be submitted to the committee. The paper proposal should be no more than **five pages** in length. The proposal will include an explanation of the characteristics of the paper that establish its quality as suitable for scholarly publication. This proposal will be submitted to the committee by September 1. The committee will meet with the student after the committee members have had at least ten days to evaluate the proposal.

The proposals for the two-paper option will be defended in meetings with corresponding three-person committees. Each committee will approve the proposal prepared for them and/or recommend changes to the topic itself or request additional preparation. If necessary, a committee can request that the student resubmit the proposal and then meet again for further discussion. The committees will provide written appraisals of the proposals to the student. The advisor will submit the proposal evaluation form (follows), with the paper proposals and/or prefaces attached, to the Graduate Staff Assistant by **October 1**. The advisor describes the outcome of these meetings on the pink form after the entire set of meetings has been completed. The advisor will also confirm progress on remedial and communication requirements. The two proposals may be evaluated in one meeting or in separate meetings, depending on the overlap in the two committees and the preferences of the student and faculty.

Completing a Master's Thesis

The subject, content, and organization of the thesis are matters to be settled between the student and his or her advisor and master's committee. The aim should be to solve a meaningful geographic problem or group of problems. The thesis must be more than an organized compilation of facts or a series of lengthy descriptions.

The completed thesis must be approved by 1) the student's advisor; 2) a pre-selected second member of the student's master's committee; 3) the Department Head; and 4) the Graduate School. The Department Head will review and sign the thesis only after the other two signatures have been obtained. **Give the Department Head at least two weeks to review and sign the thesis.** Before preparing the thesis in its final form, consult the Graduate School's *Thesis Guide* (available online at <http://www.gradsch.psu.edu/current/thesis.html>), which provides detailed information on the PDF option and how material is to be printed and bound (do not use a previous thesis as a model for format).

A bound copy of the finished work must be filed with the department. This copy does not need to be printed on cotton paper (though it is appreciated). Please check with your advisor and second reader on the format in which they would like to receive their copy of the thesis.

Continuing students will not be allowed to enter the PhD program without having submitted a thesis copy to the Geography Department. The absolute deadline for completing the masters is the first day of the semester of entry to the PhD for fall semester, this is mid-August (a week before classes begin). The final thesis copy, signed

by the advisor and second reader, must be given to the Head for approval two weeks before this deadline.

Completing Master's Research Papers

Follow thesis format guidelines in preparation of the final papers. Each paper will be assessed with direct reference to the proposal and its evaluation by the committee. The master's papers must be read and approved by the Department Head, who will inform the Graduate School that the work is acceptable. **The Head must receive the papers after both readers have signed the papers and no less than two weeks before the deadline for final approval.** One finished, bound copy of each paper is given to the department (the two papers may be bound together in the department copy). Consult the readers of the papers about the form of binding they prefer for their copies of the papers. The bound copies must be submitted to the Geography Department *before* the student is allowed to progress toward the PhD.

Presentation of Master's Research

All master's students are required to present their research during an end-of-semester event held the spring of their second year. The presentation format is similar to an AAG Illustrated Paper session, with a poster and five-minute talk by each student. The student presentations will be followed by refreshments and discussion among faculty and grads.

Registration Requirements

When All Degree Requirements Are Met Except Completion of the Thesis:

Resident Students Only

For MS students in residence who have met all degree requirements except completion of the thesis (e.g., required courses, minimum credits, proposal defense), the Department requires registration for a minimum of one credit of on-campus research and writing (GEOG 600) each semester. Students who have registered for one or more credits during summer session need not enroll in the succeeding fall semester. However, if students do not complete the degree by the end of the fall semester, they will have to apply to resume studies in the spring semester. The Graduate Staff Assistant will assist in submitting this form to the Graduate School.

Non-Resident Students Only

For MS students not in residence who have met the degree requirements except for completion of the thesis, the department requires registration for a minimum of one credit per semester in off-campus thesis research (GEOG 610) for each semester after completion of the minimum credits for graduation including the final semester in which the thesis is presented and approved. If the student graduates at the end of the semester directly following approval (i.e., does not meet the Graduate School deadlines for the current semester), no additional registration will be required. If the student fails to register each semester as required, he or she will be expected to register for the total

number of credits due (one per semester) during the semester of final thesis preparation and submission. Exceptions will only be permitted by a written petition to the faculty.

Graduate School Time Limit

The Graduate School allows eight years for completion of the master's degree. We hope you will finish much sooner!

The *Graduate Degree Programs Bulletin* of the Graduate School is an important source of information. Please read it thoroughly: <http://www.psu.edu/bulletins/whitebook/>.

Example Two-year Program for a Master's Student with Half-time TA or RA Funding

YEAR 1, MS

Fall

- geography orientation, entire week before classes
- entry interview with entry committee, Friday before classes start;
student's Summary and advisor's Report to Grad. Staff Assistant
- register for GEOG 500, 501, 590, 602, and additional credits
- select advisor by last day of classes at the latest; *gold form to Grad. Staff Assistant*

Spring

- register for GEOG 502, 590, and additional credits before classes begin
- complete annual progress report (for funding meeting), by Jan. 31
- select two additional faculty members to complete masters committee; *green form to Grad. Staff Assistant*

Summer

YEAR 2, MS

Fall

- register for 9 to 12 credits before classes begin
- submit proposal to masters committee, by Sept. 1
- meet with masters committee to defend proposal and confirm that breadth and communications skills requirements are met, plan crucial dates for thesis completion, by Oct. 1; *pink evaluation form with proposal copy attached to Grad. Staff Assistant*

Spring

- register for 9 to 12 credits
- complete annual progress report
- activate intent to graduate, late January
- draft of thesis to advisor and to Graduate School for format review, early March
- final thesis has been read and signed by advisor and second reader; submit signed thesis to Department Head to read and sign, early April (2 weeks before Graduate School deadline).
- present MS research to department
- final thesis submitted to grad school, middle of April
- bound copy of thesis to department
- Graduate School commencement, middle of May

Confirm Grad. School deadlines at: <http://www.gradsch.psu.edu/calendar/>

Forms:

- Appointment of Masters Committee (green)
- This is resubmitted when/if committee changes.

- Advisor Report on Masters Proposal Defense (pink)
- Advisor submits form to the Grad Staff Assistant with proposal copy attached.

APPOINTMENT OF MASTERS COMMITTEE

Student's Name: _____

What is the nature of your research?

Committee Members:

Advisor: _____

Second Reader: _____

Third Member: _____

How will each member contribute to your research program?

All members evaluate research proposal 3rd semester.

Committee approved by: _____ Date _____
Associate Department Head

ADVISOR'S REPORT ON MASTERS PROPOSAL DEFENSE

Student Name: _____

Meeting Date: _____

Committee Members Present: _____

Approved

Approved with revisions as described

Not approved

Proposal Evaluation: _____

Additional Progress Evaluation

Remedial Requirements (from Entry Interview): _____

Communication Requirements: _____

Advisor's Signature _____

Date _____

**Attach proposal copy to this completed form and return to Graduate Staff Assistant, 302 Walker, by Oct. 1st.

Doctoral Program

THE DOCTORAL DEGREE

The PhD is a different kind of degree from the master's degree. A doctoral candidate in geography must be capable of making original contributions to knowledge and scholarship. It is unlikely that a person will make such contributions unless he or she concentrates on a narrow and clearly defined field of study. We require, however, that doctoral candidates know more of geography than their particular specialties; thus any aspirant for a doctorate must obtain master's training or its equivalent before being admitted to doctoral candidacy. In short, admission to doctoral candidacy is official recognition that a student's general foundation in the breadth of geography is satisfactory. Students then devote their attention to developing depth in chosen specialties.

Admission to the Graduate School with a Geography master's degree does not mean automatic admission to doctoral candidacy. Penn State Geography master's students wishing to enter the doctoral program must make formal application to the Associate Head. This application includes a one-page description of intent to study and three letters of reference from faculty, at least one of which is to be an evaluation of the student's master's work by the student's advisor. The application deadline is January 1 (the same deadline as new applicants). It is important to meet this deadline to be considered for fellowship opportunities. Students who have completed a master's degree at Penn State and who have been admitted to the doctoral program become doctoral candidates only after successful completion of the doctoral candidacy examination.

The general requirements for a doctoral degree in geography are more rigorous than those for a master's degree. At the same time the greater flexibility of the doctoral program allows advanced students to pursue programs of study tailored to their special interests and needs.

All students admitted to the doctoral program will have an entry interview. Students will select their permanent advisor before the end of the first semester.

Courses and Registration

In addition to GEOG 500 and 502, PhD students are encouraged to take advanced courses in their area of study, though there are no formal course or seminar requirements for the doctorate. Most students take both courses and seminars as part of their doctoral program, especially in preparation for comprehensive exams. Likewise, the 501 series may be useful preparation for the candidacy exam. New PhD students also take GEOG 590 in their first year.

After the comprehensive exams, many people choose to register for GEOG 600 (on campus) or GEOG 610 (off-campus) while researching and writing their dissertations. Students needing full-time status (e.g., for fellowship or visa requirements) may find it cheaper to register for GEOG 601 (on-campus) or GEOG 611 (off-campus) at a special PhD thesis preparation rate. PhD students must take at least 12 credits of GEOG 600 and no more than 12 credits of 600-level work can be assigned a letter grade. The remainder must be graded on an “R” research basis. Almost all full-time students accumulate R-grade 600 credits. For grading purposes, please register in increments of 3 credits for GEOG 600/610. For example, a single semester’s transcript may look like this:

Course	Credits	Grade
GEOG 600	3	A
GEOG 600	3	R
GEOG 600	3	R

Graduate School Requirements

The *Graduate Degree Programs Bulletin* of the Graduate School is an important source of information. Please read it thoroughly: <http://www.psu.edu/bulletins/whitebook>

Language and Communication Skills Requirements

The method of satisfying the communication skills requirement of the Department and the Graduate School will be jointly determined by the doctoral committee and the candidate as soon as possible after passing the candidacy examination. Progress on these requirements will be evaluated at the proposal defense.

Doctoral Candidacy Committee and Examination

A committee, appointed by the Associate Head, will administer the doctoral candidacy exam to students admitted to the PhD program. The blue form for establishing this committee follows. Students must list at least five geography faculty from a breadth of the discipline, including the student’s advisor, from whom the Associate Head will select four to administer the exam. The candidacy exam must be taken no later than the end of the second semester of doctoral study (do not postpone the candidacy exam to summer).

The candidacy examination is specifically designed to assure that all doctoral candidates have at least the equivalent of a master's degree from Penn State. Candidates should demonstrate superior competency in the discipline of geography. This competency is measured by the student's basic knowledge of geography and an advanced knowledge of a general area of interest (e.g., human geography). Students should be able to recall and comment on material from the core courses (GEOG 500, 502 or equivalents) and demonstrate an ability to think about research questions. The exam may include discussion of a student's master's thesis. The PhD candidacy is not the appropriate forum to test knowledge of introductory geography courses; students without basic course work in geography should demonstrate competency by excelling in appropriate courses. The student often begins the exam session by presenting a brief description of their MS thesis work.

The candidacy exam is an oral examination that requires about two hours and is closed. The examination has six possible outcomes shown on the form.

Forms at end of PhD section:

- Appointment of Doctoral Candidacy Committee (blue)
- Schedule Doctoral Candidacy Examination (green)
- Advisor's Report on Doctoral Candidacy (green)
 - *Department form, advisor submits to Graduate Staff Assistant.*
- Report on Doctoral Candidacy (green)
 - *Graduate School form that the Graduate Staff Assistant submits based on advisor's report.*

Doctoral Committee

Each student's doctoral committee should be established no later than the end of the second semester of residence unless the student has not passed his or her candidacy examination by that time. In that case, the doctoral committee is to be appointed no later than the end of the semester in which the candidacy examination is passed and three weeks prior to the proposal defense.

The doctoral committee consists of at least four members, with one from another discipline who has no budgetary affiliation with Geography. Members of the doctoral committee are appointed by the Dean of the Graduate School on the recommendation of the Associate Head. All committee members must be members of the graduate faculty at Penn State.

The doctoral committee is responsible for all facets of the doctoral program. It will evaluate performance on examinations, evaluate the dissertation proposal, and supervise the dissertation. Each student's doctoral program should be formulated in consultation with his or her doctoral committee. The program should be approved no later than six months after passage of the candidacy examination. It may be modified as necessary, providing the committee approves.

Each student should complete the Selection of Doctoral Committee form and return it to the Graduate Staff Assistant soon after the first meeting with the committee and well before scheduling the comprehensive exam. Once the form has been completed, the Graduate Staff Assistant will create the Committee Appointment Signature Form. The student is required to sign this form and will have each of their committee members sign the form as well. Once all the signatures have been obtained, it is returned to the Graduate Staff Assistant who will obtain the Associate Head's signature and will then forward it to the Graduate School. This form needs to be forwarded to the Graduate School well before the student schedules their Comprehensive Exam because they check whether each faculty member is authorized to serve in their role.

Forms at end of PhD section:

- Selection of Doctoral Committee (orange) *Given to the Graduate Staff Asst. to create signature form for the student to obtain signatures.*
 - Graduate Student Committee Policies and Procedures (orange)
 - Committee Appointment Signature Form (orange)
- *Two-page graduate school form; Graduate Staff Assistant creates from the Selection of Doctoral Committee form submitted by each student.*

Dissertation Proposal

Before the doctoral comprehensive examination is scheduled with the Graduate School and before beginning dissertation work, the candidate for the degree will write a dissertation proposal in consultation with the advisor and members of the doctoral committee. The proposal will be discussed at a separate meeting of the committee. A proposal should include a statement of the research question, the methods to be used in the research, an analysis plan, and a statement of the significance of the work. **Please prepare an approximately 20 page proposal.** The advisor writes a brief report on the proposal meeting for the candidate's file. Approval of the proposal must be completed before the comprehensive exam may be scheduled. Progress on Language and Communication Skills requirements will also be confirmed at the proposal defense.

If there is a total change in dissertation topic or if there is a major revision of the original proposal, another formal meeting of the committee must be held to approve such changes.

Forms at end of PhD section:

- Advisor's Report on Dissertation Proposal Meeting (pink)
- *copy of proposal is attached to this form for the student's file.*

The Comprehensive Evaluation

This exam is scheduled when a doctoral candidate has completed course work, their dissertation proposal has been approved, and they have met the Graduate School's Language and Communication Skills requirement. We require that students take the exam before the end of the second year of study and **at the latest before classes start in the fall of the third year**. (Exams taken in the summer require summer registration.) Students' eligibility for financial support for their third year is dependent upon successful completion of the comprehensive exam. The exam is officially scheduled by the Dean of the Graduate School upon recommendation of the student's doctoral committee through the Associate Head. The departmental Graduate Staff Assistant will assist in submitting the electronic version of the form for requesting Graduate School scheduling of this exam (form follows). **The Graduate School requires three weeks notice for scheduling the oral portion of the exam.**

Questions on the comprehensive exam are given by at least four faculty members and address at least two substantive areas of study. Each student should meet individually with members of his or her doctoral committee to discuss the general question areas and identify specific preparation at least one semester before planning to take the comprehensive exam.

The examination is administered in two parts, written and oral. The written examination period usually lasts about a week, with each day allotted to questions from an individual committee member (four members produces a four-day exam). Following the writing period—usually about a week later—the candidate meets with the entire committee for an oral examination, which lasts about three hours and is closed.

A favorable vote of at least two-thirds of the members of the doctoral committee is required for passing the comprehensive exam. If a candidate fails the exam, it is the committee's responsibility to determine whether, and when, it may be taken again. Candidates who pass may devote full time to their dissertations. They also may continue with a reduced load of course work if they so desire (GEOG 601).

Residency Requirements

There is no minimum number of required credits or semesters of study, but over some twelve-month period during the interval between admission to the PhD program and completion of the PhD program, the candidate must spend at least **two semesters** (which may include the semester in which the candidacy exam is taken) as a registered full-time student. Note that summer session is not normally counted as a semester—see *Graduate Degree Programs Bulletin*. For example, students who take their candidacy exam in the fall semester can complete the residence requirement by registering for nine credits in the

fall semester and for nine credits in the following spring semester. The Graduate School requires that continuous fall/spring registrations be kept current until graduation and not be paid in arrears at some later date.

Graduate School Time Limit

The Graduate School allows eight years for completion of the doctoral degree, from the time of candidacy to conclusion of the doctoral defense, with six years allowed between passing the comprehensive exam and the doctoral defense. If more than six years elapse between the comprehensive and doctoral defense exams, a second comprehensive exam must be administered (see *Graduate Degree Programs Bulletin*).

Forms at end of PhD section:

- Schedule Doctoral Comprehensive Examinations (yellow)
- Examination Request Form (yellow)
 - *Graduate School form to schedule oral comprehensive examination.*
- Report on Comprehensive Examination of a Doctoral Candidate (yellow)
 - *Graduate School form; Graduate Staff Assistant prepares version to be signed at exam.*

The Doctoral Dissertation

The doctoral dissertation must represent a significant contribution to knowledge. It must be presented in a scholarly manner, reveal an ability by the candidate to do independent research of high quality, and indicate considerable experience in using a variety of research techniques. It should also demonstrate the candidate's ability to express her- or himself precisely, concisely, and in an interesting manner.

The content and mode of presentation of a dissertation are decided by the candidate in consultation with the advisor and the doctoral committee. As noted previously, the candidate will present a formal dissertation proposal to his or her committee for approval before initiating research on the proposed topic.

The Graduate School enforces a variety of detailed regulations about the format of finished dissertations. To avoid last minute frustrations, candidates must familiarize themselves with the regulations in the *Thesis Guide*, available at the Graduate School office in Kern Building or at <http://www.gradsch.psu.edu/current/thesis.html> (do not use a previous dissertation as a model format).

Doctoral Defense – The Final Oral Examination

This examination is conducted by the candidate's doctoral committee. It is officially scheduled and announced by the Dean of the Graduate School. Two weeks' notice is required by the Graduate School to schedule this exam (form follows). This examination is largely concerned with the doctoral dissertation itself, but questions may range over the candidate's entire field of specialization and study. The dissertation must be presented to the committee in **final form** (complete with figures, tables, appendices, etc.) at least **two weeks before the examination**.

The examination is graded on a pass-fail basis. A favorable vote of at least two-thirds of the members of the doctoral committee is required for passing. If a candidate fails, it is the committee's responsibility to determine whether, and when, the student may repeat the defense.

The doctoral defense is an open exam and an announcement of the time, place, and title should be distributed by e-mail to the department community at least one week prior to the exam.

The dissertation must be in final form with a signature page signed by the entire committee before submitting it for the **Department Head's approval no less than two weeks before the deadline for final submission**.

A PDF version of the complete dissertation must be filed in the Graduate School office by the announced deadline prior to the Commencement at which the candidate expects to

receive the degree. The advisor accompanies the PhD student on stage at commencement, so schedule coordination is essential. **One bound copy of the dissertation must be filed with the department.**

Forms at end of PhD section:

- Change of Doctoral Committee (orange)
 - *This should be given to the Graduate Staff Asst. to create signature form for the student to obtain necessary signatures of any member who might have changed.*

- Schedule Doctoral Defense Examination (gray)

- Report on the final oral examination of a Doctoral Candidate (gray)
 - *Graduate School form; Graduate Staff Assistant will prepare version to be signed at the defense.*

Example Three-year Program for a PhD Student with Half-time TA or RA Funding

YEAR 1, PhD

Fall

- geography orientation, entire week before classes
- entry interview with entry committee, Friday before classes start; *student's Summary and advisor's Report to Grad Staff Assistant.*
- register for GEOG 500, 590, and 602 (if TA) and additional credits
- **select advisor**, by last day of classes at the latest; *gold form to Grad. Staff Assistant*

Spring

- register for GEOG 502, 590 and additional credits before classes begin
- complete annual progress report (for funding meeting) by Jan 31
- submit 5 faculty member names (including advisor) for candidacy committee; *blue form to Associate Head.*
- schedule candidacy exam for a date before the end of exam week; *green form to Grad. Staff Assistant two weeks before exam*
- **candidacy exam**; candidacy committee evaluates performance and also confirms progress on communications skills requirement; *Advisor reports on green form; Grad Staff Assistant submits Grad School form*
- select doctoral committee; *orange form to Grad. Staff Assistant*

YEAR 2, PhD

Fall

- register before classes begin
- meet with doctoral committee to confirm program plans
- discuss comprehensive exam topics with each committee member

Fall or Spring

- Present **dissertation proposal** to doctoral committee in formal meeting (before comprehensive exam); *advisor reports on pink form to the Grad. Staff Assistant with proposal copy attached to be placed in student's file*

Spring

- complete annual progress report (for funding meeting) by Jan. 31

Spring or Summer

- schedule comprehensive exam; *yellow form to Grad. Staff Assistant three weeks before exam; Grad. Staff Assistant submits form to Grad. School*
- **comprehensive exam** (usually 4 days writing with oral exam one week later); *Grad. School evaluation form to Grad. Staff Assistant*

Before End of Year 4, PhD

Spring

- activate intent to graduate, middle of Jan.
- advisor and committee agrees that dissertation defense may be scheduled (advisor and usually all committee members have read drafts); *gray form to Grad. Staff Assistant and Grad. School*
- draft of dissertation to graduate school for format review.
- completely finished dissertation to committee two weeks before defense (all figures, tables, appendices, etc.)
- announce defense one week before scheduled date (email to all grads and faculty)
- dissertation defense**; *Grad. School evaluation form to Grad. Staff Assistant*
- final dissertation with all signatures submitted to Department Head to read and sign, beginning of April
- final dissertation submitted to Grad. School, middle of Apr.
- bound copy of dissertation to department
- Graduate School commencement, middle of May

Confirm Grad. School deadlines at: <http://www.gradsch.psu.edu/calendar/gradcal.html>

Submit form to Grad. Staff Assistant each time advisor or members of your doctoral committee change.

APPOINTMENT OF DOCTORAL CANDIDACY COMMITTEE

Student Name _____

Committee consists of 4 faculty (provide 5 names):

Chairperson or Advisor: _____

Co-Chairperson (if necessary): _____

Other Members: _____

Request not approved for the following reasons:

Request approved as stated above.

Associate Head

Date

SCHEDULE DOCTORAL CANDIDACY EXAMINATION

**** You must be registered for the semester during which the exam is scheduled (including summers).**

Student Name _____ **Student #** _____

Advisor _____

DOCTORAL CANDIDACY EXAM (oral) on (date) _____

during the following hours _____ in room _____.

ADVISOR'S REPORT ON DOCTORAL CANDIDACY

Student Name: _____

Date of Evaluation: _____

Please mark one of the following three boxes based on the conditions listed below each examination outcome. If the student is not an *Unconditional Pass*, specify the student's status in a letter you give to the student (attach a copy to this form).

The student passed the candidacy examination and should now be considered an official doctoral student.

1a. ***Unconditional pass*** – Admission to candidacy is granted without reservation.

1b. ***Conditional pass*** – The student is admitted to candidacy and no reexamination is required. Minor gaps in the student's preparation can be remedied by readings or courses. The candidate's doctoral committee will supervise the necessary work. A copy of the letter to the student to this effect is attached.

The student failed the candidacy examination, but will be given the opportunity to retake it. A copy of the letter to the student to this effect is attached.

2a. ***Partial fail with partial reexamination*** – The reexamination will be confined to the topics in which significant deficiency exists. The program designed to remedy the deficiency will be prescribed by the doctoral candidacy committee. The doctoral committee will not be appointed, and formal doctoral work does not begin until the deficiency has been remedied and a reexamination taken and passed.

2b. ***Failure with option for reexamination*** – A student whose general preparation is inadequate will be advised to take another examination after a period of preparation. The student will be limited to a maximum of two examinations.

The student failed the candidacy examination, and will **NOT** be given the opportunity to retake it. The department has rejected the student as a doctoral candidate. A copy of the letter to the student to this effect is attached.

3a. ***Failure without option for reexamination***

3b. ***Recommendation***, in appropriate cases (e.g., for those without a master's degree in geography), *to complete a master's degree in geography* at Penn State, prior to retaking the PhD candidacy exam.

Is “**program terminated by department**” to appear on the transcript? yes no

Was this the first attempt at candidacy? yes no

Will the student continue to seek the master's degree? yes no

Committee Members Present: _____, _____,

_____, _____, _____

Advisor's Signature: _____ Date: _____

SELECTION/CHANGE OF DOCTORAL COMMITTEE

Student Name _____ Student # _____

- *Please include the Department for any member outside of the Geography Dept.*

Chairperson and Advisor: _____

Co-Chairperson (if necessary): _____

Major Members: _____

Outside Members: _____

Minor Field Members: _____

Special Members: _____

**ADVISOR'S REPORT ON DISSERTATION PROPOSAL
MEETING**

Student Name: _____

Meeting Date: _____

Committee Members Present: _____

Approved

Approved with revisions as described

Not approved

Proposal Evaluation: _____

Additional Progress Evaluation:

Language & Communication Requirements: _____

Advisor's Signature _____ Date _____

*** Attach proposal copy to this completed form and return to Graduate Staff Assistant, 302 Walker

SCHEDULE DOCTORAL COMPREHENSIVE EXAMINATIONS

****You must be registered for the semester during which the exam is scheduled (including summers).**

Student Name _____ Student # _____

Advisor _____

DOCTORAL COMPREHENSIVE EXAM (written)

- (Date for each question)
1. _____
 2. _____
 3. _____
 4. _____

With arrangements for questions to be picked up and returned as follows:

DOCTORAL COMPREHENSIVE EXAM (oral) on (date) _____

during the following hours _____ in room _____.

(Has your committee changed or remained the same? Be sure to complete committee form for Graduate Staff Assistant.)

CHANGE OF DOCTORAL COMMITTEE

Student Name _____ Student # _____

**** Please include the Department for any member outside of the Geography Dept.***

Chairperson and Advisor: _____

Co-Chairperson (if necessary): _____

Major Members: _____

Outside Members: _____

Minor Field Members: _____

Special Members: _____

SCHEDULE DOCTORAL DEFENSE EXAMINATION

****You must be registered for the semester during which the exam is scheduled (including summers).**

Student Name _____ Student # _____

Advisor _____

Title of Dissertation

DOCTORAL DEFENSE on (date) _____

during the following hours _____ in room _____.

(Has your committee changed or remained the same? Be sure to complete committee form for Graduate Staff Assistant.)

GEOGRAPHY GRADUATE MINOR

A minor is a formal credential that appears on a graduate student's transcript. The geography minor is for Penn State graduate students enrolled in programs other than geography (for example, a Communications PhD students may seek to earn a Geography Minor, and both credentials would be reflected on the student's final Penn State transcript). The requirements for award of a geography graduate minor are:

PhD, 15 credits total:

- i. 3 credits: Three one-credit GEOG 501 "Research Perspectives" courses for breadth in geographic study (offered fall only).
- ii. 3 credits: At least one 500-level Geography seminar.
- iii. 9 credits: Geography courses at 400, 500, and 800 levels, with no more than six credits at the 400 level and no more than six credits of GEOG 596 (independent study).
- vi. At least one tenured/tenure-track Geography faculty member must be on the candidate's doctoral committee.

Master's, 9 credits total:

- i. 3 credits: Three GEOG 501 "Research Perspectives" one-credit courses for breadth in geographic study (offered fall only).
- ii. 3 credits: One 500-level Geography seminar.
- iii. 3 credits: One Geography course at a 400, 500, or 800 level.