Geography Graduate Handbook
2018-2019
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ROAD MAP through the M.S.

First Semester:
- Course selection in collaboration with Graduate Coordinator and other appropriate faculty.
- Form Advisory Committee consisting of:
  - Major advisor from Geography Department -- must be Graduate faculty;
  - At least two additional faculty members, one or more from Geography (Graduate faculty)
- Complete “Two Year Plan for the M.S. Degree” with input from Advisory Committee – submit form to Graduate Coordinator by the eighth week of the semester.
- Submit copy of “Thesis Committee Approval Form” to the Graduate Coordinator and Graduate School.

Every Spring (by February 1):
- Complete and submit Department of Geographic and Atmospheric Sciences, “Annual Graduate Report”.
- Complete and submit “Annual Meeting of Committee Members for the M.S. Degree” form to Graduate Coordinator

First through Fourth Semesters:
- Required Core Courses:
  - GEOG 600 and 601 every semester
  - GEOG 663 first fall semester
  - GEOG 661 first spring semester
- Additional course work:
  - minimum 16 semester hour (3 “advanced”), and 6 hours of thesis (GEOG 699), or
  - minimum 22 semester hours and two Masters Research Papers under GEOG 672 (6 hrs)
- Presentation of thesis or non-thesis research at:
  - a professional society conference (submit copy of program to department office), and
  - a department colloquium (may be integrated with defense of the thesis or a non-thesis paper)

Second /Third Semester
- Defend thesis proposal

Third / Fourth Semester
- Submit an application for graduation to the Graduate School through MyNIU (myniu.niu.edu)
  - September for December graduation; January for May graduation; April for August graduation (see Graduate School webpage (http://www.grad.niu.edu/grad/) for exact dates

Final Semester:
- Oral defense of thesis (with comprehensive exam) or non-thesis paper:
  - Submit “Request for Oral Defense of Thesis” form to Graduate School October for December graduation; March for May graduation; June for August graduation. Not necessary if pursuing non-thesis M.S.
  - Submit copy of thesis or non-thesis paper to all members of Advisory Committee at least two weeks prior to oral defense.
  - Thesis defense typically consists of three parts: a summary presentation of the research, a follow-up question and answer session with the Advisory Committee, and a comprehensive exam following a format agreed upon by the Advisory Committee and student.
- Upon acceptance of thesis by the Advisory Committee:
  - Format thesis according to Graduate School guidelines.
  - Submit a post-defense PDF copy of the thesis to the Graduate School reader.
  - After any corrections noted by the Graduate School editor are made, upload the final version of the thesis to ProQuest/UMI Dissertation Publishing.
- Presentation of thesis or non-thesis paper research at a department colloquium.
- Participate in Graduate Commencement.

• Presentation of thesis or non-thesis research at:
  - a professional society conference (submit copy of program to department office), and
  - a department colloquium (may be integrated with defense of the thesis or a non-thesis paper)

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  - a department colloquium (may be integrated with defense of the thesis or a non-thesis paper)

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  - Submit copy of thesis or non-thesis paper to all members of Advisory Committee at least two weeks prior to oral defense.
  - Thesis defense typically consists of three parts: a summary presentation of the research, a follow-up question and answer session with the Advisory Committee, and a comprehensive exam following a format agreed upon by the Advisory Committee and student.
- Upon acceptance of thesis by the Advisory Committee:
  - Format thesis according to Graduate School guidelines.
  - Submit a post-defense PDF copy of the thesis to the Graduate School reader.
  - After any corrections noted by the Graduate School editor are made, upload the final version of the thesis to ProQuest/UMI Dissertation Publishing.
- Presentation of thesis or non-thesis paper research at a department colloquium.
- Participate in Graduate Commencement.
ROAD MAP through the Ph.D.

First Semester:
- Course selection in collaboration with Director of Graduate Studies and other appropriate faculty.
- Identify cognate field.
- Form Advisory Committee consisting of:
  - Major advisor from Geography Department -- must be Senior Graduate faculty;
  - At least two additional faculty members from Geography (Full or Senior Graduate faculty)
  - An adjunct faculty or faculty from the cognate field.
- Complete “Academic Plan for the Ph.D. Degree” with input from Advisory Committee – submit form to Graduate Coordinator.
- Submit copy of “Dissertation Committee Approval Form” to the Graduate Coordinator
- With input from advisory committee, identify a maximum of 30 credit hours from Master’s degree coursework to be applied to PhD credit requirements.

Every Spring (by February 1):
- Complete and submit Department of Geographic and Atmospheric Sciences, “Annual Graduate Report”
- Complete and submit “Annual Meeting of Committee Members for the Ph.D. Degree” form to Graduate Coordinator

First through Fourth Semesters (and summers):
- Required Core Courses: GEOG 600, 601, 661, 663
- Specialty courses: at least 6 semester hours of “Advanced” courses in specialty area in GEOG.
- Cognate field courses: minimum 9 semester hours.
- Applied research experience: at least 6 semester hours of off-campus applied research experience completed under GEOG 602.
- Additional coursework: 19-26 semester hours, including one course as research tool – e.g., GEOG 660; BIOS 643, 646, 670; CSCI 670, 677; ECON 690; MATH 560; STAT 573, 574, 578, 579, 678, 680.
- Research participation in professional society meetings (paper or poster presentation, discussant)
- Complete GEOG 601 presentation on sub-discipline

Fourth Semester:
- Prepare outline for Ph.D. Candidacy Examination, in consultation with Advisory Committee, Complete Candidacy Examination Themes Form.
- Defend Dissertation Proposal.
- Student finalizes Research Committee (in consultation with advisor) consisting of:
  - Director/chairperson of the committee (must be a Senior Graduate Faculty member);
  - Two or more faculty from the Geography Department (Full or Senior Graduate faculty);
  - A representative of a cognate field or an adjunct faculty.
  - All NIU members of the research committee must be Graduate Faculty; at least 50% must be Senior Members of the Graduate Faculty.
- Note: The Research Committee must be approved by the Dean of the Graduate School.
- Research Proposal
  - Preparation of Research Proposal.
  - Approval of Research Proposal: Advisory Committee determines necessary changes in Research Proposal and approves the Research Proposal.
  - Distribution of Research Proposal to faculty and graduate students at least one week prior to oral presentation of Research Proposal.
  - Oral presentation of Research Proposal to the department in GEOG 601.

Fifth Semester:
- Candidacy Examination
  - Minimum 4 examiners (3 GEOG, 1 external)

CANDIDACY Upon successfully completing the qualifying examination, the Student’s Advisory Committee
recommends candidacy to the Dean of Graduate School. Upon approval of the Dean, of the Graduate School, the student is awarded a Certificate of Candidacy.

**Sixth Semester and Beyond:**
- Up to 20 credit hours of *GEOG 799 Doctoral Research and Dissertation*.
- Once registration in 799 has begun, continue to register for a minimum of one hour of 799 each semester until the degree is completed.
- Prepare and submit research paper(s) to refereed journal and/or research proposal to external funding agency.

**Final Semester**
- Submit an application for graduation to the Graduate School.
  - September for December graduation; January for May graduation; April for August graduation
- Submit a copy of dissertation to all members of the Research Committee.
- In consultation with the Chair of the Advisory Committee, student requests Oral Defense. The decision to schedule a defense is reached by the Advisory Committee
- The defense will consist of two parts: a public presentation with opportunity for questions from any interested parties and a restricted examination session with the dissertation research committee.
- Three weeks prior to the defense, the student submits a “Request for Oral Defense” and a draft copy of the dissertation (on paper) to the Graduate School.
- At least two weeks prior to the scheduled defense, the committee informs the Dean of the Graduate School the date, time, place, and dissertation title for the public presentation. The Graduate School will publicize this on campus, inviting attendance of interested persons.
- Upon acceptance of dissertation by all members of the Advisory Committee:
  - Prepare final dissertation according to Graduate School guidelines.
  - Submit a post-defense PDF copy of the dissertation to the Graduate School reader.
  - After any corrections noted by the Graduate School editor are made, upload the final version of the dissertation to ProQuest/UMI Dissertation Publishing.
- Students are strongly encouraged to participate in Graduate Commencement which involves a hooding ceremony for all Ph.D. recipients.
The Campus and Community
Northern Illinois University was founded in 1895. Begun as a state’s teachers college, NIU has grown to meet the challenges of the region's expanding and diversifying economy. Today more than 25,000 students are served by NIU’s 41 departments in six undergraduate and graduate degree-granting colleges (Business, Education, Engineering and Engineering Technology, Liberal Arts and Sciences, Professional Studies, and Visual and Performing Arts). In addition, the College of Law awards degrees to more than 75 graduates each year and the College of Continuing Education offers one of the Midwest's largest credit and noncredit programs.

NIU has grown from a small state normal school to a large, respected research university dedicated to excellence and to serving one of the most dynamic regions in the nation. NIU is listed in the Carnegie Foundation’s top category for research-oriented institutions. Northern ranks among the nation’s top universities in the United States in terms of research, service and social mobility.

NIU is a blend of three distinct environments: it is a self-contained university campus in a small Midwestern city near metropolitan Chicago. Most of Northern's students (about 75 percent) live on campus or nearby. Our 460-acre campus is a mixture of architectural styles, from Tudor Gothic to bold contemporary. The wooded east lagoon is a tranquil year-round retreat for students and visitors. Other popular gathering places are Holmes Student Center, Martin Luther King Jr. Memorial Commons, Student Recreation Center, and the lagoon.

Northern's home, DeKalb, a city of about 45,000 combines clean and friendly country living with the services of a middle-size city. NIU students have ready access to Chicago (only 65 miles to the east), the Fox River Valley and neighboring communities such as Rockford, which offer a variety of shopping, entertainment and services.

The combination of typically Midwestern characteristics – warm hospitality and friendliness, appreciation for both old and new, and a work ethic built on creativity and problem solving – makes NIU a comfortable and stimulating learning environment.

The Geography Graduate Program
Geography at Northern Illinois University evolved, with Geology, out of a former Earth Sciences department. The tradition of a land and resources emphasis continues with graduate curricula in urban/economic geography, mapping sciences, and physical geography with a focus on soils, hydrology, climate, and biogeography. The Master of Science program predates creation of the department in 1969/70. The Ph.D. program was launched in January 2010. Including thesis or non-thesis research, the M.S. in Geography normally takes two years to complete. The Ph.D. normally encompasses three to four years, including two years of course work and a dissertation of original research. Further information on the M.S. and Ph.D. graduate programs is found in NIU’s Graduate Catalog.

Research and Laboratory Facilities
The department provides a wide offering of modern facilities for computer graphics and analysis in all fields of study.

- the tree ring/biogeography laboratory houses a Velmex tree ring measuring system; a portable photosynthesis analysis system; a growth/germination chamber; and a variety of instruments and sampling tools for field application
- the soil characterization laboratory contains a laser diffraction particle size analyzer; pipette and sieving equipment for particle size analysis; an elemental analyzer for carbon and nitrogen concentration analysis of soil and vegetative samples; ovens; and a variety of standard equipment for soil characterization and wet/dry aggregate stability analysis. The lab holds a foreign/quarantine soil permit from the USDA. An ATV-mounted Giddings hydraulic drill rig and traditional field equipment are available for soil sampling and analysis.
- the meteorology/climatology research laboratory is equipped with computer workstations linked to the department's MET server as well as a multi-screen weather visualization wall. The system uses meteorological software and Internet resources for interactive analysis of surface and upper air data and GOES satellite images.
- the Geovisual Mapping Lab conducts funded research and provides support to faculty projects in GIS, geovisualization, spatial data development, image analysis, and spatial modeling.
- additional facilities include a soils analysis wet lab, a NWS cooperative weather station, and a number of automated weather stations for remote field experiments.
**M.S. Degree Requirements**

The requirements for the M.S. degree in Geography include four core courses; 16-20 semester hours of elective courses in an area of specialization; a comprehensive examination; and the completion of a thesis or two non-thesis papers. All students admitted to the graduate degree program in geography are required to consult with an Advising Committee to design a two-year program of study. Based on the student's prior educational background and career goals, the Advising Committee will recommend a sequence of electives leading to specialization in a systematic field of geography. Upon consultation with an advisor, the student must select either the thesis or non-thesis degree option.

**Admission & Deficiencies**

Admission to the M.S. program presumes a level of analytical skills and general background equivalent to those required for the department's B.S. degrees, including at least 1 semester of calculus and a course in probability and statistics. For those intending to focus their studies in physical geography a 1-year sequence in biology, chemistry, and/or physics is recommended. Students who are admitted into the graduate program with course deficiencies must satisfy those deficiencies during their first year of graduate study. Courses designated as deficiencies do not carry graduate credit toward the degree.

**Requirements for the M.S. Degree**

All students must complete the following requirements:

1. 10 semester hours of core courses (with a grade of B- or better in each course):
   a. GEOG 661, Advanced Quantitative Methods for Geographic Research
   b. GEOG 663, Geographic Research Procedures
   c. GEOG 600, Seminar (2 hours)
   d. GEOG 601, Practice of Geography (2 hours)
2. Satisfactory completion of 16-20 semester hours of elective course work. The majority of elective course work must be taken in the Department of Geographic and Atmospheric Sciences, and at least 50% taken in graduate courses (numbered 600 or greater).  
3. At least 3 semester hours of advanced course work (chosen from: GEOG 622, 660, 662, 664, 665, 670, 702, 753, 760, 790) appropriate to their field of specialization.
5. Enroll in GEOG 600 and 601 each semester in residence. Each graduate student in geography must accumulate 2 semester hours of credit in each prior to graduation, but hours for 600 may not be applied toward credit-hour requirements for the M.S. degree. With the approval of the department, enrollment in GEOG 600 may be waived for a student whose circumstances prevent participation in this course.
6. Completion of a Thesis or 2 Non-thesis papers. Students doing the thesis option must accumulate 30 semester hours, 24 hours of which are in course work; students doing the non-thesis must accumulate at least 36 semester hours, of which 30 hours are in course work and six in Master’s Research Paper.

**Thesis Option** The thesis is a capstone research experience demonstrating the ability to pose a question, relate what is known and unknown from the literature, design a strategy (experiment) to answer the question, conduct the experiment and appropriate analyses, interpret results from the analysis, and communicate these elements in writing and graphically. Full-time students must orally defend a thesis proposal in their second or third semester, and part-time students must defend at a point agreed upon by their thesis committee. The proposal must be submitted to the committee two-weeks prior to the scheduled defense. Students must also orally defend a complete and nearly-final version of the thesis. A complete draft of the thesis must be provided to the committee 14 days prior to the proposed defense and before the defense can be scheduled. A post-defense version of the thesis, approved by all Advising Committee members, shall be submitted in PDF format according to the Guidelines for Preparing and Submitting Theses and Dissertations (see Graduate School website). Students must register for thesis under GEOG 699 for a minimum of 6 semester hours.

**Non-Thesis Option** The non-thesis option is designed for students who wish to undertake several smaller research projects. Students must submit two major research papers, completed under GEOG 672 for a total of six hours. The first paper must be submitted and accepted prior to completion of 24 semester hours. An oral defense of the second paper, normally completed at the end of the second year, is required. Each paper must be reviewed and accepted by a committee of

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1In cases where a student must achieve a certain grade as specified in the Graduate Catalog, and the student failed to do so, the course may be repeated once. If the student again fails to achieve the required grade, the student’s admission to that program will be terminated. (Committee Report for Graduate Council Meeting, March 6, 2000.)
at least two NIU faculty, composed of regular or adjunct members of the Department of Geographic and Atmospheric Sciences.

6. Present findings of the thesis or at least one non-thesis paper at Geography Seminar (GEOG 600).
7. Present one paper or poster at a state, regional, national, or international professional meeting. Submit a copy of the conference program showing schedule of presentation to department’s Administrative Assistant.
8. Submit PDF copy of thesis, or both Masters research papers to department Administrative Assistant.
9. Exit interview with the Graduate Coordinator
Areas of Specialization

Students earning the M.S. degree in Geography are expected to develop a proficiency in at least one systematic field of study and a working knowledge of spatial analytic methods.

1. Urban/Economic Geography
The curriculum in urban/economic geography emphasizes the spatial, demographic, economic, and structural character of cities and regions. Course work in urban and economic geography provides a conceptual foundation for understanding the structure and dynamics of places and regions, as well as an introduction to the tools necessary for practical problem solving and policy evaluation. Faculty research interests currently include urban structure, urban planning and policy, regional economic development, urban transportation systems and commuting, and the geography of health. The urban/economic track is designed for students wishing to pursue advanced degrees or careers in city planning, economic development, industrial and retail location, community development, transportation, public health, and land use planning.

2. Physical Geography
The curriculum in environmental geography is organized into four, overlapping fields: biogeography, climatology, hydrology and water resources, and soil science. Graduate studies combine classroom, laboratory, and field experiences. Due to the interdisciplinary nature of physical geography students are encouraged to develop a program of study that integrates two or more of these fields. Additional elective course work may also be taken in Geology, Biological Sciences or Physics. Current faculty research includes the climatology of extreme temperature and precipitation, hydroclimatology, regional climate modeling, remote sensing climatology, applied climatology, flood hydrology, landscape evolution, human impacts on natural environmental systems, forest ecology, plant-soil dynamics, soil spatial relationships, soil geomorphology, soil carbon sequestration, and quantitative modeling of natural systems. Collaborative projects with the National Weather Service, United States Geological Survey, The Nature Conservancy, County Forest Preserve Districts, Environmental Protection Agencies and the Natural Resource Conservation Service introduce students to applied research and problems confronting environmental specialists. Students may expect to find challenging careers with private sector firms or with government agencies having environmental assessment or management mandates.

3. GIS/Spatial Analysis
Urban/Economic and Physical Geography share a common methodological and epistemological foundation in the spatial analytic tools of geographic inquiry. Regardless of track of study, all students in the graduate program are encouraged to develop sound analytical skills in at least two areas of spatial analysis. In addition to traditional quantitative methods, the Department offers course work in geographic information systems (GIS), cartography, remote sensing, spatial statistics, regional analysis, field instrumentation, and spatial modeling. Students may augment their skills development with courses in mathematics, statistics or computer science. Students in the M.S. program may also earn the certificate in GIA (Geographic Information Analysis).

Tools skills are of little consequence without the systematic understanding necessary for the recognition of problems, design of an appropriate research strategy, and implementation of results. Students specializing in GIS/spatial analysis will be required to develop a systematic background in a subfield of urban/economic or physical geography.

The Comprehensive Examination
The purpose of comprehensive examination is to show evidence of the student's mastery of his/her chosen field of study. It is demonstrated through competence in the basic subject matter of the field and the ability to synthesize and think critically. It is an oral exam administered at the time of the oral defense of the thesis following a format agreed upon by the Advisory Committee and student.

Guidelines for the Comprehensive Examination
1. The Graduate School stipulates that the comprehensive exam can be taken no more than three times. We expect each student to prepare diligently so as to pass on the first attempt.
2. The subject matter to be examined is to be jointly determined by the student and the Advisory Committee. The subject matter may consist of topics within the student's fields of study that originate in courses taken or independent readings or research. It is the Advisor's responsibility to ensure that the topics are relevant and neither too general nor too specific.
3. The goal of the comprehensive exam is for the student to demonstrate the ability to synthesize diverse information and think critically.

The Graduate Coordinator, on behalf of the Department, shall consult with each student's Advisory Committee to ensure that the intent of this policy is upheld. The exam outline, date of the exam, grades, and any written comments of committee members will be permanently recorded in the student's
Program Progress file.

**Registration in Geography 699 (Thesis option)**

A student who has formally begun the thesis or its equivalent must register in course number 699 in each subsequent term, including summer, until the thesis or equivalent is submitted to and formally approved by the Graduate School. Registration for this purpose may be in absentia. If circumstances prohibit continuing registration, a graduate student may request a leave of absence from the Dean of the Graduate School. If a student interrupts registration in course number 699 without obtaining a leave of absence then, upon recommendation of the major department, the student's admission to the degree program will be terminated. After a student has registered for the maximum number of semester hours that can be received for the thesis, he or she should register for one hour of audit in 699 until the thesis receives final Graduate School approval.
### Timetable of the 2-Year M.S. Program

#### Year before starting graduate school

**Nov/Dec/Jan**
- take GRE, have results sent to NIU
- apply to NIU Graduate School

**March - April – May**
- receive admission decision from NIU
- notify department that you will enroll in program in August

#### 1st Year begins

- meet with graduate coordinator to discuss fall courses
- participate in annual TA instructional workshop
- receive TA/GA assignment; meet with faculty supervisor
- register for classes; complete any deficiencies
- participate in NIU directed TA workshops

**end of August**
- begin classes

**Aug - Sept.**
- meet with each member of faculty to introduce yourself and discuss academic interests

**October 1**
- identify advisor
- with input from advisor, select Advising Committee
- with input from Advising Committee, design two-year program

**October 15**
- **Submit “Two Year Plan for the M.S. Degree” form** with department office. Form is available from Geography Department.

**End of Semester**
- **Submit “Thesis Committee Approval Form” to** Graduate School and Graduate Coordinator. Form is available through Graduate School website.

**January**
- meet with graduate advisor/Advising Committee to discuss spring courses
- receive TA/GA assignment; meet with faculty supervisor
- register for classes; complete any deficiencies
- get topic for 1st research paper approved if choosing non-thesis track

**February**
- meet with graduate advisor/Advising Committee to discuss research progress and summer courses
- complete and submit Annual Graduate Report and Annual Committee Meeting forms

**March**
- notify graduate coordinator of interest in financial support for 2nd year

**April – May**
- defend proposal
- present non-thesis research at department colloquium (20 min.)

**May**
- register for summer courses

**June, July, August**
- complete 1st research paper if doing non-thesis track
- start thesis field research, if necessary

#### 2nd Year begins

- meet with graduate advisor/Advising Committee to discuss fall courses
- participate in annual TA instructional workshop
- receive TA/GA assignment; meet with faculty supervisor
- register for classes

**end of August**
- register for classes
- get topic for thesis approved if choosing thesis track
- identify professional meeting where you will present thesis or non-thesis research
- defend proposal (in not done already)

**October**
- get topic for 2nd research paper approved if choosing non-thesis track

**January**
- meet with graduate advisor/Advising committee to discuss spring courses
- receive TA/GA assignment; meet with faculty supervisor
- register for classes
- **Submit application for Spring graduation.** Form is available through Graduate School website.

**February**
- complete and submit Annual Graduate Report

**March**
- submit 1st complete draft of thesis for May Graduation
- **submit Request for Oral Defense of Thesis.** Form is available through Graduate School website.

**Sept/ Oct/ Nov/ Dec/ Jan/ Feb/ March/ Apr/ May/ June**
- present non-thesis or thesis research at professional meeting

**April – May**
- present thesis or non-thesis research at department colloquium

**June**
- submit defended draft of thesis for August graduation

**May -or- August**
- Graduate.
Certificate of Graduate Study in GIA

The department offers a Certificate in Geographic Information Analysis. This certificate is designed for graduate students in all disciplines and for professionals seeking an advanced education in geographic information systems, mapping science, and applications.

Students should consult with the graduate certificate adviser prior to registering for any courses. Regulations require students maintain a minimum 3.00 GPA in all graduate-level work undertaken at NIU in order to remain in good standing. The courses are listed below.

Course work from the following (16-18):
GEOG 503, Soil Geography and Land Use Planning (3)
GEOG 532, Geography of Health (3)
GEOG 554, Fundamentals of Remote Sensing (3)
GEOG 556, Fundamentals of Mapping (3)
GEOG 557, Fundamentals of GIS (3)
GEOG 558, Geovisualization (3)
GEOG 559, Geographic Information Systems (3)
GEOG 560, Remote Sensing of the Environment (3)
GEOG 564, Location Analysis (3)
GEOG 568, Workshop in GIS (3)
GEOG 570, Web Mapping (3)
GEOG 593, Computer Programming for the Geospatial and Atmospheric Sciences (3)
GEOG 602J, Internship: Methods and Techniques (3)
    OR GEOG 602K, Internship: Mapping/Geovisualization (3)
GEOG 656, GIS Design and Data (3)
GEOG 659, Regional Planning (3)
GEOG 660, Advanced Spatial Analysis (3)
GEOG 665, Advanced Field Methods (3-6)
GEOG 690, Community Geography (3)
GEOG 761, Advanced Spatial Modeling and Regression Techniques (3)
GEOG 771J, Independent Research: Methods and Techniques (1-3)
    OR GEOG 771K, Independent Research: Mapping/Geovisualization (1-3)
GEOG 790J, Advanced Seminar: Methods and Techniques (3)
    OR GEOG 790K, Seminar in Current Problems: Mapping/Geovisualization (3)

1Not available for credit to students who have taken these courses for undergraduate degree or who have earned the certificate in undergraduate study in geographic information systems; other course work within the certificate should be substituted.
**Ph.D. Degree Requirements**

The Ph.D. degree in Geography requires 90 semester hours of course work beyond the baccalaureate, 60 semester hours beyond the Masters, including three core courses, at least 6 hours of advanced topical course work in geography, and at least 9 hours of cognate course work outside of geography. A unique aspect of the Ph.D. program in geography at NIU is the requirement that students participate in applied research experience outside the university; credit for the applied research experience is earned through GEOG 602, Internship. A Ph.D. dissertation of original research is also required. All students admitted to the Ph.D. program in geography are required to meet with an Advising Committee at least once a year. The Advising Committee shall be composed of the students’ Ph.D. advisor, two additional graduate faculty from geography and one adjunct or external faculty person. The Advising Committee consults with the student on a program of study, administers the student’s Ph.D. qualifying examination, and serves as the student’s dissertation research committee.

**Admission & Deficiencies**

Admission to the Ph.D. program presumes a level of knowledge, writing and analytical skills equivalent to those required for the department's M.S. degree (including the completion of a thesis or equally significant research-based document). To demonstrate those, students will be required to submit an application letter/personal statement, three letter of recommendation, GRE scores, TOEFL scores (if required), and a sample of academic research and writing. Applicants with an M.S. in Geography from NIU must also submit a sample “Plan to Degree”, indicating the courses which will be utilized to complete degree requirements. The students should indicate a clear focus of proposed study in their application letter. Under normal circumstances, students will not be admitted to the Ph.D. program with deficiencies. Potential students should address deficiencies by enrolling as a student at-large before applying to the Ph.D. program.

**Requirements for the Ph.D. Degree**

All students must complete the following requirements:

1. 60 semester hours beyond the Masters, including:
   - 10 semester hours of core courses (with a grade of B- or better in each course):
     a. GEOG 661, Advanced Quantitative

   1Where a student must achieve a certain grade as specified in the Graduate Catalog, and fails to do so, the course may be repeated once. If the student again fails to achieve the required grade, the student’s admission to that program will be terminated. (Committee

   Methods for Geographic Research
   b. GEOG 663, Geographic Research Procedures
   c. GEOG 600, Seminar (2 hours)
   d. GEOG 601, Practice of Geography (2 hours)
   - >50% of coursework credits must be ≥600 level
   - at least 6 semester hours of advanced course work (may be chosen from: GEOG 622, 660, 662, 664, 665, 670, 702, 753, 760, 790 or other courses upon approval of advisory committee) appropriate to their field of specialization.
   - All courses taken in geography must be graduate courses (numbered 600 or greater). 1
   - at least 9 semester hours of graduate-level, cognate course work related to the student’s Ph.D. field of specialization.
   - it is expected that most of the courses applied to the degree will be in the Department of Geographic and Atmospheric Sciences
   - at least 6 semester hours of applied research experience external to the university, completed under GEOG 602. Appropriate settings for the applied research experience include corporate, NGO or governmental labs or research institutes. All prospective research experiences must be approved by the student’s advising committee.
   - at least 12 semester hours of dissertation under GEOG 799.

2. Enroll in GEOG 600 and 601 each semester prior to comprehensive examination, for a minimum of four semesters. In that timeframe, the student will be required to develop and present to 601 of a 50-minute unit on the evolution and current thought in their sub-discipline. Presentation must be approved by 601 coordinator and faculty advisor. Hours for 600 do not count towards total hours.

3. Develop skill in one research tool at a high level of proficiency, or two research tools at average proficiency

4. Successful oral defense of a dissertation research proposal to the advisory committee, followed by a public oral presentation of the research proposal made to the department (this will normally occur in GEOG 601, but it may follow the oral presentation made to the advisory committee); a complete, written draft of the proposal must be provided to the committee 14 days before the proposed defense and before the defense can be scheduled. For full-time students, this must occur no later than the summer between the second and third years.

5. Satisfactory performance on a Ph.D. candidacy exam following the successful defense and
presentation of the dissertation proposal. The candidacy exam shall be taken only after all required course work is completed, proposal defended, and with permission of the student’s advising committee. For full-time students, this occurs no later than the beginning of the third year.

6. The student will be admitted to candidacy after successful completion of the 1) sub-discipline presentation in GEOG 601, 2) candidacy exam, 3) research proposal approval by the advisory committee, 4) the public oral proposal presentation.

7. Presentation of one or more research papers at a national/international conference.

8. Submission of a research manuscript to a peer-reviewed or edited outlet, or submission of a research proposal to an external funding agency.

9. A dissertation of original research, theoretical or applied, and completed under GEOG 799 for a minimum of 12 semester hours. The final dissertation must be defended within 3 years after admission to candidacy (A complete, written draft of the dissertation must be provided to the committee 14 days before the proposed defense and before the defense can be scheduled).

10. Submission of the final dissertation, approved by the student’s committee, to the Graduate School and to the department’s Administrative Assistant (in PDF format).

11. An exit interview with the Graduate Coordinator and Chair prior to commencement and awarding of the doctoral hood.

Areas of Specialization
The Ph.D. in Geography builds on department strengths in the human organization of geographic space, spatial environmental science, and geographic information science, with a core mission of developing and applying knowledge, geospatial methods, and systems science to the spatial human and environmental sciences. Students pursuing the Ph.D. degree in Geography will develop an in-depth expertise in a systematic field of study along with their search and spatial analytic tools appropriate to that field.

1. Human Organization of Geographic Space
The curriculum in the human organization of geographic space broadly consists of urban geography, economic geography, environmental management, and human impacts on the environment. Appropriate fields of specialization for the Ph.D. depend on faculty interests. Currently these include, but are not limited to: urban geography; location theory; transportation; the spatial organization of industry and other human activities; comparative urbanization; geography of

2. Spatial Environmental Science
Department strengths in spatial environmental science consist of: biogeography & forest ecology, hydrology & water resources, climatology, soil science, geophysical hazards and natural physical systems.

Appropriate fields of specialization for the Ph.D. depend on faculty interests. Currently these include, but are not limited to: biogeography; climate change; climatology of extreme temperature and precipitation; forest ecology; human impacts on natural environmental systems; hydrology; landscape evolution; natural hazards; pedology; plant-soil dynamics; regional climate modeling; regional environmental change; soil carbon sequestration; and the spatial modeling of natural systems. Cognate course work may be taken in geology, biological sciences, physics, or engineering.

3. Geographic Information Science
Mapping is one of the core traditions of geography. That visual aspect of modern geography is captured in geographic information science and the methods of geographic information systems, remote sensing, geo-visualization, spatial analysis, field mapping, and cartography. Due to their role in geographic research and the communication of geographic understanding, Ph.D. students are required to be proficient in at least one method of geographic information science. Additional research tool proficiencies and cognate field understanding can be developed through course work in statistics, computer science, bioinformatics, genomics, econometrics, geochemistry, analytical chemistry, and mathematics.

Candidacy Exam & Admission to Candidacy (ABD)
In order to be recommended for admission to candidacy (i.e., conferral of ABD), the student must successfully pass a candidacy examination and defend a dissertation proposal. The candidacy exam will normally evaluate conceptual understanding, knowledge of the literature, ability to design and effectively communicate research, cognate understanding, and/or technical proficiency in the student’s area(s) of specialization. The form of the candidacy exam is at the discretion of the Advising Committee.

Guidelines for the Ph.D. Candidacy Examination
1. The Ph.D. candidacy exam cannot be taken until the student has completed a minimum of 30 semester hours of course work in the program, including all required core, advanced, and cognate
field courses, as well has successfully defended the dissertation proposal. The full time student will sit for the candidacy exam at the start of their third year in residence. The part time student shall sit for the exam upon an agreed upon timetable by the Advisory Committee.

2. Submit “Doctoral Committee Approval” form to the Graduate School along with a memo to the Graduate Coordinator indicating the student's intent to take the candidacy exam, as well as the scheduled dates of the exam. This form must be submitted to the Graduate School by the end of the semester preceding the scheduled examination.

3. The examination is scheduled at the discretion of the Advising Committee, which shall have the same personnel as the Dissertation Committee. Each student must have at least four examiners who are members of the Advising Committee: the major advisor, two additional geography faculty, and an adjunct or a faculty member from the student’s cognate field; ≥50% the Advising Committee must be graduate faculty. Examinations may be offered (but not necessarily graded) in summer semesters at the discretion of the Advising Committee.

4. The specific themes covered in the examination will be at the discretion of the committee, though heavily influenced by the dissertation proposal. The committee and student will meet no later than one month prior to the proposed date of examination and reach a consensus on the format, schedule, themes, grading criteria, and contribution of each question to the exam. The committee will sign and submit the Department of Geography Candidacy Exam Structure Form to the Graduate Coordinator. As a whole, the examination will be designed to assess the student’s achievement of the programmatic Student Learning Outcomes (SLOs), which will reflect the student’s ability to synthesize literature, engage in independent critical thought on a topic, display proficiency in research techniques, and display proficiency in communication skills. These examinations can take the form of a traditional, question-based examination, an applied research project, or a combination of both. No student, however, will be expected to complete more than one type of exam (e.g. a full traditional and full applied research project).

5. Once finalized, each examination will take place according to the proposed schedule in the Candidacy Exam Structure Form for traditional, question-based exams, they will take place in a closed book, closed door environment over the course of three days, or open book, closed door environment over five days. If the exam is open book, the expectation for citation accuracy and depth will be increased. For applied research project, a maximum of four weeks will be allocated. Combination exams will consist of one or two days of question-based examination, and up to two weeks for the applied research project. Two weeks following the submission of the examination, an oral follow up will be scheduled, where the Advising Committee can ask questions based upon the answers given, and the student will have the opportunity to expand on the given answers. The final grade for individual questions and overall examination will be assessed after the oral follow up.

6. Each examiner has responsibility for ensuring fairness and thoroughness of the examination. Examiners will follow the grading criteria outlined by the Candidacy Exam Structure Form. Examiners may request to read and/or discuss the outlines of other examiners; students are required to comply with those requests. It is the responsibility of the committee chair to coordinate questions.

7. The candidacy exam is to be graded by the authoring examiner(s) for each question with an overall grade issued the Advising Committee on a P/F scale. Each question, however, is to be graded upon the letter grading system approved by the Graduate School, with the grading criteria outlined in the Candidacy Exam Structure Form. A passing grade from the exam is an individual minimum score of B- for each question. The final grade for each question is the post oral examination score. At a minimum, a passing score will indicate a satisfactory standard in achieving the SLOs for the program, as well as those designed to be examined by each component of the exam. Students must pass all questions of the exam to successfully pass the exam. Examiners shall submit all grades to the department and report an overall grade issued the Advising Committee on a permanent record. The student’s major advisor will then convey that information to the student.

8. The student's answers to the examination are to be filed in the student's permanent record. The student and any examiner may request to review the answers and/or grades for all questions.

9. The candidacy exam is closed to the public.

10. The Graduate School stipulates that a student who fails a candidacy examination may repeat the failed portion once, after a period of time determined by the Advising Committee. A student who fails the exam a second time, or is not granted permission for a second attempt, will not be permitted to continue work toward the Ph.D. and will have their admission terminated. A student must be admitted to the doctoral program, must be in good academic standing, and must be
enrolled in the term in which the qualifying exam is taken.

The Graduate Coordinator, on behalf of the Department, may review outlines, exam questions, or graded exams or consult with each student's advisory committee to ensure that the intent of this policy is upheld. The exam outline, dates of the exam, all grades, and the written comments of Advising Committee members will be permanently recorded in the student's Program Progress file.

Registration in Geography 799
A student who has been admitted to candidacy and begun dissertation research must register in GEOG 799 in each subsequent term until the dissertation is submitted to and formally approved by the Graduate School. Registration for this purpose may be in absentia. If circumstances prohibit continuing registration, a graduate student may request a leave of absence from the Dean of the Graduate School. If a student interrupts registration in GEOG 799 without obtaining a leave of absence then, upon recommendation of the major department, the student's admission to the degree program will be terminated.
**Timetable of the Ph.D. Program**

**Year 1**

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<tr>
<th>Fall</th>
<th>Spring</th>
<th>Summer</th>
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<tr>
<td><em>form Advising Committee</em></td>
<td><em>file curriculum plan</em></td>
<td><em>GEOG 602, Internship</em></td>
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<td>GEOG 600 &amp; 601</td>
<td>GEOG 600 &amp; 601</td>
<td>GEOG 602, Internship</td>
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<td>GEOG 663</td>
<td>GEOG 661</td>
<td>or GEOG 758 or 771</td>
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<tr>
<td>GEOG elective</td>
<td>or cognate elective</td>
<td>- dissertation pilot project</td>
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<td>or research tool</td>
<td>or research tool</td>
<td>- field data collection</td>
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**Year 2**

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<td>GEOG 600 &amp; 601</td>
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<td>Dissertation Proposal Defense and Presentation</td>
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<td>or cognate elective</td>
<td>GEOG 758</td>
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**Year 3**

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<th>Summer</th>
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<tr>
<td>PhD candidacy exam</td>
<td>Dissertation research &amp; writing</td>
<td>Submit research paper to refereed journal</td>
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<td>Presentation at professional meeting</td>
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**Year 4**

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<th>Summer</th>
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<tr>
<td>Dissertation research &amp; writing</td>
<td>Presentation at professional meeting</td>
<td>Submit research paper to refereed journal</td>
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<tr>
<td></td>
<td>Dissertation colloquium &amp; defense</td>
<td>Exit Interview</td>
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Application for Admission to NIU

Applications are available online at www.grad.niu.edu/apply/index.shtml. Graduate School and program deadlines for the completion of the application dossier are available online at www.grad.niu.edu/application.deadlines.pdf. The completed application form, with the required application fee, must be received by the Graduate School no later than June 1 for admission to the fall semester, November 1 for the spring semester, and April 1 for the summer session. All remaining application materials – official transcripts, required test scores, writing sample, degree plan, and letters of recommendation – must be received by August 1 for the fall semester, January 1 for the spring semester, and June 1 for the summer session. (Dates for international students are indicated below.)

M.S. and Ph.D. applicants are required to submit an application letter/personal statement that outlines the career plans, research interests, and how NIU can help them achieve those goals, official transcripts, three letters of recommendation, GRE scores, and TOEFL scores (if English is not native language). Ph.D. applicants will also be required to submit sample of research writing (e.g. publication, major seminar paper, thesis). Ph.D. applicants holding an M.S. in Geography from NIU will also be required to submit a “Plan to Degree” form which outlines their anticipated path to degree completion.

Applicants who hold baccalaureate degrees from colleges or universities other than Northern Illinois University, or who have been awarded a graduate degree elsewhere, should request that the appropriate institutions send one official copy of the transcript showing each degree directly to the Dean of the Graduate School. Applicants are urged to submit transcripts showing other post-baccalaureate work.

In addition to the following regulations, it is the responsibility of each student to read and understand the procedures and requirements described in the sections entitled "Admission to Graduate Study", “General Regulations”, and "Requirements for Graduate Degrees" in the current Graduate Catalog.

International Students
Application for admission, letters of recommendation, diplomas, mark sheets, test scores, and proof of adequate financial support must be received by the Graduate School no later than May 1 for admission to the fall semester or October 1 for the spring semester. Normally, international students will not be admitted to begin a degree program in the summer session. All applicants whose native language is not English must present an IELTS score of 6.5 or alternatively, a TOEFL score of at least 80 on the TOEFL ibt, 213 on the scale of 0-300, or at least 550 on the older scale of 310-667 where applicable (in certain countries). The score must be for an examination administered no more than 24 months prior to the beginning of the academic term for which admission is sought. A student whose command of English appears deficient or marginal for purposes of graduate study will be required to take special instruction in English until this deficiency is removed. For IELTS information, contact www.ielts.org. For TOEFL information, contact www.toefl.org

International students must register for a minimum of 9 hours of credit each semester, including any undergraduate deficiencies in their disciplines and special instruction in English.

Graduate Admission Requirements
To be admitted as graduate students at NIU, applicants must have obtained a bachelor's degree from a four-year accredited college or university, must have the approval of the department in which they plan to major, and must have a minimum 2.75 grade point average (GPA), based on a 4.00 system, in undergraduate work. The Department of Geographic and Atmospheric Sciences normally requires a GPA of 3.00 for the last 45 hours of undergraduate course work and a minimum Graduate Record Examination (GRE) score (verbal and quantitative) in the 75th percentile or greater. All prospective graduate students must take the GRE (verbal and quantitative) prior to admission.

Matriculation
Graduate students must enroll in the semester or summer session for which they are admitted, indicated in the letter of admission from the Graduate School. At the discretion of the office of the dean of the Graduate School and with permission of the major department, matriculation may be deferred up to but not beyond two calendar years. The request for deferral of admission must be submitted to the Graduate School, in writing, no later than the end of the academic term for which admission has been granted. If students do not request a deferral of admission, and fail to matriculate (enroll in the term of admission) as required, their admission to that program is canceled.

Social Security numbers are required for registration purposes. A student who does not have a number should obtain one from a Social Security office in advance of registration.

Registration
Registration procedures as well as class offerings are found on the NIU website at www.niu.edu. Students will not receive credit for any course for which the registration is not completed according to these procedures.
Financial Support

Eligibility, Stipends, and Application
Graduate teaching assistantships, graduate research assistantships, and graduate staff assistantships are available to qualified graduate students. Students not admitted to the Graduate School are not eligible to receive graduate assistantships. Assistantships and fellowships (see below) usually begin in the fall semester and, for the 2017-2018 academic year, (9-month) carried a stipend up to $13,500 (M.S.) and $16,200 (Ph.D.) plus partial tuition waiver covering instructional costs. Students who hold assistantship appointments should be prepared to pay the full amount of fees in accordance with published university procedures.

Applications for graduate assistantships and fellowships should be completed prior to January 15. Students completing the first year of their program who wish to either continue receiving financial support or who wish to be considered for funding for the first time should submit their requests by the above date. “Application for Graduate Assistantship” forms are available from the Graduate School’s website. Northern Illinois University does not discriminate on the basis of the gender, race, creed, color, or national origin of any applicant.

Obligations of Recipients, Course Load, and Criteria for Funding
Graduate assistantships are not research appointments and, therefore, have specific work assignments by the department and/or the advisor. Students holding graduate assistantships should be prepared to accept the obligations of such appointments. The Department of Geographic and Atmospheric Sciences expects graduate assistants to give first priority to academic achievement, degree completion, and to fulfilling the requirements of their appointments. The department normally will attempt to provide funding for a period of two years for M.S. students, and four years for Ph.D. students who meeting performance expectations. Available funds, departmental needs, and student performance and benchmark attainment, both academic and as a graduate assistant, are primary criteria for awards, and each student will be assessed each year. A graduate student holding a full-time or three-quarter-time appointment as a graduate assistant is considered to be pursuing a full-time course of instruction if enrolled in 9 or more semester hours in a fall or spring semester, or 6 semester hours in the summer session. It is expected that in all terms a student is awarded a graduate assistantship they shall maintain full-time status to fulfill degree requirements.

Internships and Cooperative Education Positions
The Department of Geographic and Atmospheric Sciences also helps to make available internships and cooperative education positions with government or private sector organizations. Internships and cooperative education positions usually carry academic credit and are available in most areas of specialization. In most cases, internships provide financial support equal to that of assistantships, but the level of support may differ according to the specific needs and resources of the agency. Students should note that the number of internships varies from year to year. Contact the Graduate Coordinator for further information.

Requirements for International Students
The 1986 Immigration Reform and Control Act mandates that any person employed by Northern Illinois University after November 6, 1986, must be either a U.S. citizen or possess current employment authorization from the U.S. Immigration and Naturalization Service. All such employees, including graduate assistants, must present original documentation to the employing department/cost center within three days of the start date of their employment contract or risk cancellation of the contract. In accordance with State statute, teaching assistants engaged in oral instruction shall be persons who possess adequate competence in spoken English.

Rhoten A. Smith Assistantship Program for Women and Minorities
The Rhoten A. Smith Assistantship Program was established at Northern Illinois University to help provide graduate assistantships to minorities and women enrolled in graduate programs in which these groups are underrepresented. The program, named in honor of the university's sixth president, represents part of the institution's commitment to increasing access to graduate education. A Rhoten A. Smith assistantship typically pays a stipend and provides a full waiver of tuition. Only U.S. citizens and permanent residents are eligible.

Fellowships and Other Awards
There are no application forms for Graduate School Fellowships awarded by the university. A student seeking nomination for one of these awards should contact the Graduate Coordinator. NIU Graduate School Fellowships are awarded in the spring for the following academic year.

Graduate School Fellowships are available to a limited number of outstanding students. They pay stipends for the ten-month academic year and provide tuition waivers (including out-of-state tuition). Selection is based upon academic achievement and departmental recommendation—not financial need. Recipients must enroll as full-time students (9 semester hours each semester). Students at the master's and sixth-year level
are eligible.

For externally funded fellowships, graduate students should contact the Office of Sponsored Projects’ Grants and Fellowship Office. A grants and fellowship directory describes opportunities by name, type of support, purpose, eligibility requirements, award amounts, application information, and deadline dates of the granting institution or agency. Directories are currently available for review in the Graduate School. The Grants and Fellowship Office staff is available to assist students in using the directory and in preparing and submitting externally based fellowship applications.

Grading and Graduation Requirements

Grade Point Average and Academic Standing
To remain in good academic standing, a graduate student must maintain a minimum GPA of 3.0 in graduate courses required on the student's program as well as in all graduate courses taken. A graduate student who fails to maintain a GPA of 3.0 in his or her required program of courses may be dismissed from the degree program. A student-at-large must maintain a GPA of at least 3.0 in all graduate course work. Following any academic term at the end of which the cumulative graduate GPA falls below 3.0, the student will be placed on academic probation.

Academic Probation
A student on academic probation who fails to bring the GPA to the required level of 3.0 upon completion of an additional 9 semester hours of graduate work (excluding S/U course work but including course work for which a grade of IN has been recorded), or upon enrollment in any course in 3 subsequent terms, will be academically dismissed from the Graduate School.

A student on probation who has registered for, but not completed, 9 or more semester hours will not be permitted further registration until she or he has removed all grades of I and NR and achieved good academic standing.

Graduate assistants shall be graduate students in good standing on the effective dates of their appointments. Assistants will have appointments terminated if during the term of their appointments they (1) receive academic dismissal or (2) fail to achieve good standing after one semester, excluding summer session, on probationary status. Termination of an appointment due to probationary status may be appealed in writing to the Department of Geographic and Atmospheric Sciences. The office of the Dean of the Graduate School will make the final decision on such appeals.

Incompletes
When a student is passing a course yet special circumstances prevent a student’s completing the requirements of a course, the instructor may, at her or his discretion, direct that the symbol I (indicating incomplete) be entered in the student’s record. When the I is assigned, the instructor will file in the departmental office and in the Graduate School an Incomplete/Reversion Grade Form outlining the work to be completed, the deadline for completion of the work, and the grade that will be awarded if the student fails to meet the deadline. In no case may the deadline be later than 120 days after the last day of final examinations during the term for which the incomplete is assigned. The incomplete must be removed within 120 days.

If the instructor does not change the incomplete within the period allowed for resolution, the incomplete (I) will be converted to an F or to the stipulated reversion grade. If no reversion grade is recorded, a grade of F will be awarded at the conclusion of 120 days. An administratively awarded grade, like one assigned by an instructor, may be changed at the discretion of the instructor of record prior to a student’s graduation. A student may not graduate with a transcript entry of “I” on his or her record.

Advisement
It is the responsibility of the student to seek proper advice and guidance from a faculty advisor throughout their program of graduate study. An advisor should be selected within the first few weeks of the student's first semester in residence. The advisor must be a regular faculty member of the Department of Geographic and Atmospheric Sciences and a member of the graduate faculty. Upon consultation with the advisor, the student will also select an Advising Committee which is chaired by the advisor. Under normal circumstances members of the Advising Committee will also serve on the student's comprehensive examination and thesis/non-thesis committees.

The advisor is the primary person responsible for directing a student's program of study and ensuring that all programmatic requirements for the degree are met. The advisor, together with the Advising Committee, shall meet with the student in his/her first semester in residence to identify a specific set of courses and requirements for the student's degree program. One copy of the student's proposed program of study, signed by the advisor and Advising Committee, must be submitted to the Graduate Coordinator by the eighth week of the first semester. Students must meet with the advisor and Advising Committee prior to the eighth week of each Fall semester, whether in residence or not, and are encouraged to meet on a more periodic basis. Failure to comply with these advisement guidelines will result in a failing grade in GEOG 600 and possible dismissal from the graduate program.
**Auditors**
With permission of the instructor, a student may enroll in a class as an auditor. A student who enrolls as an auditor cannot expect to submit assignments to be graded by the instructor unless those assignments are part of the audit requirements established when permission to audit was granted. A student enrolled for credit who wishes to change that enrollment from credit to audit after the drop deadline must do so prior to the withdrawal deadline specified on the Graduate School website, and must have the approval of the instructor, the department, and the office of the dean of the Graduate School.

Tuition and fees are charged for audit hours on the same basis as for hours taken for credit. Audit hours are included in the calculation of the total course load, but a student who enrolls as an auditor will not receive credit for the course. A student enrolled as an auditor who wishes to change that enrollment to registration for credit must do so early in the term, no later than the add/drop deadline specified for that course.

**Withdrawal from a Course or from the University**
All drops of or withdrawals from courses must be accomplished before the applicable deadlines. Schedule-change deadlines and drop and withdrawal procedures are published each term. Questions about those procedures should be directed to the Graduate School.

It is possible for a student to drop a course prior to the start of or early in the course. When a course is dropped, no record of the enrollment appears on the student’s record. After the drop deadline, a period is specified during which the student may withdraw from the course with the course remaining on the student’s record with a grade. A student who withdraws from all courses in which he or she enrolled in a given term is considered to have withdrawn from the university for that term. For each graduate course in which a student is doing passing work (C or better in a graduate course) at the time of withdrawal, as assessed by the instructor, a WP will be received; for any course in which the instructor determines that the student is not doing passing work, a WF will be received. If the instructor does not make an assessment of whether the student is passing or failing, a WP will be received. Transcript entries of WP and WF are not included in the computation of the graduate GPA. Transcript entries made in connection with withdrawals from undergraduate courses will be W or F in accordance with the undergraduate grading system; the withdrawal procedures and deadlines, however, will be those applicable to graduate-level students and courses.

Students who fail to notify the Graduate School in writing of their intent to withdraw from the university, or who fail to withdraw from a course or from the university in accordance with established procedure and by the established withdrawal deadlines, may receive an F in any affected course(s). If withdrawal is accomplished early enough in the term, there may be reduced liability for tuition and fees under the university’s refund policies. Later withdrawal may leave the student wholly liable for tuition and fees. Questions about billing and refund policies should be directed to the Bursar’s Office.

**Academic Integrity**
Good academic work must be based on honesty. The attempt of any student to present as his or her own work that which he or she has not produced is regarded by the faculty and administration as a serious offense. Students are considered to have cheated if they copy the work of another during an examination or turn in a paper or an assignment written, in whole or in part, by someone else. Students are guilty of plagiarism, intentional or not, if they copy material from books, magazines, or other sources without identifying and acknowledging those sources or if they paraphrase ideas from such sources without acknowledging them. Students guilty of cheating or plagiarism on an assignment or examination, or assisting others in same, may receive a grade of F for the course involved and may be suspended or dismissed from the university (see the Graduate Catalog).

**Application for Graduation**
A student who intends to graduate at the end of a particular term must have submitted to the Graduate School a completed graduation application, including the receipt for payment in the Bursar’s Office of the graduation fee, by the graduation-application deadline for that term. The deadline is available online at www.grad.niu.edu/audience/current_students.shtml. All requirements for a graduate degree must be completed according to the schedule listed at the above website. It is the student’s responsibility to be aware of these deadlines.

If a student applies for graduation in a particular term and fails to graduate at the end of that term, the student must submit a “Deferral of Graduation Request.” That form must be received in the Graduate School at least two months prior to the commencement date.

After a student has applied for graduation and it has been verified that all degree requirements have been completed, an official “certificate of completion” can be issued by the Graduate School to the student or to another party designated in writing by the student. Such a certificate is commonly accepted as proof of completion in advance of issuance of the diploma and degree transcript.
Geography and Meteorology Faculty
Teaching and Research Interests

**Professors**

**Walker Ashley**, Ph.D., University of Georgia, 2005, Professor: environmental risk, synoptic and mesoscale meteorology/climatology, hydroclimatic variability, GIS

**David Changnon**, Ph.D., Colorado State, 1990, Professor: regional climate variability and change; hydroclimatic studies; synoptic climatology; climate extremes; applied climatology

**Xuwei Chen**, Ph.D., Texas State University, 2006, Associate Professor: GIS, spatial analysis and geostatistics, cartography and geovisualization, transportation analysis

**Courtney Gallaher**, Ph.D., Michigan State University, 2012, Assistant Professor: food systems and sustainable agriculture, soils, human-environment interactions, gender issues, international development; Sub-Saharan Africa

**Vittorio Gensini**, Ph.D., University of Georgia, 2014, Assistant Professor: severe convective storms, synoptic meteorology, GIS techniques

**Ryan James**, Ph.D., University of North Carolina at Charlotte, 2012, Associate Professor: location analysis, regional development, spatial modeling, urban planning, GIS

**Michael Konen**, Ph.D., Iowa State, 1998, Associate Professor: soil sciences, landscape evolution, geomorphology, human impacts on surface processes

**Wei Luo**, Ph.D., Washington University, 1995, Professor: hydrology, geomorphology, physical process modeling, remote sensing, GIS

**Jie Song**, Ph.D., Delaware, 1995, Professor: dynamic meteorology/climatology; regional/mesoscale climate modeling; micrometeorology; remote sensing of the environment

**James Wilson**, Ph.D., University of North Carolina, 1991, Associate Professor: geography of health and population, rural and historical geography

**Instructors**

**Kory Allred**, Ph.D., Northern Illinois University, 2017, Instructor: land surveying, hydrology, geomorphology, computer modeling/data mining, drones

**Autumn James**, Ph.D., Northern Illinois University, 2018, Instructor: behavioral geography, spatial perception and cognition, GIS, urban planning, crime

**Adjunct Faculty**


**Sharon Ashley**, Ph.D., University of Georgia, 2006

**Richard Boniak**, Ph.D., SIU Carbondale, 2007: Assistant Professor of Environmental Science, Aurora University


**Robert Fahey**, PhD., University of Wisconsin, 2011: Forest ecologist, Morton Arboretum

**Julie Jastrow**, Ph.D., University of Illinois, 1994: Scientific Associate, Argonne National Laboratory

**William Kleiman**, M.S.Ed., NIU, 1986; Project Director, Nachusa Grasslands Preserve, The Nature Conservancy

**Michael Ritsche**, M.S., NIU, 2001: Scientific Associate, Argonne National Laboratory

**Mark Stelford**, Ph.D., NIU, 2001: Soil Research Scientist, Precision Cropping Systems

**Staff**

**Freddy Segura**, B.S., 2018: Senior Cartographer

**Philip Young**, M.S., NIU, 2012: Research Scientist and Computing System Administrator
William Morris Davis Fund for Graduate Research

William Morris Davis, for whom Davis Hall is named, is known as one of the fathers of North American geography. A geographer, earth scientist, and meteorologist, Davis initiated some of this country’s first graduate programs in Geography and was a major proponent of the field research method. This fund provides graduate students in Geography with support for the acquisition of specialty data, equipment, supplies, or services related to their thesis, non-thesis or dissertation research.

Who is Eligible to Apply: only those students admitted to candidacy* in the MS or PhD program in Geography at Northern Illinois University. No more than two awards will be made to any one student.

What it Funds:
- purchase of data, equipment, specialty software or supplies not currently available in the department or readily accessible through the university;
- rental of specialty equipment or instrumentation;
- external research services – e.g., laboratory processing, Internet survey hosting, etc.

What it does not Fund:
- field research travel, accommodations, or per diem living expenses
- conference fees, conference travel or per diem living expenses
- publication fees, printing, or reproduction costs
- workshops, training, books, or serials
- computers, computer peripherals, computer services, standard software or applications development/programming tools
- personal services – e.g., typing, transcribing, research assistant, etc.
- salary, tuition, or university fees

Application Process: Submit an application packet consisting of
1. a short description of the research, what the award funds will purchase, why this purchase is critical to the research, and a justification of the budget
2. a detailed budget, with vendor/supplier price quotes
3. a timetable for use of the award purchase and completion of the research
4. a statement of transfer to the Department of Geography - where the item(s) purchased will be transferred upon completion of research use

Conditions of Award: All data, equipment, software or supplies purchased with William Morris Davis Award funds will remain the property of the Department of Geography at Northern Illinois University. Students receiving the award will have full and exclusive rights to access/use of award-purchased materials during the active term of their research.

Award Cycle and Deadlines: Applications will be accepted and processed twice each calendar year: fall and spring semester. Completed applications should be submitted to the department’s graduate secretary (or Graduate Coordinator) on or before: October 15 for fall award, or March 15 for spring award.

* PhD students must be fully admitted to candidacy as described in the Graduate Catalog; MS students must have completed a majority of the core courses and at least 19 graduate credit hours in geography at NIU.
Titles of Recent Ph.D. Dissertations, M.S. Theses and M.S. Research Papers
Faculty director in parentheses

2018

M.S.
Seijas-Clark, Claudia “The Role of Socio-Economic Environmental Factors as Barriers to Community Resource Access” (Wilson)
Seijas-Clark, Claudia “Welsh Park: Establishing Identity, Improving Image, and Increasing Usage” (James)

Ph.D.
Haberlie, Alex. “Observed and Future Dynamically Downscaled Estimates of Precipitation Associated with Mesoscale Convective Systems” (Ashley)
James, Autumn C. “People, Place and Perceptions: How Criminal Victimization Influences the Perception, Engagement, and Navigation of Space” (Gallaher and Krmenec)
Ribant, Michael W. “The Geography of Urban America: Shrinking Cities, Right Sizing, and Neighborhood Change” (Chen)

2017

M.S.
Chun, Steven E. “Predicting Major Peach Yield Reductions in the Midwest and Southeast United States” (Changnon)
Fritzen, Robert C. “The Influence of Pre-existing Snow Pack on an Extratropical Cyclone” (Ashley)
Moore, Andrea D. “Economic Base Changes in Counties Impacted by Military Base Closures” (Chen & James)

Ph.D.
Allred, Kory J. “Quantified Modeling of Terrestrial Glacial Valleys and the Application to Mars” (Luo)

2016

M.S.
Bergman, Dustin P. “Using LIDAR to Measure the Urban Forest in DeKalb, IL” (Pingel)
Ferguson, Alex P. “Spatiotemporal Analysis of Residential Flood Exposure in the Atlanta, Georgia Metropolitan Area, 1990-2010” (Ashley)
Heuer, Casey S. “State of the Community Report: Establishing Viable Recreational Space in DeKalb, Illinois” (James)
Heuer, Casey S. “Utilizing GIS and Vulnerability Attributes in Order to Establish Effective Emergency” (Wilson)
Irizarry, Ashley C. “Changes in the U.S. Hurricane Disaster Landscape: The Relationship between Risk and Exposure” (Ashley)
Moses, Mary R. “Carbon Assimilation of Oak Seedlings Under Canopy Openness Manipulations” (Goldblum)
Smith, Sarah E. “Restoration Age and Quality Effects on Dynamic Soil Properties at Nachusa Grasslands in Franklin Grove, IL” (Konen)
Whalley, Kyle K. “The Pressure of Society on Water Quality: A Land Use Impact Study of Lake Ripley in Oakland, Wisconsin” (Luo)

Ph.D.
Strader, Stephen M. “Changes in the U.S. Tornado Disaster Landscape” (Ashley)
2015
M.S.
Dalbec, Aubrey “Genesis and Geomorphology of Superimposed Landforms on Ice-Walled-Lake Plains in Northern Illinois.” (Konen)
Florez, Andres E. “Development Programs and Livelihood Strategies of Residents in Altos de la Florida, Columbia” (Gallaher)
Furness, Walter W. “Food Sovereignty, Food Security, and Community Gardens in Rockford, IL.” (Gallaher)
Kordek, Kristopher M. “Development of a Population Density-Based Regression Model to Forecast Discharge-Precipitation Ratios in Midwestern Urbanizing Drainage Basins.” (Changnon)
Long, David E. “Flushing to Flourish: Lessons Learned on How to Sewer an Unsewered Community” (Wilson)
Long, David E. “Planning for the Future of South 4th Street, DeKalb, IL.” (James)
Marinaro, Alan J. “Reassuring the Reinsurers: The Impact of the Precursory Indian Ocean Dipole on Seasonal Atlantic Cyclone Activity.” (Changnon)

Ph.D.
McCarragher, Shannon R. “Ecological and Evolutionary Invasion Dynamics of Lonicera maackii (Amur Honeysuckle) in Relation to White Oak Savanna Restoration Management at Nachusa Grasslands, Illinois, USA.” (Rigg)

2014
Haberlie, Alex M. “Warm-season Convective Initiation Climatology for the Atlanta, Georgia Region” (Ashley)
Maloney, Benjamin J. “The Role of Amenities, Demographics and Soci-economic Variables in the Decision Making of High Amenity Zone Residents: A Chicago, IL and Houston, TX Comparison” (Greene)

2013
Carrier, Christine E. “An Introduction to Biogeography and Climate Change.” (Rigg & Goldblum)
Carrier, Christine E. “Importance of the Understory and the Need for Future Research.” (Goldblum & Rigg)
Crutchfield, Christopher J. The U.S. Census Bureau’s 2010 Urbanized Area Definition: A Kane County, Illinois Case Study.” (Greene)
Dawson, Adam M. “The Influence of Snow Cover on Monthly Temperatures in Illinois.” (Changnon)
Hari, Alexander J. “Assessing Human Encroachment Along Forest Preserve Borders in Kane County, IL.” (Goldblum)
Osterloh, Kristopher R. Land-Use Impacts on Dynamic Soil Properties at Nachusa Grasslands.” (Konen)
Robbins, Karen L. “Location-Allocation Using GIS to Improve Emergency Response.” (Krmenec)
Rohrbach, Kristina L. “Changes in Southeast Florida Vulnerability since Hurricane Andrew.” (Ashley)
Shaw, Andrew J. “Land Cover Change and Nitrate in the Upper Mississippi River Basin.” (Greene & Krmenec)
Vallimont, Russell A. “Agriculture and Climate Change.” (Wilson)
Vallimont, Russell A. “Analysis of the World3 Model.” (Wilson)

2012
Briley, Laura J. “Uncertainty Description for CMIP3 Precipitation Projections in the Great Lakes Region.” (Ashley)
Chang, Yi-Yin “Spatial Distributions of Rainfall Intensity Maxima in Intense Tropical Cyclones from the TRMM Multi-satellite Precipitation Analysis (TMPA) Data.” (Bentley)
Friedrichova, Michaela “Effects of Experimental Removal of Coexisting Sugar Maple and Trout Lily on the Overall Plant Growth and Survival, Ontario, Canada.” (Goldblum)
Lindfors, Zachariah S. “Exploring the Commuting Interactions of Neighboring.” (Greene)
Saxton, Michael L. “Understory Diversity and Seed Bank Germination in Oak Savanna Restorations.” (Goldblum)
Sepulveda, Joseph A. III “Highway-Rail Grade Crossing Safety: An Examination of View Obstruction and Crossing Angle Using Aerial Photography.” (Krmenec)
Shakir, Ata “Spatial Dimensions of a long-Term Merit Pay Environment and Forecast of Teacher Mobility.”

2011
Burlingame, Melissa A. “Spatial Analysis of Management Plan Impacts on Landscape Change for the Forest Preserve District of Kane County, IL.” (Goldblum)
Darby, Keith D. “Municipalities Competing for Land: Sorting Out Land Cover Change Among Annexed & Unincorporated Areas of Naperville’s Southwest Expansion Center.” (Greene)
Darby, Keith D. “A GIS Assessment of the Human Impact of a Potential Nuclear Power Plant Accident: Local and Regional Perspectives.” (Greene)
Fish, Meghan A., “Mapping Amenities and Searching for a Creative Class in the Exurbs: A Regional Study of Northern Illinois.” (Greene)
King, Andrew J., “Identification and Examination of Hailswaths in the U.S. Midwest.” (Ashley)
Pearse, Jacob T. “Cryptosporidium and Humans: A Human Ecology Approach.” (Wilson)
Wang, Siqin “Job Density and Employment Subcenters in the Four U.S. Metropolitan Areas.” (Greene)
Whippo, Tara L. “Variable Catchment Sizes for the Two-Step Floating Catchment Area Method: A Case Study of Accessibility to Primary Care Physicians within Two Illinois Regions.” (Luo)

2010
Falsey, Mary Beth “Hydric Soil Determination Using IRIS Tubes, Soil Morphological Features, and Monitoring Wells at a Northern Illinois Wetland.” (Konen)
Gensini, Vittorio A. “Climatology of Potentially Severe Convective Environments from Reanalysis.” (Ashley)
Grudzinski, Bartosz P. “Estimating Hydraulic Conductivity from Drainage Patterns on Mars – A Case Study in the Mare Tyrrhenum Quadrangle.” (Luo)
Haller, Kara A. “The Regional Context of Reviving Downtown Riverside, IL: An Amenity Index Approach.” (Greene)
Haller, Kara A. “The Geography of Foreclosures and the Neighborhood Stabilization Program in Joliet, IL.” (Greene)
Hatzis, Joshua J. “The Development of a Dynamic Root Distribution for the Community Land Model with Carbon-nitrogen Interactions.” (Song)
Hayes, Jessica L. “Community Gardens in Chicago Neighborhoods: The Role of Community Gardens in the Local Food System, Food Accessibility and Environmental Justice.” (Blue)
Kazmierczak, Thomas C. “Rangeland to Cropland Conversion in the Great Plains” (Greene)
Kwit, Matthew C. “Light Environments Influence on Understory Sugar Maple Carbon Balance and Survival at and North of the Current Range Limit.” (Goldblum)
Lisowski, Alicia M. “Characteristics of the Soils in the Boreal and Deciduous Forests of Lake Superior Provincial Park, Ontario, Canada.” (Konen)
Loesch, Jameson L. “The Competitive Role of Balsam Fir (Abies balsamea) in the Forest Understory at the Deciduous/Boreal Forest Ecotone, Ontario, Canada” (Rigg)
Maxwell, Alexis S. “The Vanishing Farmland Myth: Tracking Farmland Loss to Urbanization Through the Use of Geospatial Data.” (Greene)
Paulikas, Marius J. “Thunderstorm Hazard Risk for the Atlanta, GA Metropolitan Region.” (Ashley)
Walsh, Thomas R. “Evaluating and Classifying the Phase Cycles of the Madden-Julian Oscillation.” (Changnon)

2009
Church, Heather L. “The Change of Corn and Soybean Acres in the United States.” (Greene)
Glaves, Brian P. “Seed Rate Study for Restoration Ecology: What Weight of Seed Should Be Planted for Best
Results?” (Rigg)

Gilson, Christopher W. “Human Vulnerability to Lightning in Georgia.” (Ashley)

Matthew, Joshua C. “The Homer Site: The First Triceratops Bone Bed – Hell Creek Formation Southeastern Montana.” (Rigg)

McCarragher, Shannon R. “Geographic Variations in Seed Germination, Seedling Growth, and Mortality of Sugar Maple (Acer saccharum) Under Different Temperature and Climate Regimes: Results of Common Garden and Reciprocal Transplant Experiments.” (Goldblum)

Prell, Jenni A. “Meteorological Instrumentation Performance and Data Quality Using Temperature, Relative Humidity, and Wind Speed Sensors in Barrow, Alaska.” (Changnon)

Roberts, Gregory A. “Analysis of Employment Center Change in the Chicago Metropolitan Area, 1990 – 2000.” (Greene)

Schoen, Joseph M. “A Climatology of Fatal Tornadic and Non-tornadic Wind Events by Storm Type in the United States, 1998-2007.” (Ashley)

Vogel, Cynthia J. “Agricultural and Urban Land Use Change: Detecting the Perimetropolitan Bow Wave at National and Regional Scales.” (Greene)

Winter, Jericho M. “Assessment of Hydric Soil Indicators, Iris Tubes and Water Table Dynamics in Northeastern Illinois.” (Konen)

Zappa, Monica K. “Assessing Human Vulnerability to Hurricanes in Latin America Coastal Communities: A Case Study of Bluefields, Nicaragua.” (Ashley/Blue)

2008


Burman, Anna. “A Comparison of Flood Data Formats in DeKalb County, IN.” (Greene)

Burman, Anna. “Biases and the Importance of Place in U.S. Refugee/Asylee Policy: A Multi-Scalar Analysis of Four Southeast Asian Countries.” (Blue)

Nyberg, Michelle N. “Exploration of Chlorophyll Fluorescence for Acer saccharum Marsh. Seedlings and Saplings Growing Along Their Northern Range Limit and at a Mid-Range Site in North America.” (Rigg)

Qi, Yi. “The Impact of Toxically Releasing Inventory Sites on Residential Property Values in Aurora, Illinois, 1999.” (Greene)

Vogelman, Brooke L. “Urban Expansion in Kane County, Illinois: Examining Planning Efforts in a Metropolitan Fringe County with a Purchase of Development Rights Program.” (Greene)
Guidelines for the Preparation of the Thesis, Non-Thesis Papers, and Dissertation

Master's level research conducted under the thesis or non-thesis option is expected to be a scholarly contribution to knowledge. It should illustrate the student's capabilities for formulating a researchable question that fills a void in the literature and for carrying out the inquiry necessary to answer that question. Thesis research focuses on one specific issue in considerable detail, and produces a contribution to the scholarly literature equivalent to one journal article in a reputable journal. The non-thesis option is intended for students who prefer to develop and illustrate their capabilities for independent research through two smaller topics. The two non-thesis papers need not be substantively related. However, the two non-thesis research papers are considered to be equivalent to a thesis and, therefore, follow many of the same composition, formatting, and submission guidelines.

Doctoral level research expands upon the research formulation and execution outlined at the master’s level. Here, the dissertation is designed around a larger, conceptual deficiency in the scientific literature which frames the research purpose. In order to fulfill that research purpose, a dissertation is expected to make a minimum of three unique, novel contributions to the literature to demonstrate the breadth and depth of knowledge and research skills on the topic. These contributions are commonly understood to contain the equivalent contributions of three unique manuscripts publishable in reputable journals, where each answers one aspect of the overarching research purpose and theme.

For both M.S. and Ph.D. proposals, it is expected that the document frame the research deficiency to be addressed, the need for that research to be conducted, contain an in-depth literature review to frame the research and demonstrate knowledge on topic, and present the methodologies utilized to answer the research questions.

Non-thesis Requirements
Two substantive research papers

a. prepared under GEOG 672 for a total of 6 hours; neither paper should exceed 3 credit hours.

b. directed by a non-thesis research committee composed of at least two faculty members: a research supervisor and a 2nd reader. The non-thesis supervisor must be a regular faculty of the Department of Geographic and Atmospheric Sciences, additional readers may be adjunct faculty or other faculty persons associated with NIU. Normally, the student's advisor serves as the non-thesis supervisor. As is the case with a thesis committee, the student should choose members for the non-thesis research committee who are most capable of contributing to the completion of the proposed research. It is entirely possible, therefore, that research committees for the first and second papers may be different.

c. one paper must be presented to the Geography Seminar, GEOG 600. The second must be orally defended at a formal defense to the research committee.

d. composed (see below) and formatted according to the directions for a Master's thesis in the Department of Geographic and Atmospheric Sciences.

e. formatted as a PDF document (file) and delivered to the Advising Committee and the department’s Administrative Assistant.

Thesis Requirements

One substantive original research report

a. prepared after a successful defense of a proposal

b. prepared under GEOG 699. Once a student begins enrollment in thesis hours he/she must continuously register until completed. A maximum of 6 credit hours count toward degree requirements.

c. directed by a thesis research committee composed of at least three faculty members. The thesis supervisor is normally the student's advisor and must be a member of the Geography graduate faculty. A majority of the committee must be Geography faculty and a majority must be graduate faculty.

d. defended orally. Oral defenses are open to the public, although only the thesis committee evaluates the student's defense for pass or failure. Students are required to present findings of the thesis at the Geography Seminar (GEOG 600) and to present one paper or poster at a state, regional, or national professional meeting.
e. composed (see below) and formatted according to the directions for a Master's thesis in the Department of Geographic and Atmospheric Sciences. Students shall submit an electronic copy of the thesis in PDF format according to the Guidelines for Preparing and Submitting Theses and Dissertations, found on the Thesis and Dissertation page of the Graduate School website.

Dissertation Requirements

One substantive and extensive original research report

a. prepared after a successful defense of a proposal and other candidacy requirement

b. prepared under GEOG 799. Once a student begins enrollment in dissertation hours he/she must continuously register until completed. A maximum of 20 credit hours count toward degree requirements.

c. directed by a dissertation research committee composed of at least four faculty members. The dissertation supervisor is normally the student's advisor and must be a member of the Geography graduate faculty with senior status. A majority of the committee must be Geography faculty, a majority must be senior status, and one member must be external to the department or university.

d. defended orally. Oral defenses are open to the public, although only the dissertation committee evaluates the student's defense for pass or failure. Defenses are held in Practice of Geography (GEOG 601), which counts as the presentation to the department as well.

e. composed (see below) and formatted according to the directions for a Master's thesis in the Department of Geographic and Atmospheric Sciences. Students shall submit an electronic copy of the thesis in PDF format according to the Guidelines for Preparing and Submitting Theses and Dissertations, found on the Thesis and Dissertation page of the Graduate School website.

General Organizational Format for the Thesis, Non-thesis Papers, and Dissertation

- abstract
- title page
- acknowledgments (optional)
- dedication (optional)
- Table of Contents
- List of Tables (if necessary)
- List of Figures (if necessary)
- List of Appendices (if necessary)
- Preface (optional)
- main body of thesis (begins on page 1)
- references/bibliography
- appendices (if applicable)


Dissertations may also be organized around the “three paper” concept. The final organization of that document shall be at the discretion of the dissertation committee, but the document submitted to the Graduate School is still required to follow all Graduate School formatting guidelines.

Office Space Policy

Graduate students in the Department of Geographic and Atmospheric Sciences, whether enrolled full- or part-time are eligible for office space within the department. The department currently offers a mix of graduate office space, from smaller 2-3 person rooms to one large 10 person room. The following guidelines (prepared by a graduate student committee) shall serve in the determination and prioritization of graduate office space.

1. Priority of assignments shall be:
   a. -- full-time, funded students with teaching and/or research obligations
   b. -- full-time, non-funded students
   c. -- part-time students.

In all cases, on-campus students have priority over off-campus students.

2. Office mates may share a common field of study.

3. Seniority of students and personal preferences as to office mates should be honored when possible. Special assignment request should be submitted to the Graduate Coordinator in writing.

4. Change in status from year-to-year, or semester-to-semester should be evaluated on a case by case basis to ensure that office assignments reflect
change in responsibility.

5. Incompatibility and dispute resolution should be resolved through mediation and reassignment, if necessary, by the Graduate Coordinator.

6. All graduate students, part- and full-time, will receive a departmental mailbox.

7. In using printing and other office materials, these may not be utilized for coursework or personal work and billed to the department. All work related to the GA/TA activities should be submitted to the Office Manager or Administrative Assistant for copying and printing to be billed to the department.

Employment Information
Students may be interested in information about positions filled by recent geography graduates and the types of organizations employing them. Although the list does not account for all graduates, it highlights employment prospects.

Positions Held by Recent Graduates
--Land use specialist and environmental planner
--Soil scientist
--Remote sensing analyst
--Census data user consultant
--Air pollution meteorologist
--City planner
--Forest ecologist
--National weather service forecaster
--Environmental Program administrator
--Cartographer/Geographic information manager
--TV Meteorologist
--Geographic market analyst
--Retail site selector
--Transportation systems planner
--GIS system & data consultant

--Commercial and residential property analyst
--GIS Specialist
--Service Climatologist
--Research Meteorologist

Employers of Recent Graduates
--U.S. Bureau of the Census
--U.S. Bureau of Land Management
--U.S. Forest Service
--U.S. Department of Agriculture, NRCS
--Kane County Soil Conservation District
--Kane County Development Department
--DeKalb County
--Cook County Elections Office
--Cook County Forest Preserve District
--City of Chicago
--City of Elmhurst
--City of Joliet
--Weston Solutions
--National Climate Data Center
--Argonne National Lab
--National Weather Service
--United Airlines
--John Deere
--Sidwell
--Parkland College
--Northern Arizona University
--Augustana College
--Northern Illinois University
--College of DuPage
--Harper College
--CUSD 428
--NAVTEQ
--MGP Inc.
--Baxter Woodman
--Wills Burke Kelsey Associates, Ltd.
--Christopher Burke Engineering
--V3 Companies of Illinois
## Tentative Schedule of Classes Available for Graduate Credit

<table>
<thead>
<tr>
<th>Course*</th>
<th>Semester*</th>
<th>Year*</th>
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<tbody>
<tr>
<td></td>
<td>Fall</td>
<td>Spring</td>
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<tr>
<td>GEOG 502: Pedology</td>
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<td>GEOG 503: Soil Geography &amp; Land Use Planning</td>
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<td>GEOG 506: Natural Hazards and Environmental Risk</td>
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<td>GEOG 507: Technical Hazards</td>
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<td>GEOG 508: Tropical Environmental Hazards</td>
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<td>GEOG 513: Forest Ecology &amp; Management</td>
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<td>GEOG 522: Plant-Soil Interactions</td>
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<td>GEOG 530: Population Geography</td>
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<td>GEOG 532: Geography of Health</td>
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<tr>
<td>GEOG 535X: Space in Language and Culture</td>
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<td>GEOG 542X: Geomorphology</td>
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<td>GEOG 553: Environmental Management</td>
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<tr>
<td>GEOG 556: Fundamentals of Mapping</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>GEOG 557: Fundamentals of GIS</td>
<td>✓</td>
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<td>GEOG 558: Geovisualization</td>
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<td>GEOG 559: Geographic Information Systems</td>
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<td>GEOG 560: Remote Sensing of the Environment</td>
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<td>GEOG 563: Urban Geography</td>
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<td>GEOG 564: Location Analysis</td>
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<td>GEOG 567: Workshop in Cartography</td>
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<tr>
<td>GEOG 568: Workshop in GIS (online only)</td>
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<tr>
<td>GEOG 570: Web Mapping</td>
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<td>GEOG 592: Hydrology</td>
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<td>GEOG 593: Computer Programming for the GaS Sciences</td>
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<td>GEOG 604: Concepts in Geography</td>
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<td>GEOG 622: Advanced Vegetation Geography</td>
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<td>GEOG 651: Geopolitical Perspectives</td>
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<td>GEOG 656: GIS Design &amp; Data</td>
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<td>GEOG 659: Regional Planning</td>
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<td>GEOG 660: Advanced Spatial Analysis</td>
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<td>Course*</td>
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<td>Spring</td>
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<td>GEOG 661: Advanced Quantitative Methods for Geographic Research</td>
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<td>GEOG 663: Geographic Research Procedures</td>
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<td>GEOG 664: Advanced Economic Geography</td>
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<td>GEOG 665: Advanced Field Methods</td>
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<td>GEOG 666: Advanced Climatology</td>
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<td>GEOG 667: Master’s Research Paper</td>
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<td>GEOG 668: Community Geography</td>
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<td>GEOG 699: Master’s Thesis</td>
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<td>GEOG 702: Advanced Soil Landscapes</td>
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<td>GEOG 753: Advanced Human-Environmental Interactions</td>
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<td>GEOG 760: Advanced Geospatial Science</td>
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<td>GEOG 771: Independent Research</td>
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<td>GEOG 790: Advanced Seminar</td>
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<td>GEOG 799: Doctoral Research and Dissertation</td>
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<td>MET 510: Weather Dynamics I</td>
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<td>MET 511: Weather Dynamics II</td>
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<td>MET 521: Advanced Synoptic Meteorology</td>
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<td>MET 530: Micrometeorology</td>
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<td>MET 531: Applications in Climatology</td>
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<td>MET 540: Climate Dynamics I</td>
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<tr>
<td>MET 541: Climate Dynamics II</td>
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<td>MET 544: Mesoscale Meteorology</td>
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<td>MET 550: Numerical Analysis and Forecasting</td>
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<tr>
<td>MET 585: Atmospheric Physics</td>
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</table>

*Availability subject to change
Graduate School Calendar 2018-2019

FALL 2018 SEMESTER

Aug. 27 First day of regularly scheduled Fall 2018 classes.

December 2018 Graduation deadlines:

Sept 15 Last day to submit completed application (including adviser’s signature and Bursar’s Office receipt for fee payment), and program of courses, for December 2018 graduation.

Oct 9 Deadline to defer graduation to next semester (MS/Ph.D.)
Oct 9 Submit request for oral defense (MS/Ph.D.) (Ph.D. include paper copy of dissertation with request for defense)

Oct. 30 Last day to submit department’s report of thesis/Ph.D. defense.

Nov 2 Last day to submit final post-defense version of thesis/dissertation electronically.

Nov 30 Last day to submit department’s report of results of comprehensive examination.

December 15, 2018 Commencement; December 2018 degree date.

SPRING 2019 SEMESTER

Jan. 17 First day of regularly scheduled Spring 2019 classes.

May 2019 Graduation deadlines:

Feb. 14 Last day to submit completed application (including adviser’s signature and Bursar’s Office receipt for fee payment), and program of courses, for May 2017 graduation.

March 12 Deadline to defer graduation to next semester (MS/Ph.D.)
March 12 Submit request for oral defense (MS/Ph.D.) (Ph.D. include paper copy of dissertation with request for defense)

April 2 Last day to submit department’s report of thesis/Ph.D. defense.

April 5 Last day to submit final post-defense version of thesis/dissertation electronically.

May 3 Last day to submit department’s report of results of comprehensive examination.

May 10, 2019 Commencement; May 2019 degree date
Quick Safety Guide
Department of Geographic and Atmospheric Sciences

Telephone Numbers
- **EMERGENCY:** 911
- Non-emergency Police: 753-1212
- Student Counseling Services: 753-1206
- Employee Assistance and Wellness: 753-9191
- Geography Office: 753-0631

Incident Response Locations
- Fire/fire alarm: exit 1st floor on east side of building
- Evacuation Reassembly: quad east of Davis Hall, or 1st floor of Lowden Hall
- Tornado/Severe Storms: basement of Davis Hall

Locations of Safety/Personal Protection Equipment
- First-aid kits: DH 118; DH 115; DH 215; DH 217A; DH 223; DH 700
- Eye Wash: DH 215, DH 217A
- Dust/particulate masks: DH 216, DH 700
- Face shields/safety glasses: DH 215, DH 216, DH 217A
- Fire Extinguishers: hallway outside of DH 103, DH 114, DH 204, DH 206, DH 600, DH 700
- Fire Extinguishers (electrical fire): DH 101
- Field First-aid kits: DH 118
- Hi-vis Safety Vests: DH 118
- Weather radios: DH 118, DH 312
GRADUATION

Name: ________________

CHECKLIST—MASTER OF SCIENCE

In order to graduate, each Master of Science student must:

☐ Attend Graduate School Teaching Assistant Workshop (mid-August before 1st and 2nd years)
☐ Submit Two-Year Plan (week 8, first semester) – Due: ____________
☐ Submit Thesis Committee Approval form (end of 1st semester) – Due: ____________
☐ Complete Annual Meeting of Committee Members form (Feb 1)
☐ Submit Annual Graduate Report (Feb 1 every year)
☐ Submit IRB Inquiry form
☐ Present research at academic conference
☐ Present research in departmental Colloquium
☐ Complete the required number of credit hours for degree
☐ Apply for Graduation via MyNIU (see Grad. School website for deadlines) – Due: ____________

☐ Submit Request for Oral Defense of Thesis (see Grad. School website for deadline) – Due: ____________

☐ Defend thesis – Due: ____________
☐ Submit thesis to Graduate School – Due: ____________
GRADUATION

Name: __________________

CHECKLIST—DOCTOR OF PHILOSOPHY

In order to graduate, each PhD student must:

☐ Attend Graduate School Teaching Assistant Workshop (mid-August before 1st and 2nd years)
☐ Submit Academic Plan (week 8, first semester) – Due: ____________
☐ Submit Dissertation Committee Approval form (end of 1st semester) – Due: ____________
☐ Complete Annual Meeting of Committee Members form (Feb 1 every year)
☐ Submit Annual Graduate Report (Feb 1 every year)
☐ Submit IRB Inquiry form
☐ Research Proposal approval by committee
☐ Colloquium presentation of research proposal
☐ Candidacy Exam
☐ Present research at academic conference
☐ Present research in departmental Colloquium
☐ Complete the required number of credit hours for degree
☐ Apply for Graduation via MyNIU (see Grad. School website for deadlines) – Due: ____________
☐ Submit Request for Oral Defense of Dissertation (see Grad. School website for deadline) – Due: ____________
☐ Defend dissertation – Due: ____________
☐ Submit dissertation to Graduate School – Due: ____________