

Department of Geography, Planning & Recreation  
Geographic Science and Planning (GSP)  
Graduate Student Handbook

**DEPARTMENT OF  
GEOGRAPHY  
PLANNING &  
RECREATION**



**NORTHERN  
ARIZONA  
UNIVERSITY**

## Contents

Welcome.....	3
Program of Study.....	3
Graduate Certificates .....	3
Master of Science in Geographic Information Science with Remote Sensing (online MS).....	4
Master of Science in Applied Geospatial Sciences (on-campus or online MS) .....	4
Advising .....	4
Graduate Committee.....	4
Practicum.....	5
Thesis.....	6
Non-Classroom Courses (Directed Study) .....	7
Grades.....	8
Transfer Credits .....	8
Full Time .....	9
Semester Review .....	10
Incomplete and In Progress Grades .....	10
Grievance Procedure .....	10
Department Resources.....	11
Conferences.....	11
Office Space.....	11
Mail.....	11
Financial Aid .....	12
Scholarships.....	12
Graduate Assistantships and Tuition Waivers.....	12
Loans and Work Study.....	13
Graduation.....	13
Online Resources.....	13
APPENDIX A– PRACTICUM GUIDELINES.....	15
APPENDIX B– CHECKLIST FOR MASTER’S STUDENTS.....	17
AGREEMENT FORM FOR GEOGRAPHIC SCIENCE AND PLANNING GRADUATE PROGRAM .....	21

## Welcome

Welcome to Northern Arizona University (NAU) and the graduate programs of Geographic Science and Planning (GSP). We are glad you are here. This handbook is a resource to assist as you transition into your new program of study. The Geography, Planning & Recreation (GPR) Department consists of Geographic Science and Planning (GSP) and Parks and Recreation Management (PRM) programs. The faculty making up the GSP and PRM programs work together closely.

Flagstaff sits at 7,000 feet in elevation and offers year-round opportunities for outdoor recreation. There are access points to the [Flagstaff Urban Trail System](#) from campus and downtown Flagstaff. The [Downtown Business Alliance](#) fosters the “Town to Gown” connection between downtown Flagstaff and NAU with lots of promotions and events. Get to know Flagstaff and the surrounding area to make the most of your time here.

## Introduction

The contents of this handbook are applicable to all master’s and graduate certificate students in Geographic Science and Planning (GSP). We believe that graduate education provides training for a profession and we expect students to contribute as professionals. This includes course performance, teaching roles, serving as responsible representatives of the university, and providing and receiving constructive criticism during interactions with faculty and student colleagues.

When a student accepts admission to NAU, the university assumes the student agrees to conduct themselves in accordance with university standards. NAU reserves the right, on the recommendation of the Dean of Students and with approval of the President of NAU to terminate the enrollment of a student who acts undesirably.

## Program of Study

The advisor (MS) or program coordinator (Certificates) will assist the student during their first semester to form a statement of intended Program of Study (See Online Resources - Program of Study.) This will establish general goals, topics of interest, and a schedule for completing requirements for the degree. The statement may be revised as needed. Each student will arrange meetings with their advisor at least twice per semester. With assistance from their advisor, each student is required to update their program of study form within the first month of each semester that classes are taken.

## Graduate Certificates

Certificate students are not required to complete a practicum or write a thesis. Our department has an assigned coordinator for each certificate program to assist students with certificate curricula and course selections. If during or at the conclusion of a certificate program, the student would like to pursue a masters in that discipline, course work can be applied towards both the certificate and master’s degree requirements. After the following sections on our Master of Science programs, the remainder of this handbook content applies to all (Certificate and MS) graduate students, including Graduation, University Policies, etc.

### [Geographic Information Systems \(GIS\) Certificate](#)

GIS is a growing field with many opportunities. This certificate provides the opportunity to add GIS technical skills to your skillset. It can be completed in one academic year or over multiple semesters if the student is working while taking classes.

### [Community Planning Certificate](#)

Urban and community planners will emerge from this program with fundamental and advanced knowledge, ready for professional practice. These skills are needed in local government, federal land management agencies, international and private sector land development companies, and in city and county planning departments.

### [Master of Science in Geographic Information Science with Remote Sensing \(online MS\)](#)

Under construction...

### [Master of Science in Applied Geospatial Sciences \(on-campus or online MS\)](#)

#### Advising

New MS students will select or be assigned to an advisor that they will work with for the duration of their program. The advisor will act as chair of the student's thesis or practicum committee. The advisor must be a full-time faculty member of the department. This includes tenure track professors and non-tenure track lecturers. Faculty may go on leave from the university for sabbatical. If the student's advisor or another committee member plans to go on leave during a crucial part of the student's degree work, such as during completion of the thesis, the student must plan to ensure continuity of advisement. Students should inquire of their advisors the possibility of leave as soon as possible and make other arrangements if that person will not be available.

The Department is not responsible for finding a new or alternative advisor for the student. Failure to follow the requirements listed above may lead to 1) a faculty member resigning as the student's advisor, 2) discontinuation of an assistantship or scholarships, and 3) administrative dismissal from the graduate program by the Department and Graduate College. Students may petition any such decision.

The advisor will assist in issues and problems that may arise regarding procedural matters within the graduate program. Problems not resolved at this level will go to the Graduate Program Coordinator or the Department Chair, who can bring the situation before the faculty as a whole. The student can refer to the official university guidelines in the NAU Student Handbook for further options (link available under Online Resources).

#### Graduate Committee

Early in the second semester, master's students must form a committee to oversee their final thesis or practicum project. The committee must be selected in consultation with the student's advisor. The committee chair is the student's official academic advisor, approving class registrations and providing course advisement. The department Graduate Program Coordinator is available to answer questions on procedural matters pertaining to the student's degree. Students must obtain written approval from the Graduate Program Coordinator and the Department Chair for formal procedural matters such as petitioning to transfer units from another school.

The MS committee for thesis students consists of a minimum of three faculty, including the committee chair, who must be a GPR faculty member. A minimum of two committee members (including the committee chair) must have regular, continuing faculty status in the GPR Department. One or more committee members may be part time faculty in GPR or faculty from another department or university. One or more committee members may be a working professional in a field closely related to the student's thesis project. A similar committee makeup is strongly encouraged, but not required, for non-thesis (practicum) students. The committee for non-thesis students should be determined in close consultation with the student's advisor.

It is possible to switch between the thesis and practicum options in the MS degree. A switch must be approved by the student's advisor and committee. If the student has already started taking thesis hours, they will not apply to the practicum Program of Study. The student must still register for a total of 6 units of thesis or practicum hours after the switch.

All members of the committee should hold at least a master's degree and the student must get the approval of their advisor before inviting others to be members of the committee. All committee members will be required to attend the student's thesis defense, either in person or by electronic means. Upon obtaining the verbal consent of the prospective chair and committee members, the student must obtain their signatures as well as those of Graduate Program Coordinator and the Department Chair on the Graduate Committee Recommendation form.

The student must arrange a formal meeting with their graduate committee by the end of the second semester. The student must also arrange a formal thesis committee meeting each year registered as a full-time student. Students who are not full time must make other arrangements in collaboration with their academic advisor.

Changing the composition of a thesis committee is an unusual move that should not be undertaken lightly. If after discussion between the student, committee chair, and committee members, it is decided that a change is warranted, the committee member seeking to leave will submit a written request to the Graduate Program Coordinator explaining the reason for the change. The student, the remaining committee members, and the Department Chair should receive copies of the request. The student and faculty members may need to meet with the Department Chair to discuss and resolve the matter.

## Practicum

The practicum is recognized as the non-thesis option by the NAU Graduate College. It usually includes the results of an internship or professional project with a company, government agency, or nonprofit organization. The practicum will demonstrate the student's ability to complete a significant applied research or consulting project under the direction of the committee. The scope and duration of the practicum project will depend on the student's professional interests and on a reasonable schedule for the completion. The practicum is a terminal experience for a professional degree for students who are not considering continuing the education for a Ph.D.

The Program of Study for Practicum students must include a minimum number of Practicum (GSP 689) units. With the approval of the student's committee, the practicum product may take different forms than presented here. The guiding principal in committee deliberations is that the effort and educational outcome should be comparable to that of a thesis.

### A Basic Research Paper Practicum shall include:

- a) The results of a professional internship experience or an independent study and analysis, like a thesis.

- b) A final paper that is ready in content, format and presentation for submission to an academic peer-reviewed or a professional technical or trade journal.
  - i. The paper will demonstrate an appropriate theoretical context, literature review, methodology, and conclusions.
  - ii. A detailed set of sample data sets, correspondence letters, meeting notes, and similar research material shall be included in the appendices. Demonstrate an appropriate theoretical context, literature review, methodology, and conclusions.
- c) Submission of the paper (not the full practicum document) for publication review.
- d) A final presentation and an oral defense of the research to the practicum committee and public, which includes a reflection of the results and what was learned.

An **Applied Research Report Practicum** shall include:

- a) The results of a professional internship experience
- b) A written report that details the goals, process, and outcomes of the project. Incorporated within the report, the student will critically reflect on the project, its theoretical context, its application and usefulness, its methodology, and its conclusions. Specifically, the report shall include:
  - i. A literature review consisting of academic and applied work related to the project, providing a historical and theoretical context to the applied research project.
  - ii. A chronological journal that documents the process of the project from beginning to end.
  - iii. A detailed set of sample data sets, correspondence letters, meeting notes, and similar project material, as appropriate, shall be included in appendices.
- c) A final presentation and oral defense of the project to the practicum committee and public, which includes a reflection of the results and what was learned.

Practicum documents are not subject to Graduate College review and will not be formally archived by the institution, but a digital copy (pdf) must be submitted to the Graduate Program Coordinator for archiving on the departmental website. The final format should adhere to thesis requirements, although variations may be allowed by the practicum committee. Practicum students may provide a final printed copy to the Administrative Associate for archiving in the department.

***See Appendix A at the end of this document for a list of further Practicum Guidelines.***

## Thesis

The thesis must be an original piece of work and should contain description, analysis, and interpretation of a body of geographic information collected by the student from documentary sources and through field or laboratory research. The thesis should demonstrate the student's ability to complete a full cycle of problem formulation, method formulation, research, and evaluation under the direction of the master's committee. The scope and duration of the thesis project will depend both on the student's research interests and on a reasonable schedule for the completion of the degree. The thesis is the preferred route for students who are considering continuing to a Ph.D.

Submit your thesis for committee and Graduate College review early enough to be able to graduate in the semester you intend. Theses must follow all Electronic thesis and dissertation (ETD) processes and guidelines: <https://nau.edu/graduate-college/thesis-and-dissertation/>

### Institutional Review Board (IRB)

Once the thesis or practicum proposal is approved the graduate student must submit the research proposal to the NAU Institutional Review Board if it involves human subjects in any manner. Before submitting a research proposal to the IRB, you must complete the IRB Online Tutorial. The board reviews all human research projects on campus, and they must approve your project before you begin collecting data. Give yourself one month to go through this process. Your committee chair and the department chair must approve your application before you can submit it to the IRB.

### Final Presentations (Oral Defense)

Thesis students must and practicum students should defend their final projects in an oral examination given by the student's committee. (Not required for the Certificate students.) It is the responsibility of the student's committee chair to determine the readiness of the student's thesis or practicum project, and once ready, to schedule the defense presentation date with the other committee members. A complete thesis or practicum draft must be available for review by the committee three weeks prior to the presentation date. All members of the committee must be available to attend the presentation, in person or via technology.

The defense involves the oral presentation of the thesis followed by questions and discussions amongst the committee. In your defense presentation you should be prepared to answer a variety of questions about your thesis or practicum. Presentations are open to all department faculty and other members of the university and the general public. The student may invite guests, faculty, and other graduate students. Students are not to provide food, drinks, or gifts for committee members.

At the conclusion of the defense the student and guests will be invited to leave. A vote to either pass or fail will be taken and shared with the student who will be invited to return to the room. The presentation will be evaluated by the committee. The student will be recommended for the MS degree only if the committee judge the thesis and presentation to be satisfactory. A vote of two thirds of the committee is needed for approval.

Theses presentations must be made and passed by the week prior to final exams week the semester of graduation. Practicum presentations may be made up to the last day of final exams. Once a presentation date and time are set, the student reserves a room through the department office.

If the student fails the defense with a vote than less than two thirds in favor, the student will have one opportunity to retake the defense. One month must pass before the second defense can take place. The student will work closely with the thesis chair to schedule this defense. The student will not graduate until the defense is passed and all committee members sign both the thesis document and the Graduate College Final Oral Exam form, which will change the grade on the thesis credits from in progress to passing.

***See Appendix B at the end of this document for a comprehensive Master's Checklist.***

### Non-Classroom Courses (Directed Study)

Non classroom courses include internship hours, fieldwork experience, graduate and practicum research, and independent studies. These courses involve direct supervision of a student's work by a faculty member. Online courses are considered classroom courses based on how they are taught.

A student wanting to take a non-classroom course must arrange with a faculty member to supervise the work. Students may not normally take a non-classroom course when the topic is covered in a regular class. A student who wants to take a non-classroom course other than thesis or practicum hours must:

1. Develop a detailed description of the proposed project with your advisor and/or the faculty member who will supervise the coursework.
2. Develop a detailed description of the work expected from the student and how the student's work will be evaluated. Include reading assignments, writing assignments, oral assignments and deadlines, expectations for student/supervisor meetings, and any other requirements agreed upon. The student must submit a report at the end of the course to be graded by the faculty supervisor.
3. Establish the number of units the course will be worth. The Arizona Board of Regents (ABOR) guidelines stipulate one credit hour must correspond to a minimum of 15 hours of classroom instruction.

## Grades

The graduate college maintains policies on the minimum cumulative units needed to graduate with any degree, and on the number of semester units for which the student can receive a grade of C. These policies are in the NAU Academic Catalog. Courses in which the student receives a grade below C will not count toward the units required for the graduate degree. Only two courses with a grade of C may count towards the required units.

It is the graduate college policy that graduate students who receive a grade of C in 10 units of courses will be removed from the graduate college and the MS or Certificate Program. Graduate students whose GPA falls below 3.0 for two consecutive semesters will also be removed. The NAU Graduate College will not allow a student with an assistantship to continue if the student receives a grade of C or below in any class. Graduate assistants must also maintain 9 units of courses that may be applied directly to the degree program while they are on an assistantship. The summer requirement is 4 units.

## Transfer Credits

General guidelines for transfer units from another university:

- 1) The coursework must not have applied toward another degree awarded the student
- 2) The coursework must be acceptable as graduate credit at the school where it was awarded
- 3) The student must have received either an A or a B in the class
- 4) The coursework must have been completed within the six year time period that the degree at NAU will be awarded
- 5) The coursework must meet the ABOR requirements transfer credit (be an accredited institution)
- 6) The course and petition form must be approved by the student's academic advisor and the Graduate Program Coordinator.

The maximum number of units that may be transferred is 25% of that required for the degree or certificate. This would be 9 unit for the master's and 5 units for the GIS Certificate. Undergraduate students should consult with the NAU Graduate College to ensure that courses taken apply to a graduate program. This does not apply to students in the BS to MS Integrated Degree Program.

All courses applied to the degree must be completed within a six year period, starting with the oldest course applied to the degree. A single one-year extension of this six year limit may be granted. Justifications may

include job relocation, military duty, pregnancy, illness, serious accident, divorce, or other personal tragedies or challenges within the student's immediate household. The petition must include a Plan for Completion with:

- Details on how and when the student will complete the degree
- Which courses will be allowed to be exempt from the six year limitation

The plan must be accepted by the student's advisor and the GPR department, with the NAU Graduate College making final approval.

## Full Time

NAU considers graduate students to be full time when they take 9 credit hours per semester. Many scholarships and other forms of financial aid require students to be enrolled full time to receive their awards or stipends. Graduate Assistantships require students to take a minimum of 9 credits per semester. Summer assistantships require students to take a total of 4 credits over the summer sessions. A graduate student can take a maximum of 16 units in one semester. Graduate Assistants may take no more than 12 units in one semester, as being a teaching assistant has time commitments of its own.

All course work applied to your degree must have been taken within six years prior to your graduation with your degree. You may extend this deadline by petitioning for an extension in your sixth year of study. An authorized leave of absence does not affect the six-year time limit.

## International Students

International students who are on a student visa while attending NAU must enroll in 9 units each semester to maintain their visa status. Of those 9 credit hours, 6 must be face-to-face classes (including independent study, practicum or thesis hours, and hybrid classes). The remaining 3 can be online. The US Government defines online classes as those that "do not require a student's physical attendance in a classroom for classes, exams or other purposes integral to the completion of the class." Many GPR classes are offered online, so international students must be deliberate in building their Programs of Study.

## Continuous Enrollment

If you do not maintain continuous enrollment for three semesters after you have begun your practicum or thesis and you do not have an authorized leave of absence on file with the NAU Graduate College, then you will be considered to have withdrawn from the university and will need to reapply for readmission to resume your program. Re-admission is not automatic and can be denied. (See the Continuous Enrollment policy in Online Resources at the end of this document under Grad College Policies.)

## Leave of Absence

Graduate students are expected to pursue a graduate degree with little or no interruption by maintaining continuous enrollment. A student who does not enroll for three consecutive semesters (excluding summer) will be considered withdrawn from the university and must reapply for admission to resume their program. A student may petition for a one-year leave of absence during which time you are not required to register for classes and are not allowed to use department resources for your thesis or practicum. The petition must be submitted before the leave takes place.

## Semester Review

The department faculty hold periodic review of all graduate students to evaluate the progress of students in the MS and Certificate Programs. The review will be held at the beginning of the semester. The faculty will review each student's record over the past year, based on the filled out Program of Study forms and input from the student's academic advisor to evaluate whether the student is making satisfactory progress.

If the student is not making satisfactory progress the faculty may offer recommendations to allow the student to remedy the situation. Recommendations are based on a timetable of reasonable expectations for completion of the MS and Certificate Programs. Failure to comply with advisory decisions of the department's review is sufficient grounds for a faculty member resigning as the student's advisor or the discontinuation of an assistantship or scholarship. The department is not responsible for finding a new or alternative advisor for the student. Students may petition any decisions.

## Incomplete and In-Progress Grades

If you are unable to complete coursework in a scheduled course within the term in which you are enrolled, you may petition your instructor to receive a grade of I (Incomplete). If accepted a contract must be written which stipulates the date by which all work will be completed (must be less than one year). An incomplete grade agreement form is available from the department. Students are strongly advised to avoid an incomplete grade, as the lack of completed units may jeopardize their eligibility for current or future assistantships and other forms of financial assistance administered by the department. Thesis courses, practicum, independent study and others may carry a grade of IP (In Progress) and remain so until the project is finished, upon which they will be changed to Pass or Fail.

## Grievance Procedure

The GPR Department adheres to the guidelines outlined in the NAU Student Handbook (link in Online Resources). NAU has several boards, committees, and procedures to resolve issues and ensure fair adjudication regarding Code of Conduct and other disciplinary matters. The student has rights regarding decisions that may lead to dismissal. Each step must have a written summary of minutes by those in attendance.

1. Student meets with the faculty member recommending probation.
2. If the first meeting does not resolve the issue, the student will then meet with the Graduate Program Coordinator.
3. If the grievance is not resolved with the Graduate Program Coordinator, the student will meet with the Chair of the Department.
4. If the grievance is not resolved by meeting with the chair, the student can request a hearing with the Graduate Committee to review the problem. The decision of the Graduate Committee is final.
5. If the student wishes to appeal the procedures are described in the Disciplinary Procedures Sections and the University Code of Conduct.

## Petitions and Appeals

A petition is a written request to the department faculty for approval of a course of action which departs from the requirements set forth in the NAU Academic Catalog and this guide. A student may petition for permission to waive a required core course. Petition forms are available at the NAU Graduate College website. Students should meet with their advisors to discuss petitions. A petition is submitted via letter of explanation to the

Graduate Programs Coordinator and/or the Department Chair to examine the requirement in question. The petition put to a vote among the department faculty. A copy of the decision will be provided to the student and their advisor.

An appeal is a written request by the student to have the faculty reconsider or review a decision that affects the student's status in the graduate program. A student who intends to submit an appeal should consult first with their advisor, committee, and Graduate Program Coordinator or Department Chair. The student should be acquainted with the procedures involved in appealing outside the department as outlined in the NAU Academic Catalog. A written record of each meeting related to the appeal is required and should consist of a written summary of the meeting. A student who feels it is necessary to seek redress from a decision is required to exhaust departmental procedures before going outside of the department.

## Department Resources

### Conferences

Graduate students are encouraged to participate in national conferences in their subject area. At times departmental funds may be available to support students' participation in a conference such as the Association of American Geographers (AAG).

### Office Space

Office space is limited. Graduate students with assistantships have first priority for desk space. Those who have been at NAU longer have higher priority. Desks are assigned at the beginning of each academic year by the department. Graduate students also qualify for library carrels. Contact Cline Library to apply.

Teaching Assistants (TAs) and Research Assistants (RAs) are responsible for the work necessary for their lab or research, according to the faculty member supervising that assistant. Office supplies are available for work related activities and not for personal use. Printer codes can be assigned to graduate students. Computers are available for graduate student use in the graduate assistants' office. Supplies related to coursework, thesis, and other research are the responsibility of the student.

### Keys

All currently enrolled graduate students may receive a building key and a graduate student office key (for desk space) from the Administrative Associate. Do not prop the door to a lab or the building open after hours.

### Mail

Graduate students are provided mailboxes in the mailroom (room 261). NAU students are given an NAU email account. You will be emailed with information relevant to your graduate career. Please check your email and mailbox on a regular basis. If you prefer to continue to use a personal email address, set up your NAU account to forward to your personal email.

## Financial Aid

### Scholarships

There are scholarships available to students in the Social and Behavioral Sciences College and the Geography, Planning and Recreation Department. Many scholarships and all work study positions require a demonstration of financial need. Filling out the Free Application for Federal Student Aid (FAFSA) is the first step. Students requiring financial assistance should inquire about funding opportunities prior to applying to the program. The departments and Graduate College offer several opportunities for financial aid – graduate assistantships, work-study, and tuition waivers.

For scholarship eligibility the maximum number of credit hours that can be taken is 45. After 45 units have been taken you will no longer be eligible for NAU financial aid. You may petition to appeal with the NAU Financial Aid Office to override the 45 unit limit for a one-time only exemption.

### Graduate Assistantships and Tuition Waivers

Graduate assistantships may be for research or teaching assistance for faculty. Graduate assistantships also provide a full tuition waiver and health insurance for students with full assistantships (20 hours per week; from one week prior to the start of classes through the end of finals). A 50% waiver of tuition fees and partial health insurance coverage is provided for students with a 10 to 19 hour per week assistantship. The work contract will be established in collaboration between the supervising faculty member and the student. Hours worked per week may vary.

Tuition waivers (for resident or non-resident tuition) are offered by the Graduate College based upon departmental recommendations. They are limited and competitive. Applications for assistantships must be received by February 15<sup>th</sup> for priority consideration for the year that you want to attend NAU's fall semester. Acceptance of a graduate assistantship or scholarship may affect a student's eligibility for Federal Financial Aid. Consult with a counselor in the Office of Student Financial Aid before accepting any offers.

NAU does not allow students to work more than 20 hours per week on campus while they are taking classes. Additional hours can be worked during vacations with approval. A student awarded a graduate assistantship in the department must report for work at the times designated in their expectation agreement or contract. This is typically one week prior to the first week of classes, when NAU holds graduate student orientation.

Students who violate their assistantship contract may forfeit their assistantship. Exceptions can be granted in writing by the academic advisor supervising the assistantship. Research assistants (RAs) are on a 45 day probationary period upon hire. Teaching assistants (TAs) are on a one semester probationary period upon hire. At the end of the probationary period a decision to extend or withdraw the assistantship will be made. Graduate assistantships are re-evaluated each year. There is no guarantee of continuation of an assistantship. In most cases when the student is progressing in a satisfactory manner, the assistantship will be continued for two years. Departmental funding for graduate assistantships is subject to change from year to year and may impact assistantship availability.

## FERPA and Online Teaching Tutorial

All students who have access to grades, advising, academic files, and any other potentially confidential student information are required to take the NAU tutorial on the Family Educational Rights and Privacy Act (FERPA). All teaching assistants, graders, and office workers must take this tutorial at the beginning of their assignment, as well as the Online Teaching Tutorial.

## Loans and Work Study

Information on loans and work study assignments is available at the NAU Office of Student Financial Aid. A completed FAFSA is required to receive Pell Grants, loans, or work study assignments. Work study assignments are awarded by many programs on campus. It is the student's responsibility to explore these options. The department does not administer programs outside of the GPR Department. Students are asked to notify the Graduate Program Coordinator when they are working on campus outside of the GPR Department.

## Office Work

Part time, temporary, and summer employment opportunities are often available. These positions are offered through the university and are paid hourly. Nonpaying internships and volunteer positions may also be available for those students desiring to gain skills which will lead to employment.

## Graduation

Students are eligible to graduate upon completion of all degree requirements as set forth in the Graduate Catalog including satisfactory completion of all coursework and a thesis or practicum and presentation, including submissions of all required written work to the Graduate College. If you must extend your graduation date by one term, you are allowed to do that once by informing the Graduate College. Further extensions require a new application.

Commencement ceremonies for all graduating students are held on Friday the week of final exams for Fall and Spring semesters. For your name to appear on the commencement program you must apply for graduation about three months prior to graduation. It is possible to walk in the graduation ceremony in the term prior to your graduation if you will not be able to make it to a later graduation ceremony. If you plan to walk in the ceremony, make your advisor aware so that they can make plans to attend.

Refer to the Graduate College for all formal graduation policies, requirements, and deadlines:

<https://nau.edu/graduate-college/graduation/>

## Online Resources

Below are links to information graduate students need to navigate the program. Read through them and reach out to your Faculty Advisor or the Graduate Program Coordinator for more information.

FAFSA: <https://studentaid.gov/h/apply-for-aid/fafsa>

GPR Website: <https://nau.edu/gpr>

NAU Catalog: <https://catalog.nau.edu/>

NAU Cline Library: <https://nau.edu/library/>

NAU Graduate College Forms: <https://nau.edu/graduate-college/forms/>

NAU Graduate College Policies: <https://www5.nau.edu/policies/>

NAU Graduate College Program of Study: <https://nau.edu/graduate-college/programs-of-study/>  
NAU Graduate College Website: <https://nau.edu/graduate-college/>  
NAU Graduate Student Government: <https://nau.edu/graduate-college/graduate-student-government/>  
NAU Institutional Review Board (IRB): <https://nau.edu/nau-research/research-safety-and-compliance/human-research-protection-program/>  
NAU Registrar Forms: <https://in.nau.edu/Registrar/Forms-and-Policies/>  
NAU Registrar's Website: <https://in.nau.edu/registrar/>  
NAU Safe Learning and Work Environment Policy: <https://nau.edu/wp-content/uploads/sites/106/2018/05/Safe-working-and-learning-2.pdf>  
NAU Scholarship information: <https://nau.edu/sbs/scholarships/>  
NAU Student Handbook: <https://nau.edu/dean-of-students/student-handbook/>  
Purdue Writing Lab's APA Formatting Guidelines: [https://owl.purdue.edu/owl/research\\_and\\_citation/apa\\_style](https://owl.purdue.edu/owl/research_and_citation/apa_style)

## APPENDIX A— PRACTICUM GUIDELINES

The practicum topic and requirements are initially determined by the practicum advisor and the student, with additional consultation from other practicum committee members. Final approval is made the practicum committee as a whole. Four basic requirements must be included:

- 1) There must be a formal (physical) practicum product in the form of a report, article or paper.
- 2) The practicum must be presented at a public forum, similar in manner to that of a thesis presentation.
- 3) The practicum must be defended, similar in manner to that of a thesis defense.
- 4) The practicum should be equivalent in work to a thesis.

The practicum product is a written document, though it may be supplemented with non-written documentation of the student's work. The written will have due dates and a general format similar to those of the thesis, including:

- 1) A cover page formatted similar as in a thesis.
- 2) An abstract page.
- 3) A "Letter of Significant Contribution" from the on-site practicum supervisor. This will placed on the page after the abstract page.
- 4) A references/works cited page at the end.
- 5) A detailed time log showing the total number of hours spent on the practicum work. This will be placed as an appendix.
- 6) Additional appendices. In most instances, there will be a substantial technical appendix demonstrating the student's work effort.

Practicum documents should adopt a formal style guide (e.g. Chicago Manual of Style, MLA, APA) and typically be 1.5 or double spaced with professional quality figures and tables. The Practicum Product Agreement Form must be on file before the student begins the practicum work (next page).

**M.S. in Applied Geospatial Sciences**  
**MS Practicum Product Agreement Form**

**Geography, Planning & Recreation - Northern Arizona University**  
*Form revisions 2/12/13*

DIRECTIONS: This form must be in your application file along with all other required materials, before your committee can approve your practicum. Practicum guidelines will be individually devised and detailed in writing by the student and their advisor and committee members must approve practicum guidelines. Five basic requirements to fulfill:

1. There must be a letter from the project supervisor indicating project completion.
2. There must be a physical product from work accomplished (report, etc.).
3. The project and product must be presented and defended, similar to the thesis.
4. Six units of practicum credit must be taken.
5. Any other requirements that the thesis committee imposes.

**Completed by the student:**

Student's Name: \_\_\_\_\_

Practicum topic: \_\_\_\_\_

Planned Physical Products:

- Report \_\_\_\_\_
- Digital Data \_\_\_\_\_
- Other \_\_\_\_\_

Presentation Defense Plans: \_\_\_\_\_

Additional Requirements (as specified by your advisor and committee): \_\_\_\_\_

\_\_\_\_\_  
(additional pages may be attached)

I agree to the practicum details outlined above:

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

**Completed by the Faculty MS Advisor:**

I agree to the practicum details outlined above:

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

*Copies to: Student, Student's Major Advisor, and Graduate Program Coordinator.*

## APPENDIX B – MILESTONES GUIDE AND CHECKLIST FOR GEOGRAPHY MS STUDENTS

**PURPOSE:** These milestone expectations are provided to assist you with long-term planning throughout your program. Some strategic planning on your part may help prevent losing valuable time as you pursue your degree. Your faculty advisors are dedicated to encouraging your successful completion of the degree, in a reasonably timely fashion, though it is common for graduate students to underestimate the amount of time and effort for certain requirements. While not a replacement for regular communication with your faculty advisor, these **milestones** and intermediate steps should assist you with understanding the entire process as it is typically mapped out over the course of a graduate program. You are encouraged to use this guide as a **checklist** to track your progress through to the completion of your master’s program. The expectations outlined below focus on the sequence required for successful completion of your thesis or practicum project. Of course you will also be completing formal coursework as outlined on your Program of Study.

### ***Milestone 1: Starting the Program and Preparing your Proposal (Typically coinciding with GSP 681)***

- Establish a plan to hold regular meetings with your faculty advisor. You may need to revise this meeting plan periodically, but it is important for you to keep a close working relationship with your advisor throughout your graduate program.
  - For meetings near the start of your program: Discuss overall program requirements, concurrent graduate certificate options, possible transfer credits, and starting a tentative draft version of your Program of Study (note that up to 8 units of 400 level courses, but no more than two classes, may be included with prior approval by your advisor).
  - For all meetings throughout your program: In addition to the ongoing discussion of your thesis or practicum project (next checklist point below), continue revisiting and updating your Program of Study (it will be needed when it comes time to apply for graduation).
- By Week 8 - Discuss and identify a research problem of interest (thesis) or a potential applied project (practicum). **NOTE:** Determining a reasonable and justifiable research topic or practicum project is one of the more challenging tasks of this degree.
- Work on literature review, research methods, and other components of your thesis or practicum proposal.
- Submit draft proposal to 1) GSP 681 faculty, and 2) your advisor.
- Identify potential committee members in consultation with your advisor.

### ***Milestone 2: Proposal Defense***

- Confirm the membership of your thesis/practicum advising committee.
  - Typically completed in consultation with your advisor by mid-second semester.
  - The committee includes a minimum of three members. Two must be faculty in the GPR department. You may optionally have an external committee member, which can be an external agency or company practicum project supervisor.
  - You will need to approach potential committee members in advance, describe your intended project, and obtain their permission to participate in your committee.
- Complete full draft of thesis/practicum proposal; submit proposal to your advisor for initial review (this may occur during or after GSP 681).

- Be sure to work regularly with your advisor to confirm the organization and components of the proposal. This may differ slightly from one faculty member to the next.
- Feedback on your draft proposal will require **approximately two weeks**. Do not expect your advisor to complete this immediately given all other time and work commitments.
- ☐ Revise proposal as specified by your advisor (depending on revisions, this can require several weeks, at least two.)
  - Repeat the feedback-revision cycle until your advisor declares it ready for review by your committee.
- ☐ Upon your advisor's approval, submit your proposal to the committee and provide them with at least two weeks to review the proposal prior to the committee meeting.
- ☐ **Proposal Defense:** Work with your committee and advisor to set up a committee meeting to defend your proposal.
  - Give committee members **at least two weeks** to review the proposal prior to the meeting. **NOTE:** Do not expect to hold a committee meeting during Finals Week. Exceptions might be occasionally possible, depending upon committee availability.
- ☐ Make changes to proposal as required by committee.
  - If committee accepts your proposal, take notes on changes that need to be made for the research and eventual thesis/practicum. This is often the outcome of a proposal defense meeting.
- ☐ If needed, complete your IRB tutorial and approval to adhere to principles for working with human subjects. Retain a copy of the approval document in your files.
- ☐ Upon proposal acceptance, you are now cleared to begin your research or project!

### **Milestone 3: Conducting the Research or Project**

- ☐ Work on research or applied project for thesis or practicum. Begin analysis of results.
- ☐ Remain in regular contact with your advisor for guidance and updates as necessary.
  - Discuss potential chapter outline with your advisor as progress and results become clearer.
  - Update literature review and methods from your proposal.
- ☐ Your advisor or committee may desire an additional committee meeting to discuss progress and issues if necessary.
- ☐ **NOTE:** Applying for Graduation: You should submit the *Application for Graduation* to the Graduate College one semester *prior* to the semester in which you plan to complete your degree requirements, and no later than the **deadlines** listed at: <http://nau.edu/GradCol/Student-Resources/Graduation/>
  - Note the Step-by-Step Guide for submitting your application including the uploading of your approved (signed) Program of Study form.

### **Milestone 4: Draft Thesis or Practicum Paper**

- ☐ Complete research or applied project for thesis or practicum.
- ☐ Complete analysis and chapter outline.
- ☐ Begin writing Introduction and make final updates to Literature Review and Methods.
  - Discuss chapter outline with your advisor and receive guidance on how to organize and format your thesis/practicum.
- ☐ Complete the thesis or practicum draft and submit to your advisor for review.

- **NOTE:** Expect at least 1-3 feedback-revision cycles by your advisor. EACH can take 2 or more weeks to complete.
- Student revises thesis or practicum (until advisor is satisfied).
- When satisfied with the draft document, advisor will approve its distribution to the full committee, transitioning into Milestone 5 (below).
- **Additional requirements for Thesis** (not applicable to Practicums):
  - You must carefully review all the content links on this Graduate College website for theses: <https://nau.edu/graduate-college/thesis-and-dissertation/>
  - Topics include:
    - Deadlines for defenses
    - Thesis processes and roadmap
    - Electronic thesis (TTD) formatting requirements
    - Format review (**Note:** thesis must be emailed to the ETD Coordinator at least 10 business days prior to the defense date; however, earlier submissions are recommended to provide a more manageable time frame for the ETD Coordinator as well as for the student; read all current website instructions carefully)
    - ETD submission to ProQuest by last day of term (**Note:** again, see website for deadlines and detailed instructions).

#### ***Milestone 5: Thesis/Practicum Defense Presentation***

- By this time, you should be on track to complete final coursework as outlined on your Program of Study.
- Upon approval by your advisor, submit draft thesis or practicum to your committee. Give the committee at least 2 weeks to review before defense date.
- Work with your committee and advisor to set up an oral defense date.
  - Give committee members **at least two weeks** to review the proposal prior to the defense.
  - Defense must be held before the Finals week of the term you wish graduate. Practicum defenses can be held during the finals week if approved by advisor and committee. Defenses are rarely done over the summer (for fall graduation) as many faculty are unavailable.
- The defense presentation is a public event. Please arrange for it to be announced to the entire GPR Faculty and GPR Students as soon as possible after the date and place have been set, but **at least one week** before the presentation. The announcement can be posted to our email listservs by the GPR office staff or the GPR Graduate Programs Coordinator.
- One week prior to the presentation you are to place a draft copy of thesis or practicum in the department office for review.
- **The Defense is held.** A typical defense meeting format: Present an overview of your project and research for 20-30 minutes, followed by questions from the general audience. Members of the general public are then asked to leave, and you meet with the committee only. Committee members will ask you further questions about the project until they are satisfied.
  - **Thesis Defense:** At your defense your committee will sign the *Final Oral Examination (Thesis/Dissertation Defense)—Part 1 (Pass/Fail Form)* and submit it to the Graduate College within 48 hours of your defense.
  - **Practicum Defense:** Committee chair informs the GPR Graduate Programs Coordinator of the pass/fail decision for the oral defense. No forms are necessary.
- **Final Revisions:** Make changes to thesis/practicum as required by your committee.

- This feedback-revision cycle may be required more than once. Often, however, final revisions can be approved by the advisor without further committee involvement.
- **Final Submission** of thesis or practicum after successfully defending your dissertation and making all the revisions required by your advisor and committee:
  - **Thesis:** Read links on the Graduate College website for deadlines and details on how to submit your ETD: <https://nau.edu/graduate-college/thesis-and-dissertation/>. You will receive an email stating that your document has been approved. Retain a copy of the email as confirmation of submission. Also, email final document to the GPR Graduate Programs Coordinator for departmental archiving and website posting.
  - **Practicum:** Email the final document to the GPR Graduate Programs Coordinator for departmental archiving and posting on our website. Chair/advisor replaces all accumulated IP (In Progress) practicum grades with P/F.
- **Celebration!**

AGREEMENT FORM FOR GEOGRAPHIC SCIENCE AND PLANNING GRADUATE PROGRAM

I \_\_\_\_\_ (print name) have read and understand the policies and procedures outlined in this Graduate Programs Student Handbook.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

Please fill out and submit this form to the GSP 681 professor within your first month of classes.