



DEPARTMENT OF
**NATURAL RESOURCES
MANAGEMENT**

TEXAS TECH
Davis College

GRADUATE STUDENT HANDBOOK
2025-2026

Texas Tech University

College of Agricultural Sciences
and Natural Resources

Department of
Natural Resources Management

WELCOME

Welcome to the Department of Natural Resources Management! We are excited to have you in the NRM family.

This handbook outlines the graduate program policies and procedures of the Department. The purpose of this document is to help graduate students successfully chart a course through a respective degree program. It is your responsibility to learn and use all of the policies and requirements established by the Graduate School and the Department. This document is a supplement to the Graduate Catalog (<https://catalog.ttu.edu>) and Texas Tech Operating Policies (OPs) (<https://www.depts.ttu.edu/opmanual>). It does not supersede the OPs or the policies of the Graduate School.

The Graduate School publishes a checklist of benchmarks for Ph.D. students [Doctoral Students | Academic Progress | Graduate School | TTU](#), Master's Thesis students [Master's Thesis Students | Academic Progress | Graduate School | TTU](#) and Non-Thesis Master's students [Master's Non Thesis Students | Academic Progress | Graduate School | TTU](#). They also publish semester deadlines at [Texas Tech University Academic Calendars | Office of Official Publications | Official Publications | TTU](#)

General Expectations of Graduate Students

- 1) Be on campus and present during business hours. The scientific enterprise is a fundamentally social pursuit. Ideas, feedback, and opportunities are all transmitted and facilitated by communication. As such, many opportunities are lost by not being present in the department. Being present also facilitates interactions with your advisor, committee and other graduate students and is fundamental to success during your graduate career. In addition to scholarly activities, most graduate students are supported by an RA that frequently requires at least 20 hours of obligation a week. One good rule of thumb is that if your advisor is on campus, you probably should be too.
- 2) Be proactive regarding your milestones and your interactions with the Graduate School and departmental Graduate Coordinator. You are responsible for your graduate success. Missed deadlines, late registration, expired time tickets and the like are frustrating for everyone involved and are unnecessary.
- 3) Go to seminar. Many great ideas are exchanged when speakers come to give seminars. Often times these speakers are leaders in the field and are likely to give an interesting seminar on state-of-the-art concepts or techniques that may positively influence your research. Seminar also provides opportunities to interact with people in the department that you may not see on a day-to-day basis.
- 4) Present your work. The ultimate goal of science is the dissemination of information generated by research. Ultimately, this is done through publication. Nonetheless, often prior to publication a particular research project is presented in oral or poster form at regional/national/international meetings so as to not only announce that such findings exist, but also to solicit valuable feedback to improve the research. One metric of graduate success is the frequency at which a graduate student presents their work. Students should aim to present their research at meetings early and consistently through their graduate career.
- 5) Fund your research. Most students will be supported by an RA that is funded by a grant awarded to their major advisor. As such it may appear that there is no need for the student to obtain further funding for the research. Successful graduate students obtain additional funding for their research that can be used to pay for side projects or even to travel to meetings. Often the primary pay-off to such funding is being able to list this on a Curriculum Vitae (CV) to demonstrate ability to obtain extramural support for research. Lines on a CV demonstrating grant support provide an advantage in terms of landing a job in the future. Moreover, these additional entries on a CV demonstrate that YOUR ideas pass the muster of peer review and are sufficiently interesting and well planned to convince a funding agency to pay for the research.
- 6) Attend and excel in your classwork. Unlike during your undergraduate education, in graduate school you must learn to manage a wider variety of tasks such as meeting the work obligations associated with your support (i.e. RA); proposing, conducting, writing up and publishing your research; interacting in a scholarly fashion with others in the department; and achieving in your course work. As a result, when in graduate school you will need to balance these other tasks with excelling in your coursework. No longer will you have the luxury of just focusing on your coursework. If you do, you will undoubtedly neglect these other tasks that you have as a graduate student. On the same token however, graduate matriculation is professional training and simply put, professionals regularly/always attend and do not skip class.
- 7) Follow the rules. Yes, indeed, the rules apply to you too.

- 8) Be mindful that we are all part of a greater collective “all” that represents your advisor, people in your lab, the department, college and ultimately the University. The success of our program ultimately lies in your success. Take pride in what you do while representing the collective “all”. Instill pride in others. Be a great ambassador of us.

GRADUATE PROGRAMS

M.S. Programs

M.S. Non-thesis Degree

Designed to provide training and skills for management and career-related jobs, non-thesis students will attain a more thorough understanding of how science is used to address natural resource problems that are obtained at the undergraduate level. A non-thesis student is required to complete at least 36 graduate credit hours: at least 20 hours in Natural Resources Management and 6 or more in areas determined by the student's graduate committee. Non-thesis M.S. students can apply up to 6 hours of NRM 5000 and/or NRM 7000 (not to exceed 6 hours of one or a combination of both) toward the required 20+ NRM hours.

M.S. Thesis Degree

For the M.S. thesis student, this is generally their first experience doing hands-on science. Consequently, M.S. candidates typically receive considerable guidance from their major advisor and graduate advisory committee. The student may be following up on ideas initially generated by the major advisor or committee members. If the student is working on funded research, it is likely that the major advisor wrote the proposal and was awarded a grant or made a successful bid on a contract well before the student arrived. The student's role may be largely that of a data collector and analyst. Research is learned through intimate involvement in a structured environment. Regardless of career objectives, the student should be able to understand the scientific process and thus be better able to critically review and use scientific literature in the future. In most cases, a student can suggest changes in design, data collection, and analysis. Most of the data interpretations should be the students', with the major advisor and graduate advisory committee providing guidance, editorial comments and suggestions. The degree of originality shown during the M.S. program is often used as an indication of aptitude for a Ph.D. level program.

PSM –Professional Science Masters Degree in Environmental Sustainability and Natural Resources Management

This is a distance degree being offered with curricula from the Department of Natural Resources Management, the Department of Biology, and the Rawls School of Business. More information can be found at ([The Professional Science Master's degree \(PSM\) in Environmental Sustainability and Natural Resource Management | Programs | Graduate School | TTU](https://www.npsma.org/)). This is a certified program with the National Professional Science Masters Association (<https://www.npsma.org/>).

PhD Program

Attainment of a Ph.D. brings the expectation that the individual will ultimately serve as a faculty member or research scientist. Therefore, the Ph.D. candidate is generally involved in generation of original ideas, proposal writing, and funding negotiations. PhD students must show considerable command of the scientific literature, creativity at hypothesis formation, skill at research design, the ability to solve a problem, and competence in data analysis. The major advisor and graduate advisory committee do not solve the details but serve as advisors and critics to replicate the peer review system used in science. The outcome is judged on its originality and contribution to science and whether it is substantial enough to merit publication.

General Program Milestones

Ph.D.

Milestone	Timeframe
Formulate committee/finalize degree plan	Year 1
Proposal Defense (NRM 5100)	Year 2
Course work	Year 1 through Year 3
Data collection	Ongoing
Data Analysis	Ongoing
Comprehensive Exam	End of Year 3
Writing Thesis	Year 4
Thesis Defense	End of Year 5

M.S. Thesis

Milestone	Timeframe
Formulate committee/finalize degree plan	Semester 1
Proposal Defense (NRM 5100)	Semester 2
Course work	Year 1 and Year 2
Data collection	Year 1 into Year 2
Data Analysis	Year 2
Writing Thesis	Year 2
Thesis Defense	Year 2

Establishing a Graduate Advisory Committee

Every graduate student needs a committee, which is chaired by the student's major advisor. Within their first semester for thesis M.S. students and within the first year for Ph.D. Students, a graduate committee must be selected in consultation with their major advisor. For M.S. students, a committee must have at least three graduate faculty members. For Ph.D., a committee must have at least five graduate faculty members. At least one member of the Ph.D. committee must come from outside the department, either inside or outside of the university. For either degree there must be a greater number of committee members from within the NRM department than outside the department.

Committee members are selected after joint consultation between the student and major advisor. Potential committee members should be contacted informally by the student to gain their consent to be on the committee. Committee selection is subject to the approval of the Departmental Graduate Advisor and the Dean of the Graduate School. The composition of the committee may be revised at any time by mutual consent of the faculty involved and the approval of the major advisor, the Department Graduate Advisor, and the Dean of the Graduate School.

Even if there is some uncertainty about your specific area of concentration and career objectives, the initial committee meeting needs to be held no later than the second semester of the student's program to assist in coursework selection. Work done prior to the initial committee meeting may not be acceptable to everyone on the committee. The graduate committee recommends a program of courses, submits comprehensive examination questions, assists with the research plan, critiques annual reports and other evidence of progress on the research, reviews the final draft of the thesis or dissertation, and attends seminars presented by the candidate and the final examination.

The major advisor and student work closely together on all aspects of the student's graduate degree program. A major advisor may be changed with mutual consent of all involved, if the guidance of another faculty member would be more appropriate than that of the person initially assigned.

Preliminary Assessment

Each non-thesis M.S. student must choose, with mutual consent, a major advisor. The student and major advisor will, within the student's first semester, establish a graduate committee, develop a degree plan, and submit it for approval by the Departmental Graduate Advisor and the Dean of the Graduate School.

Thesis M.S. and Ph.D. students will, within the first semester for M.S. students and within the first year for Ph.D. students, undergo a preliminary assessment, which is different from the comprehensive exam and may include an oral or written component or both. The examination will serve as the basis for further counseling of the student and for the development of the degree plan.

Degree Plan

By the end of the first year for M.S. and end of second year for PhD degrees the student will hold a committee meeting to approve the degree plan. During this meeting the student proposes a list of required coursework to the committee. The committee then scrutinizes this list in relation to previous coursework completed by the student, current research, and career objectives. You must comply with any suggested changes and stipulations before admission to candidacy. After this committee meeting, the student submits the approved degree plan to Departmental Graduate Advisor to be submitted to the Dean of the Graduate School. The degree plan will be submitted to the Departmental Graduate Advisor prior to the beginning of the second year of work towards the degree. Email Rachel to request the Degree Plan form.

Examples of Degree Plans on the next two pages.

Master's Degree Plan Example—All fields are required



TEXAS TECH UNIVERSITY
Davis College
Natural Resources Management

Master's Degree Plan

Student Name: Your Name

R#: Your R#

Date: Date you filled out

Major: Your Major

Minor: Your Minor if

Expected Graduation Term: #1

Intend to pursue TTU PhD? Will you get a PhD at TTU?

Previous Degree(s)

Institution

Year Awarded

What degree did you earn?

What college?

Year of graduation

Select one of these

☐ Non-Thesis ☒ Thesis (Complete committee and thesis title selections below, unless graduating with a "Report" option.)

Thesis Committee: List your thesis committee. #2

Thesis Title: Your Thesis Title

Coursework—Student Program Updates (Advisor Approved Hours)

This section of the Degree Plan form should list all courses, past, current and future, to be attributed to the student's degree. Provide the TTU Course Prefix, Number, Hours, Term, and Name ONLY for Special Topics Courses.

Reminder 24 of the 36 credit hours required to graduate include 2 semesters (1 hour each) NRM5100, 6 total hours NRM6000 & 6 hours NRM7000, of which 3 hours must be taken the semester you defend your thesis.

Courses to apply/Hours/Term/Name (ONLY if 6001) Courses to apply/Hours/Term/Name (ONLY if 6001)

List your courses #3

NRM6305 (3) F24

NRM 5100 (1) F25 (1) Su26

NRM 6002 Analysis of Animal Movement & Habitat Use (3) Sp24

Degree Plans are to be reviewed and approved by the students committee.

Signature of the Faculty Advisor designates committee approval.

You will need to sign this form and collect signatures from your Faculty Advisor and Dr. Stevens.

Student Signature

Date

Faculty Advisor Signature

Date

Graduate Coordinator Signature

Date

NRM Internal document—ES Portal—Updated 05/2025

For MS students this is due the second semester you are enrolled.

#1—After you are accepted into the graduate program the graduate school assigns you a graduation term. Often times this differs from your actual date. Enter the semester that is determined you will graduate after meeting with your committee. Science is not predictable—This date is not set in stone!

#2— This committee must be more than 51% from within the NRM department. Approval is required for committee members outside of NRM and TTU. Approvals take time, if you have outside committee members the Admin Assistant will request the information to get approval when you submit your degree plan.

#3— 36 credit hours are required for the MS degree. Including 2 semesters NRM5100, 6 hours NRM6000 and 6 hours NRM7000 (3 of which must be taken the semester you defend your thesis. You can take more than 6 hours of each NRM6000/7000 but only 6 will be applied to your degree. Do not include any of those extra hours to the degree plan. *A name is only required for Special Topics Courses.*

Note—Any additional hours that you designate to apply to the MS degree would not be available to put towards a PhD degree should you decide to pursue one.

It is understood that there are times when a projected course is no longer offered or something new is offered that better suits your field of study. Should this situation arise notify the Admin Assistant to ensure this is reflected correctly on your degree plan.

Examples

PhD Degree Plan Example—All fields are required



TEXAS TECH UNIVERSITY
Davis College

Natural Resources Management[™]

Doctoral Degree Plan

Student Name: Your Name R#: Your R# Date: Date you filled out
Degree Sought (PhD, EDD, etc.): _____ Expected Graduation Term: When will you graduate?
Major: Your Major Minor: Your Minor if you have one
Previous Degree(s) _____ Institution _____ Year Awarded _____
What degree did you earn? What college? Year of graduation
#2—transfer hours

Dissertation Committee Chair: Committee Chair
Doctoral Committee: List your dissertation committee. #2
Dissertation Title: _____

Your Dissertation Title

Coursework—Student Program Updates (Advisor Approved Hours)

This section of the Degree Plan form should list all courses, past, current and future, to be attributed to the student's degree. Provide the TTU Course prefix, Number, Hours, Term and Name ONLY for Special Topics Courses (NRM600X).

Reminder 45 hours major coursework or 60 hours of coursework if no minor; include 1 semester teaching practicum NRM7210, 2 semesters (hour each) NRM5100, one level II statistics class, no more than 6 hours of un-named 600X, or Research 7000.

Courses to apply/Hours/Term/(Name ONLY if 6000) Courses to apply/Hours/Term/(Name ONLY if 6000)

List your courses #3 _____
NRM6305 (3) F24 _____
NRM 7210 (1) F25 (1) Su26 _____
NRM 6002 Analysis of Animal Movement & Habitat Use (3) Sp24 _____

Examples

Degree Plans are to be reviewed and approved by the students committee.

Signature of the Faculty Advisor designates committee approval.

Student Signature _____ Date _____ Faculty Advisor Signature _____ Date _____

Graduate Coordinator Signature _____ Date _____

You will need to sign this form and collect signatures from your Faculty Advisor and Dr. Stevens.

NRM Internal document—ES Portal—Updated 12/2024

For PhD students this is due the fourth semester you are enrolled.

#1—After you are accepted into the graduate program the graduate school assigns you a graduation term. Often times this differs from your actual date. Enter the semester that is determined you will graduate after meeting with your committee. Science is not predictable—This date is not set in stone!

#2—You can transfer up to 30 semester credit hours from an MS program to your PhD. Speak with your Advisor then ask the Admin Assistant for a form to make the request.

#3— This committee must be more than 51% from within the NRM department. Approval is required for committee members outside of NRM and TTU. Approvals take time, advise the Admin Assistant who your external committee member(s) are and they will request the information to get approval when you submit your degree plan.

#4— 60 credit hours are required for the PhD degree, only classes numbering above 5000 are acceptable. Including 1 semester NRM7210 teaching practicum, 2 semesters 1 hour each NRM 5100, at least one Level II statistics class. No more than 6 hours of credit will be given for Independent Study or un-named Special Topics NRM600X and 6 hours NRM7000 (3 of which must be taken the semester you defend your dissertation. You can take more than 6 hours of each NRM6000/7000 but only 6 will be applied to your degree. Do not include any of those extra hours to the degree plan. A name is only required for Special Topics Courses.

It is understood that there are times when a projected course is no longer offered or something new is offered that better suits your field of study. Should this situation arise notify the Admin Assistant to ensure this is reflected correctly on your degree plan.

Coursework

M.S. thesis student coursework must comprise at least 24 of the 36 credit hours required for the M.S. degree that include two semesters (one-hour each) of NRM 5100. Credit hour will include 6 hours of NRM 6000 and 6 hours of NRM 7000 (3 of which must be taken the semester you defend your thesis).

PhD students are required to complete at least 45 hours of major coursework and 15 hours of minor coursework OR 60 hours of coursework if there is no minor. Only classes numbering above 5000 are acceptable for graduate credit. All Ph.D. students must complete one semester of teaching practicum (NRM 7210), two semesters (one-hour each) of NRM 5100 and at least one Level II statistics class [Level I classes: PSS 5302 or ANSC 5403 or BIOL 6309 or STAT 5302 or equivalent basic graduate statistics course; Level II stats classes: Experimental Design (NRM 5403) or Advanced Biometry for Ecologists (NRM 6408) or Applied Regression and Least Squares Analysis (AAEC 5325)]. No more than 6 hours of credit will be given for Independent Study or unnamed Special Topics (600X) or Research (7000) classes. You are responsible for meeting with your major advisor shortly after arriving at TTU to decide upon a tentative program of coursework. After you and your major advisor agree on the proposed coursework list, you should distribute copies of it to the members of your graduate committee prior to the meeting in the first year at which coursework is to be discussed. In this meeting, the committee reviews or revises the proposed list of courses prior to approval.

Decisions concerning specific courses to be taken are the responsibility of your graduate committee. The Department Graduate Advisor and the Dean of the Graduate School review and approve the program coursework. Students lacking adequate undergraduate preparation in supporting areas may be required to take additional coursework without graduate credit.

In many cases, Ph.D. students will be able to transfer as many as 30 semester credit hours from their MS program to their Ph.D. program. Ph.D. students should consult with their advisor or the graduate coordinator to determine which and how many semester hours can be applied to the students' Ph.D. program.

Summary of a Majority of Coursework for the Ph.D. Degree

- 1) NRM 7210
- 2) Two semesters (one-hour each) of NRM 5100
- 3) 3-4 hours of Level II Stats
- 4) 6 hours of NRM 7000—Research
- 5) Up to 30 hours transferred from M.S. Program
- 6) 12 Dissertation (NRM 8000) hours (3 of which must be taken the semester you defend)
Balance—16-17 hours of additional coursework

Research Proposal and Defense (Thesis and Dissertation Programs Only)

Under supervision of the major advisor, the student will define their research problem and write a detailed proposal. The proposal should consist of a title, a statement of the problem and rationale for gathering original research data, a statement of objectives including hypotheses to be tested, a review of the literature, and a detailed description of the design, data analysis, and procedures of the study. The student should be aware that their proposal will be judged largely on the basis of whether or not the study design and procedures are likely to permit fulfillment of

the stated objectives. Research proposals should be defended at the end of the first and second years for Thesis-M.S. and Ph.D. students respectively.

Anticipate that completion of the proposal will likely require several rounds of review and revision between the graduate student and major advisor. After the major advisor has approved the proposal, the student should distribute copies to the members of the graduate advisory committee. The committee must be allowed at least two weeks to read and evaluate the proposal prior to the committee meeting (proposal defense). The completed proposal must be submitted to your Graduate Committee for review and approval.

To support the continued improvement of our program, current students are invited to share their completed proposals so they may serve as reference materials for future cohorts. Access to high quality examples helps new students better understand expectations and develop stronger proposals. Your willingness to contribute your work, while not required, is greatly appreciated and will provide meaningful guidance to those who follow. All proposal copies should be emailed to Rachel. There is a binder kept in the office for those who wish to view past proposals.

During the proposal defense committee meeting, you will be questioned by your graduate committee on the research proposal. You should be prepared to summarize orally the content of your proposal, to defend the rationale, objectives, hypotheses, to cite and comment on relevant sources in the literature, and to defend the proposed study designs and procedures. Typically, this involves a 15-30 minute presentation to the committee. When members of the graduate advisory committee have finished questioning you, they will arrive at a consensus as to whether or not and under what conditions the proposal should be accepted. Immediately following the successful defense of the proposal, the student must submit a copy of the approved proposal to the graduate advisor.

Teaching Practicum—NRM 7210 (Ph.D. students)

The teaching practicum consists of a faculty-supervised instructional experience. Requirements are usually met in one of two ways. First, you may assist a faculty member by preparing and delivering lectures and exams in a specific class. Students will teach a third to one-half of the lectures. Second, you may desire more extensive experience; in this case, you may be assigned a larger role in another course as a TA.

Seminar—NRM 5100 (M.S. Thesis and Ph.D. students)

As of the Fall 2024 semester all M.S Thesis and Ph.D. students are required to take two hours (one per semester enrolled) of seminar (NRM 5100). One-hour must be taken during the semester that they defend their proposal, and the other hour must be taken during the semester that they defend their thesis/dissertation. To receive credit for these two hours students must publicly present their thesis/dissertation proposal and final thesis/dissertation. Students accepted into the program prior to Fall 2024 have until the beginning of the Fall 2024 semester to defend their proposal or thesis/dissertation without taking NRM 5100 and presenting during the departmental seminar timeslot (i.e. essentially “grandparented” and exempt from the NRM 5100 requirement). To receive credit students must file a proposal or thesis/dissertation (depending on which one is being defended) with the Graduate Coordinator that is approved and signed by all on the committee. The same requirement holds for students wishing to be grandparented out of the NRM 5100 requirement; they must file a proposal or thesis/dissertation

(depending on which one is being defended) with the Graduate Coordinator that is approved and signed by all on the committee.

Admission to Candidacy

Non-Thesis M.S. degree: Email Rachel to request this form. To be formally admitted to candidacy, you must: 1) complete 9-12 semester hours of graduate credit; 2) defend the written degree plan successfully in a “candidacy” meeting with your graduate advisory committee; 3) obtain your committee’s approval of your degree plan; and 4) submit the Program for the Master’s Degree and Admission to Candidacy form and have it approved by, the Graduate School.

Thesis M.S. degree: Email Rachel to request this form. To be formally admitted to candidacy, you must: 1) write a detailed research proposal; 2) defend the written proposal successfully in a “candidacy” meeting with your graduate advisory committee; 3) obtain your committee’s approval of your degree plan; and 4) submit the Program for the Master’s Degree and Admission to Candidacy form and have it approved by the Graduate School.

Students are expected to complete their program for the Master’s Degree and fulfill the requirements for admission to candidacy as soon as possible after their graduate committee has been formed (usually after 9 graduate credit hours have been completed). If you are unable to define a specific research problem during the first two semesters of your program, you should still hold a preliminary meeting with your graduate advisory committee to decide on coursework within the first year.

Shortly before the candidacy meeting, the M.S. student should obtain the appropriate Program for the Master’s Degree and Admission to Candidacy form from Rachel. At the meeting, you should enter any necessary changes and obtain the needed signatures. The approved form must be submitted electronically to the Graduate School, at which time you are officially admitted to candidacy. Any change in coursework taken or major alteration in research direction requires written approval of the committee.

Ph.D. degree: Email Rachel to request this form. To be admitted into candidacy, Ph.D. students must obtain approval of their degree plan and pass the defense of their proposal. In addition, all Ph.D. candidates in Natural Resources Management are required to take a set of written and oral comprehensive examinations prepared and conducted by the graduate committee. The purpose of these examinations is to determine whether or not a candidate possesses a depth of knowledge in their area of specialization, a breadth of knowledge in supporting areas, an understanding of the scientific method, and the ability to communicate knowledge in an organized and scholarly manner.

Often, the written portion of the comprehensive exam involves a written test from each member of the committee, one a day from each committee member. Guidelines as to how the exam will proceed (i.e., how long the student has to answer the questions, how much written space can be used, whether the exam is open- or closed-book, etc.) are decided either by the committee as a whole or individually by each tester (committee member) when they administer the exam. The oral exam is conducted two weeks after completion of written exams. The oral exam should be scheduled for between three to five hours so that all committee members have opportunity to adequately examine the student.

Students should take their comprehensive exams before the end of the third year of their program and must take it within one calendar year of completing all course requirements listed on the degree plan. Failure to do so will be cause for dismissal from the program. In addition, students cannot take the comprehensive exam and defend their dissertation within the same semester. Results of this examination, reported with the Comprehensive Exam Results Form, with its recommendation for Admission to Candidacy, should be filed by the committee chairperson with the Graduate Advisor and the Graduate School.

Students pass the general exam if they obtain a majority of positive votes from the committee. Given the unfortunate circumstance that the student does not pass they have one opportunity to retake the comprehensive exam. This exam should be scheduled for the following semester. This provides the student with sufficient time to prepare to retake this exam.

Preparation of Thesis or Dissertation Data

In preparing even the earliest draft of the thesis or dissertation, it should be formatted to conform with the style currently accepted by the Graduate School. Council of Biological Editor's Style Manual, Sixth Edition provides a basic guideline. The Texas Tech University Publication Guide for Graduate Students and the CBE Scientific Writing for Graduate Students are helpful. Computers are available at the ATLC in the basement of the library.

An alternative to the traditional style of writing the thesis or dissertation is the submission of a paper or collection of papers in a format acceptable for submission to an appropriate professional journal. For a collection of papers, you should avoid redundancy in wording of common passages and provide additional chapters or appendices where appropriate, e.g., overall problem statement, general literature review, details of study area, methods used, overall conclusions, and recommendations for further research. Consultation with the major advisor and committee is recommended before you choose this alternate style and begin writing.

Thesis or Dissertation

Students should provide a penultimate copy of their thesis/dissertation to each committee member at least three weeks before their defense. Each committee member has the option of using two weeks to examine the major advisor-approved draft of the thesis or dissertation to determine if it is in acceptable condition to be formally defended. The committee members will indicate a willingness to attend the final meeting or suggest what remains to be done before they will be willing to attend a final meeting.

The final oral publication is a publicly announced oral presentation. The presentation is based upon the thesis or dissertation. This presentation is expected to be of a quality suitable for delivery at a scientific meeting. Included in the presentation should be: 1) a clear rationale for the research; 2) a concise statement of objectives; 3) a brief review of procedures; 4) a summary of results; and 5) a discussion of the broad significance of the study.

Final Examination/Defense

The final examination for non-thesis M.S. students is conducted during regular semester terms. The exam is in the form of a comprehensive oral and/or written exam covering the range of NRM disciplines and prepared by the graduate advisory committee. The result of this final examination should be reported to the Graduate School using the Comprehensive Exam Report. Email Rachel to request this form.

The thesis M.S. or Ph.D. candidate who has fulfilled all coursework requirements, who has gained the major advisor's approval of a draft of the thesis/dissertation, and for PhD students, who has passed comprehensive exams, must pass a final examination to complete the degree program. The final examination should be conducted during regular semester terms and include an oral presentation (defense seminar) open to the public. This is followed by a meeting of your graduate advisory committee in which you are expected to defend your work and answer questions regarding it.

The purpose of the final graduate committee meeting is to allow committee members the opportunity to evaluate your total academic performance and to arrive at a consensus as to whether or not you should be granted an advanced degree. During the final meeting, the committee reviews your records to make certain that all prior requirements have been completed satisfactorily and examines you verbally on the subject of your thesis or dissertation. You should be prepared to summarize briefly the objectives and results of your research, to justify the importance of its contribution, and to answer questions pertaining to the form and content of the report, thesis, or dissertation draft.

After the graduate advisory committee has reviewed your records and has examined you verbally, they determine whether or not to recommend conferral of an advanced degree. You will be advised immediately of the committee's decision. The committee has the option of indicating conditional approval, in which case you must meet the specified conditions in order to graduate. Members of the graduate advisory committee indicate ultimate approval by signing the final version of your thesis or dissertation. All committee members must sign for a degree to be conferred. Departmental policy requires a minimum 80% affirmative vote to pass.

The Graduate School should be consulted for specific deadlines and procedures for all programs.

Final Requirements for Graduation

Students who are within four months of completing their graduate degree programs are advised to consult the Graduate Catalog and personnel in the Graduate School for information on fees, disposition of the departmentally approved thesis or dissertation, and graduation deadlines. Students wishing to participate in commencement exercises are particularly urged to contact the Graduate School for annually updated information on graduation deadlines. You are responsible for meeting all deadlines required for graduation.

A useful tool is DegreeWorks that can be found on Raiderlink. DegreeWorks lists all of the classwork, training and other milestones that are necessary for completion of your degree as well as whether they have been completed or not.

Specific Department or TTU Graduate School Requirements

Grade Maintenance Requirements

The Graduate School policy requires that all graduate students maintain an average of “B” or better. If your GPA drops below 3.0, you will be put on probation. If your overall GPA is not above 3.0 within two semesters after being put on probation, you will be suspended from your graduate degree program, and any financial assistance will be terminated.

Traditionally, Research, Thesis, and Dissertation have been assigned a grade of “CR” except during the last semester when a grade is assigned. A grade of “NC” (no credit) may be assigned to indicate that satisfactory progress has not been made in Research, Thesis, or Dissertation.

Registration Requirements

All students accepted into NRM graduate degree programs and supported by the department are required to register for 9 hours each long semester and a total of 6 hours over the two summer sessions. Thus, a total of 24 hours per year are required, even if not in residence.

Non-resident tuition has been customarily waived for students with RA or TA appointments. However, fees such as the general use fee, service fee, University Center fee, and medical services fee will not be waived. The Legislature of the State of Texas has imposed a 99-hour cap on students registered in Ph.D. programs. Once total enrollment hours reach 99, full fees may be charged, including out-of-state tuition.

Students are encouraged to register for classes as soon as possible upon registration opening. The Business Office will not process waivers and stipends until 75% of students within the department have registered, which can conflict with the deadline to pay tuition and fees for the semester. This typically results in the student needing to apply for a payment plan prior to their funding going through, which has a small setup fee. The cost of the repayment plan is refunded once everything gets processed by all offices, but the delay and process can be substantive.

Residency and Registration

Students who have begun thesis or dissertation research must register in each semester until the degree requirements have been completed, unless granted an official leave of absence from the program for exceptional reasons. Approval of a leave of absence will not automatically extend time for completion of the degree.

Ordinarily, the minimum residence (i.e., residence in Lubbock and taking classes on campus) for any master's degree is a full academic year or its equivalent of graduate work carrying residence credit. Regardless of the amount of graduate work completed elsewhere, every applicant for the doctorate is required to complete in residence at Texas Tech at least one year of graduate study beyond the master's degree or beyond the equivalent of this degree if the student proceeds to doctoral work without taking a master's degree. Residence is normally accomplished by the completion of at least 9 hours of coursework in each of the two long semesters and 6 hours split over the two summer semesters.

From time to time and for a variety of reasons graduate students will have registration holds placed on them. Common reasons are for failing to send an official transcript, past due tuition owed to student business services, not completing Responsible Scholarship Training, or going

over 99 hours for PhD students. Given such an event the student should see the Graduate Coordinator to obtain the appropriate “time ticket” for registration. Be aware that obtaining a time ticket can take some time. If a student waits until the last minute to register, there may not be sufficient time to rectify the situation in time to register. It is always to the student’s advantage to register early.

Time Limits on Coursework

Coursework for a graduate degree must be completed within six years for an M.S. program. All work for the doctorate must be completed within a period of eight consecutive calendar years or four years from admission to candidacy, whichever comes first.

The state of Texas has mandated waivers for many university fees are discontinued after a graduate student has been enrolled in more than 99 hours. In addition, after a student has completed 99 hours there will likely be a registration hold placed on the student. The student will then need to fill out an Extension of Degree Completion form that outlines milestones completed, the remaining requirements, and the plan that has been agreed upon by the Major Advisor to reach the remaining deadlines, and their advisor will need to file a Progress Report with the graduate school before the hold is removed.

Proficiency in English

Since all coursework at TTU and written products of graduate research are in English, you must develop a command of English regardless of national origin.

Graduate Student Support

Graduate Student Support allows graduate students to earn a paycheck during matriculation in the graduate program. Because such support is provided to allow for the student to focus on academics and research, secondary jobs are considered moonlighting and are not allowed. All forms of support (see below) are renewable on a semester-by-semester basis based on satisfactory performance. Typically, support comes from one or two of three forms:

Scholarships--These are typically of small monetary amounts (less than a few months salary) that augment a larger form of support such as a fellowship or research assistantship. There is no expectation over and beyond those related to the accompanying fellowship or research assistantship.

Fellowships--These typically are half-time appointments that are awarded on a competitive basis. Fellowships are designed to allow the student freedom from other work obligations to creatively pursue a research project tailored to them. The expectation is that the student work 20 hours a week toward that research goal and under the direction of their major advisor.

Research Assistantships—These typically are half-time appointments where the graduate student works on a particular project supported by a research contract or grant garnered by the major advisor or other faculty member. It is expected that 20 hours per week be dedicated to achieving the deliverables of the research contract.

It is important to emphasize that many graduate activities do not fall under the half-time (20-hours per week) research expectation. For example, classwork, studying for exams, preparation of the research proposal, preparation of proposals for supplementary support, attendance of

departmental seminars, and a number of other activities are not part of the expected 20 hours dedicated to research.

Most students in the department are supported on Research Assistantships and these provide unique challenges and opportunities. For example, one challenge often is turning research contract deliverables into top-tier journal articles that will contribute to high quality placement in the job force, whether that be academia or the public/private sector. Research deliverables of a typical contract can be fairly mundane. A research contract from a state or federal agency may focus on determining if a species occurs in a particular area or may focus on how many there are in a particular area so that management and/or conservation strategies can be implemented. The answers to either of these two deliverables likely would not end up being published in a top-tier journal. To achieve this, often times the advisor and graduate student need to expend effort over and beyond attainment of a particular research contract deliverable. Research Assistantships will likely need to apply more effort in terms of creativity, data collection and data analysis to turn research under the scope of a research contract into a high quality thesis or dissertation. To develop a high quality thesis or dissertation, a graduate student should expect to expend effort over and beyond what is required to reach the deliverables of a research contract. Moreover, the best theses and dissertations typically demand more than 20 hours of effort per week.

Responsible Conduct of Research

The Office of the Vice President for Research (OVPR) requires all Principal Investigators (likely your advisor) to 1) Identify all paid and unpaid students and postdoctoral researchers whose research is supported by NSF, NIH, or EPA awards and 2) submit their names and TTU identification numbers to OVPR as soon as they join a project or the award is funded, whichever occurs last.

The OVPR will ask that individual PIs send to the OVPR a memorandum containing the following information: PI name, NSF award number, title, account number, student or postdoctoral researcher name, TTU R number, eRaider, and status (paid or unpaid). When the trainee has completed Responsible Conduct of Research (RCR) training activities that provide certificates, the PI will forward a copy of the certificates of completion to OVPR. When the trainee completes other training, the online site or course instructor will forward the certificate of completion to OVPR.

The OVPR requires that the PI direct all students and postdoctoral researchers to take the following types of training within 30 days of beginning work on the project, or before the completion of the project, whichever occurs first:

- Face-to-face TTU safety training and online or face-to-face specialized research training appropriate to their discipline, AND
- Discipline-specific CITI RCR Training available on the TTU OVPR webpage (<https://www.depts.ttu.edu/research/integrity/RCR/training.php>). The PI will direct trainees to print a copy of CITI RCR Training certificate and send it to the PI as proof of training. The PI should forward a copy of the certification of completion to OVPR.

The OVPR requires that the PI direct trainees who continue work on a project for more than one semester to:

- Complete a didactic course in RCR or research ethics offered by their disciplinary area or the Department of Philosophy. Current examples include, but are not limited to, NRM 6002 (Ethics) Field Research Ethics, ENGR 4392 Engineering Ethics, PHIL 5125 Research Ethics, OR
- Receive credit for participation for at least four (4) hours per semester in workshops and/or seminars focused on responsible conduct of research. Such activities will be offered by the Ethics Center, the Graduate School, the Teaching Learning and Technology Center (TLTC), and other units. Activities that provide RCR credits will be listed on the OVPR website and TechAnnounce.

Other Professional Obligations

Research and Its Reporting

You are encouraged to maintain close contact with your major advisor and other members of your graduate advisory committee during the research and writing phases of your thesis or dissertation. Such contact serves two functions: 1) it allows you to benefit from the expertise of individual committee members and perhaps avoid pitfalls or wasted time; and 2) it informs graduate committee members of your research progress. You are particularly urged to confer with members of your graduate advisory committee at critical points in your research program – e.g., when you have finished collecting data and are about to start analyzing results and when you are considering the broad organization of your thesis or dissertation. All data collected, slides taken, etc., are the property of the State of Texas or possibly the funding agency and must be left in the safekeeping of your major advisor.

Integrity

Advancement of knowledge depends on the generation of original truthful information. Stealing someone else's ideas, data, or producing fictitious information drastically impedes the progress of science. A scientist must be scrupulously honest with themselves and with those who use the results of their work. Consequently, even a hint of plagiarism or fictitious data will cause a cloud of suspicion to form over your relationship with professors and other colleagues. Proof of such activity will be grounds for immediate dismissal. Plagiarism is defined as presenting someone else's work (language, thoughts, ideas, writing or expression) as your own original work. In the scientific community this is interpreted in the broadest sense. If the student is unsure whether their actions represent plagiarism, it is their obligation to consult with an authority such as their major advisor. Ignorance is no excuse for plagiarism, and it will not be tolerated.

Fraud

The University expects graduate students to maintain the highest standards of research honesty. Research fraud is an act of deception; it is different from error. The term fraud is used here to include a broad range of deceptive practices including:

- Falsification of data – the intentional and unauthorized altering or inventing of any information or citation, including the purposeful omission of conflicting data with the intent to falsify;
- Plagiarism – knowingly representing the words or ideas of another as one's own;
- Misappropriation of other's ideas – the unauthorized use of privileged information (such as violation of confidentiality in peer review, however obtained).

Research fraud may be reported either during or after a graduate student's program has been completed. If found guilty of research fraud you will be given a penalty which may include: 1) reprimand; 2) warning or probation; 3) suspension; 4) expulsion; 5) required to rewrite thesis or dissertation or correct and reanalyze data and resubmit and redefend thesis or dissertation; 6) loss of financial assistance; or 7) revocation of degree.

Professional Societies

Graduate students are encouraged to join and participate in the activities of pertinent professional societies. Since you are embarking on your professional career, it is in your best interest to become actively involved in your professional society. Most societies have reduced student dues in recognition of student budgetary constraints. In addition to reading journals and newsletters, you should attend professional meetings whenever possible. Departmental transportation will often be available to off-campus events of these societies. Students serving on committees or delivering papers will usually be able to obtain at least partial travel expenses from the department.

Informal Social and Other Learning Opportunities

Alert graduate students will find that there are as many, if not more, opportunities for learning from fellow students as from classes or conferences with professors. You will gain the most from your graduate years by taking every opportunity to talk with students who have experience from other parts of the US and the world. You can learn a great deal by sharing work efforts and traveling to different study areas with other students or professors. The Department will try to facilitate these opportunities for interaction. These interactions will not be forced. However, a student who quietly keeps to themselves working only on individual research will gain only a fraction of the experience that the sociable, widely inquiring student will be able to obtain. Lifelong professional ties can be built among fellow students that enhance your long-term chances for success.

Publication of Research

A thesis or dissertation is not considered a publication. These documents are not readily accessible to the research and management community. Anyone who accepts public monies to conduct research has an obligation to make the results available to the public that paid the tax dollars or donated the money enabling the research to be accomplished. Consequently, every student is expected to get at least the main elements of their research into a widely available journal. The stature of the department and its continuing ability to attract research funds depends on this process. Maintenance of departmental stature is of overall value to all past and potential recipients of graduate degrees. Present graduates draw on the past departmental reputation as they vie for positions in the current job market.

You are encouraged to write up your research in a form acceptable for publication within one year after completion of degree requirements. This task becomes more difficult the longer it is delayed. Accordingly, if you fail to meet this obligation within one year after leaving, the responsibility for getting the work in published form will fall on your major advisor. This, in turn, may change the professor's opinion when answering your requests for job references and awards. It can also be grounds for you to relinquish senior authorship.

Departmental Regulations

Care and Use of University Facilities

Nearly all our activities entail use of facilities, equipment, and operational budgets provided through state and federal funds. When private monies are accepted, they become public. The use of these funds for conducting teaching and research entail accountability to those who provide this support. This means that use of facilities, equipment, and budgets may be audited by appropriate authorities at any time. Those who use university property for reasons other than for which they were intended, i.e., private versus public gain) are liable for legal prosecution and/or dismissal. Always think before using property and have a logical reason for your action if queried by those in authority. Avoid the temptation to use copy machines, mail, vehicles, etc., for private use. If you are in doubt about the difference between official and private action, it is your obligation to ask before doing something that may be at the least embarrassing, if not illegal. Your major advisor can readily answer or investigate your questions.

Even though equipment and facilities obtained with public monies technically belong to everyone, “what is everybody’s becomes nobody’s” and “the tragedy of the commons” results in facilities and equipment in disrepair. Accordingly, professors have been assigned responsibility for facilities and equipment. They may in turn assign responsibilities to a graduate student for shorter periods.

Common sense and protocol require that you ask permission before using facilities or equipment. This usually saves time and yields better data if you find out idiosyncrasies of operation and maintenance of a piece of equipment. This procedure also prevents conflicting uses from emerging. An overall efficiency of use of expensive or scarce equipment and use of limited workspace can be coordinated smoothly if you consider the needs of your colleagues before you act.

State Vehicle Insurance

The University carries third-party injury and property damage liability insurance on graduate students who are on contract, but this insurance does not cover costs for repairs from collisions of our vehicles nor is it valid when accidents occur in connection with unauthorized use of equipment. It also is not valid if the users are breaking the law (e.g., drinking alcoholic beverages in a state vehicle) at the time of the accident. The law breaker is also personally responsible for all fines (e.g., traffic tickets).

In order to operate a TTU Vehicle, you must maintain your personal automobile liability insurance. A current US driver’s license in good standing is required of drivers of all university vehicles. University employees are covered by Workman’s Compensation in case of injury on the job. Any accidents should be reported to the major advisor and Environmental Health and Safety within 24 hours following the procedures outlined in University OP 70.13.

Personal effects of employees are not covered by any kind of University insurance. We advise that you check your homeowner’s or renter’s policies for more complete personal property insurance coverage.

Departmental Vehicles

The department maintains a fleet of vehicles that are necessary to fulfill our teaching and research mission. These vehicles cannot be used without appropriate faculty approval and the specifically required training and paperwork. Vehicles that can be scheduled for use. The Range Barn Manager oversees this scheduling. Each driver must have a valid US driver's license, liability insurance, be listed on the departmental insurance sheet for each vehicle operated, and have documented that they have completed all the required training (see below) for the use of that vehicle.

Passengers not associated with TTU are welcome in state vehicles IF they fill out and sign a Texas Tech University System Student/Participant Release and Indemnity Agreement found at <https://www.depts.ttu.edu/opmanual/OP79.13B.pdf>

The most common taxpayer complaints are about state vehicles at unauthorized places, (e.g., private residences, restaurants, liquor stores, etc.) and speeding. The department realizes that one has to eat but remain aware that your choices and behavior reflect upon the Department and the University. Departmental vehicles should not be parked at bars, lounges, casinos, or other enterprises that members of the public might consider to be of "ill repute." While in Lubbock, Departmental vehicles should be parked at our Range Barn facility. You may not park overnight in Lubbock at home or on campus without specific prior approval from your major advisor. Failure to follow the above policies jeopardizes our privilege of having project or departmental vehicles. Several critics have suggested that all vehicles be assigned to a common state motor pool where more stringent accounting can be made. The department requires your help in seeing that we minimize our chances of losing our present vehicle flexibility.

The State of Texas also mandates extensive record keeping on all vehicles. This includes not only fuel use but also detailed records of all maintenance and repairs. There are specific policies and forms (TTU OP 80.08) that must be completed in case of accident involving any University vehicle. Your immediate responsibility is to assure the safety of any people involved and then to contact your major advisor and/or the Department Chair. They will direct you in procedures to follow.

All vehicles should be returned, filled with fuel and cleaned. If your vehicle is dirty and you can't clean it when you come in, make arrangements to return the next day and clean it. If there is something wrong with the vehicle, report it to the Range Barn Manager as soon as possible.

Required Training

Any person driving a Departmental vehicle will be required to provide documentation that they have completed and are current with the required training and documentation listed here.

- Field Safety Forms (NRM)
- 4wd care & maintenance training (NRM)
- Vehicle use form (NRM)
- Safety Awareness training (TTU)
- Trailer Training (NRM)

Individuals who expect to use other Departmental equipment/resources will require documentation of additional training, e.g.:

- ATV Safety
- Massive Open Online Course (MOOC) training
- Electro-fishing Safety
- Range Barn Equipment training (individually with Range Barn Manager)

Maintaining our operating fleet of research vehicles is critical to the operation of this Department. The Department has a limited budget for replacing vehicles. So, each one must last a long time. Therefore, to ensure that you understand the importance, and your liability, we have established the following policies.

1. State mandated vehicle reporting forms – if you have not properly completed these forms each time you use a vehicle, you may be liable for the costs of repairs or maintenance for the vehicle you have been using.
2. NRM vehicle maintenance forms – if you have not properly performed the vehicle inspection and completed these forms each time you use a vehicle, you may be liable for the costs of repairs or maintenance for the vehicle you have been using.

It is crucial that NRM vehicle users document the condition of the vehicles that they are using at all times. It is much better to document that oil level is low and you had to add a quart of oil, than to replace or rebuild an engine that was run without oil until it died. It is better to note that you heard a noise with the front end, or that the steering shimmied when you drove over 50 mph, than to have to replace the entire drive shaft because it fell out and destroyed the transfer case, etc., when it did.

1. NRM vehicle maintenance forms – it is your responsibility when you get in a vehicle to understand what condition it is in. It is also your responsibility to inform our vehicle maintenance staff person, and the next person who might use it, about your vehicle.
2. Vehicle repairs – the paperwork documenting the use and maintenance of each NRM vehicle will be carefully scrutinized before repairs are authorized. If you cannot document that the repair required to keep the NRM vehicle you have been using operational is not the result of your negligence, you will have to pay for it yourself.
3. If you have ANY questions, contact the Departmental Vehicle Maintenance Staff (Range Barn Manager) immediately. Vehicle users will not be held liable for expected costs of maintaining vehicles exposed to the kinds of off-road and heavy use we regularly do. The issues come when big (preventable) things happen because you – the person in the vehicle on a regular basis – failed to notify us of evidence of developing problems.

“If you told us about it as soon as you could, you won’t be liable. If you ignored it, waited for it to go away, or left it for the next guy, it is likely that the cost will be yours.”

How will this affect NRM drivers? All such incidents will be adjudicated by a committee which shall include: Department Chair, Departmental Vehicle Maintenance Staff, and the PI. If it is determined that you could have prevented this, these are the most likely outcomes:

- If it is your first offense, in addition to possible costs, you will be required to retake training, potentially including commercially available training at costs out of your pocket.
- If this is your second offense, in addition to possible costs, you may not be allowed to drive NRM vehicles for 1 year, and you would need to make other arrangements to be able to collect your field data.
- There will be no third offenses. Drivers responsible in such cases will be excused from the Department.

Departmental Labs (Chemical Safety)

Dr. Scott Collins is the Department Safety Officer for Natural Resources Management.

Each student is individually responsible for documenting that they have completed all the required training for their particular project, lab, or office space use in the Department of Natural Resources Management. The Department has several laboratories. Each is under the direct supervision of one or more NRM faculty members. The NRM Department Safety Officer serves to assist faculty and students to understand the training and standards required by University OPs (See additional handout re: Chemical Safety).

Waste Disposal

The custodial staff only empties waste cans containing normal office trash. University OP 63.06 details 3 kinds of waste and the appropriate methods for disposal of each. Items that can be placed in a dumpster (normal building trash, etc.) should be placed in office trash receptacles or the dumpster adjacent to your building.

- Items that are too large (or too much volume) such as building materials (e.g., sheetrock, shingles, concrete, concrete blocks, bricks, roofing material, etc.), sinks, tubs, major appliances, toilets, etc. (all are recyclable); and steel bars, pipe, rocks, dirt, clay, scrap lumber, carpet, wooden pallets, packing crates, large tree limbs, should be placed in containers that must be arranged for (at a cost) with Physical Plant Service.
- Items that cannot be put in trash or dumpsters: 1) items on TTU inventory: contact TTU Property Inventory (742-3846 or 742-3847); 2) hazardous chemical items: refer to TTU OP 60.03, Hazardous Material Spills, and contact TTU Environmental Health and Safety (742-3876); 3) Appliances (e.g., small refrigerators): contact TTU Building Maintenance and Construction (742-3301); 4) Paint cans containing paint: contact TTU Environmental Health and Safety (742-3876); 5) Waste oil: contact TTU Environmental Health and Safety; 6) Batteries: contact TTU Environmental Health and Safety; 7) Tires: contact TTU Garage (742-3332).
- Recyclable items like paper, aluminum, and plastic should be placed in recycling bins provided.
- Waste cans containing plant and soil samples must be emptied by whoever generated the waste.

- Animal parts or byproducts have to be double bagged in plastic and placed in a dumpster.

University OP 60.10 and 60.24 provide accepted procedures for disposing of “sharps” which include: blades, knives, needles, syringes, pipettes, capillary tubes, broken glass, or any other material or object that is readily capable of puncturing, cutting, or abrading the skin. 1) Sharps containers are available at the TTU Central Warehouse. The containers may also be purchased through any scientific supply catalog. 2) Once the sharps container is filled, call Environmental Health and Safety, 742-3876, for pickup and disposal. Do not place sharps containers in the general trash receptacles or in the dumpsters. 3) Refer to the attachment for proper handling and disposal of used sharps.

Additional precautions must be taken when using or disposing of sharps see OPs 60.10 and 60.24.

Range Barn Facilities

The Department owns a great deal of equipment and a large number of vehicles which are housed at the Range Barn located 0.5 miles west of Indiana Avenue on Erskine. This compound is shared with the Department of Plant and Soil Science. The Range Barn provides individual stalls for faculty to store their research equipment, a grinding room, a drying room, a wet lab, an office (for a Range Barn Manager), and a shop area. Entry into both the Range Barn facility and the workshop is controlled by electronic access obtained based on a numerical code. This code can be obtained from the Range Barn Manager.

These facilities are for the use of everyone in the Department. However, you MUST be checked out on the appropriate safety rules and regulations by our Range Barn Manager (see staff list for contact information) before you may use any Range Barn tools or equipment. It is the user's responsibility to keep the grinding room, wet lab, all equipment clean, and samples neatly stored. Samples in the drying room should be labeled with the owner's name, date, and contents. Once the samples are dried, they should be removed from the drying room and stored in the space provided by the student's graduate advisor. If grinding is necessary, this should be done promptly and the area cleaned, and the samples stored appropriately. Any equipment or facilities that are broken or malfunctioning should be reported to the Range Barn Manager or to your graduate advisor immediately.

You should not take any vehicle or equipment not belonging to your graduate advisor without checking with the Range Barn Manager or the appropriate faculty member. Departmental tools and equipment should not be removed from the Range Barn without first getting permission from the Range Barn Manager. Users should be aware that vehicles are very expensive for projects to purchase and to maintain. Each user must take the same care of the project vehicle(s) and practice better driving habits than they do with their personal vehicle. Please remember that after you, as graduate students, finish your degree and leave, we still depend on those same vehicles for continuation of our research. Please remember your successors and leave them a vehicle in good condition.

Offices and Computers

It is the responsibility of the major advisor to notify the departmental staff of the impending arrival of new students or the return of old ones, or research associates, technicians, and post-doctorates. Time of such notification is used by the department to establish precedence. It is to your advantage to advise the department as soon as change in status is known. If possible, desks will be assigned when new personnel arrive on campus, or their name will be placed on the priority list. Once assigned a desk, it is your responsibility to utilize it to the fullest.

Office space and desks are at times a scarce resource. If desks are used only as book storage areas or “part-time” study areas, you will be asked to share the desk with another such student or possibly to find a carrel in the library. People in a low priority category occupying desk space may be displaced by one in a higher priority category without desk space. The University Library has available a number of carrels with lockable bookshelves. You may wish to occupy one of these until department office space and a desk become available.

Staff computers may never be used by graduate students.

Copying and Office Supplies

The Department makes every effort to support graduate research to the fullest extent possible. However, there are some stipulations we place on the use of office supplies and equipment provided by the State of Texas. General office supplies (e.g., paper, pens, etc.) are available to faculty and staff. They are not available for graduate student use. You may not use departmental office supplies, paper, pens, etc. The Department has a copy machine that may be used by graduate students for work related to your teaching (TAs) or research (RAs) projects. To make copies, each student should obtain a copy code from their major advisor.

Travel

Official travel out of town overnight in state or private vehicles requires completion of a Travel Authorization Form. These forms must be completed and approved prior to the planned trip. See your major advisor to get appropriate paperwork to submit for travel, equipment use, P-cards, or the departmental support.

Travelers will need to email LaTisha Griffin at latisha.griffin@ttu.edu to obtain the appropriate request form(s). You must submit the travel forms whether or not there are expenses to be claimed. Once the form is completed with all travel information, including an account number (needed for advance purposes only) from your advisor, you will submit the request back to LaTisha Griffin via email. Once your request has been submitted the travel request will be put on file and held until you return. Upon return from your trip, please submit the travel expense form complete with account number from your advisor, along with receipts to LaTisha Griffin. An Expense Report will be filed to reimburse the traveler through Emburse Enterprises and payment will be made directly to the Traveler through direct deposit.

Travelers will need to set up direct deposit for travel reimbursements (note: This is different from Payroll direct deposit). If direct deposit is not established for travel reimbursements, a check will be mailed, and payments are sometimes delayed.

To check or set up your direct deposit information for Travel Reimbursements, follow the instructions below.

Employees: Access Raiderlink <http://portal.texas-tech.edu> >> Employee Tab >> Update My Direct Deposit >> Employee Reimbursement Account

Students: Access Raiderlink <http://portal.texas-tech.edu> >> My Tech Tab >> Manage My Finances >> Student Business Services >> My Direct Deposit >> Student Refund/Employee Reimbursement Account

For further Travel Operating Policies, please visit [OP 79.01: Travel Authority for Texas Tech University Faculty, Staff, and Students | Operating Policies & Procedures | TTU](#)

International Travel – Must be submitted at least 30 days prior to trip start date. International travel requires approval from Office of International Affairs (OIA) even for zero-cost travel. Please visit [OP 79.05: International Travel | Operating Policies & Procedures | TTU](#) for more information.

Helpful Links and Tips

- [Enterprise / National](#) - Identifier -UTS733, PIN TEX or tex (If Prompted)
- [Avis / Budget](#)
- [Hertz - Rates](#) - [Program Benefits](#)
- [TTU Operations Division Vehicle Rental](#)

Locality Rates

- [U.S. GSA Federal per diem Rates](#) - In and out of state travel
- [Per Diem Rates for Alaska & Hawaii \(TTU only\)](#)
- [International Per Diems \(TTU only\)](#)

Forms

- [TTU - Travel Forms](#)
- [Travel to Washington, D.C., or surrounding area](#)
- [Texas Hotel Occupancy Tax Exemption Certificate](#)

Other Travel Links

- [Currency Converter](#)
- [Mapquest.com](#)
- [Mileage Calculator](#)
- [Southwest.com](#)
- [Citi Travel Card Login](#)

Purchasing

Purchases should be made either with a P-Card (state credit card) or through the NRM Business Coordinator.

When you are not absolutely certain about a purchase, contact the NRM Business Coordinator. The rule that it is easier to ask forgiveness than ask permission does not apply when using state funds.

TTU is tax exempt. No Texas state sales tax will be paid. If you purchase something with taxes on it, you will be responsible for going back to the vendor and requesting a refund for the taxes or reimbursing the state for the tax. Tax Exempt forms can be obtained from the NRM Business Coordinator.

It is required by Texas State Law that all original receipts are retained for ten years. The NRM Business Coordinator needs original invoices and receipts of all purchases. If an email receipt was sent by vendor that is considered the original receipt so forward the email to NRM Business Coordinator. Photocopies of receipts are not considered original receipts.

All equipment and furniture are inventoried and owned by TTU. If you wish to dispose of equipment or furniture you need to fill out forms that can be obtained from the NRM Business Coordinator.

It is against university policy to ship items purchased by the university for research to your home. If you are stationed remotely, see the NRM Business Coordinator about setting up an address to ship to.

Items ordered via Amazon or via the world wide web can be shipped to your attention at the department address. Be sure the purchase is tax exempt. Items can be shipped out via the NRM Business Coordinator. Fill out the domestic shipping form and bring the package with the form attached to the NRM Business Coordinator in PSS 255. MailTech does the invoicing for postage for items shipped out so keep a record of the email sent by MailTech with tracking number in case of dispute on charges later down the road. There is a third-party account for Fed Ex and UPS if you work remotely and need to ship items to TTU or to a collaborator or lab, contact the NRM Business Coordinator for the account and procedure.

Computers and Apple products are not to be purchased with the pcard without permission. See the NRM Business Coordinator on obtaining permission.

There are mandatory office supplies that the NRM Business Coordinator needs to purchase with contracted vendors and those should not be put on the pcard. Here is the link

<https://www.depts.ttu.edu/procurement/resources/training-and-work-aids/documents/p-card/procurement-mandatory-office-supply-contract-20130401.pdf>.

We have a contract with Coca Cola; water and other soft drinks purchased by TTU must be on the list of products sold by Coca

Cola. <https://www.depts.ttu.edu/procurement/resources/training-and-work-aids/documents/p-card/procurement-coca-cola-product-list.pdf> .

Staff

Staff within office suites are primarily responsible for different departmental tasks (see Staff list). They are not to do work for graduate students.

Alcohol

Texas law prohibits consumption of alcoholic beverages in state vehicles and on all state property. Unopened containers of alcoholic beverages may be carried in state vehicles. Drinking such beverages in public is, however, illegal and any person in charge of a field trip or property is responsible for such conduct. Student refusal to comply with these laws could leave no option but to request the assistance of law enforcement officials.

Smoking

Texas Tech prohibits smoking tobacco or vaping in all structures on campus. Your major advisor may have additional non-smoking policies for the vehicles, housing, or other facilities provided for you.

Drugs

In order to continue receiving federal monies for teaching and research, TTU has agreed to maintain a drug-free workplace. Accordingly, discovery of and use of illegal (non-prescription) drugs while on university property or while conducting university business elsewhere requires notification of appropriate authorities. Conviction will be followed by dismissal.

Vacations

RA and TA appointments are part-time (0.5 Full Time Equivalent [FTE]) appointments. Part-time appointments DO NOT carry provisions for vacation or sick leave. Arrangements for absences from campus or field sites must be worked out in advance between you and your major advisor. You should indicate when you expect to be absent. If intended leave conflicts with needs for data collection, analysis, or preparation of reports to administrators or funding agencies, you may expect to have requests for extended leave denied. Student holidays, in particular Christmas, Spring and Summer Breaks, are provided for undergraduates and do not apply to graduate students, especially those supported by an RA on funded research. All leave time must be approved by your major advisor in advance.

Keys

Appropriate keys are obtained from the Physical Plant Lock Shop. Departmental staff will assist you in obtaining permission to have keys issued by the Lock Shop. It is illegal to duplicate university keys or have unauthorized keys in your possession. After the completion of your program, the keys should be returned.

Safety Regulations

Safety standards for Texas Tech University are regulated by the Attorney General's Office and enforced by the Texas Department of Health. These standards are at least as stringent as OSHA (Occupational Safety and Health Administration) requirements. Stiff fines and penalties exist for noncompliance.

Your major advisor and the Department Safety Officer assure that proper training and health and safety precautions are in place. However, it is your responsibility to familiarize yourself with the TTU Operating Procedures (OPs) pertaining to the activities you will engage in and the places you will be working. Additional (detailed) information can also be found on the Environmental Health and Safety webpage: (insert link).

Before starting any chemical procedure, you must be trained in the safe use and handling of chemicals involved. You must sign a form attesting to this training. Material Safety Data Sheets (MSDS) for all chemicals in the department are located in room 210 in the 4-drawer green file cabinet. Please read and refer to any of these for chemicals you will be handling. They contain all the necessary information regarding the chemical.

University OP 60.17 outlines the TTU Chemical Hygiene Plan. Each laboratory should also have its own lab notebook defining activities that are approved for that lab. Please visit with your major advisor about any proposed use in an NRM lab. You may obtain assistance from the Department Safety Officer for any substance that requires an MSDS. This will basically be anything that contains a chemical. An inventory must be maintained and an MSDS must be available for each and every chemical in the Department. Please also inform the Department Safety Officer about any chemical that is to be brought into any Department Laboratory. This is the only way that accurate records can be maintained.

All containers within the labs must be appropriately labeled. Proper labeling requires that each container clearly indicates what is in the container, what kind of hazards are associated with it, when it was made or manufactured, and who is responsible for that container. There are inventory lists and signs posted in each lab. Please do not remove or relocate any of these.

*****Food and drinks are prohibited in all labs.*****

Animal Use Care and Use Regulations

Texas Tech University's Animal Care and Use Committee (IACUC) requires that an appropriate Animal Use Form (AUF) be submitted for all research projects involving the handling of live vertebrates, including animals used for food and fiber production. The AUF describes the entire protocol of animal handling and care related to a research or teaching project. This form must be approved by the IACUC before any research involving vertebrate animals can begin. Handling of vertebrate animals without an approved IACUC protocol during either teaching or research could jeopardize all federal funding coming to the university now and in the future. Handling of vertebrate animals without being listed on an approved IACUC protocol is not permitted.

The IACUC form requires a detailed description of the handling protocol, purpose of the teaching or research activity, justification for the use of the specified animals, and ensures that all individuals handling animals have appropriate training and protection. Approval or disapproval is based on compliance to the Animal Welfare Act, The Public Health Service Policy on Human Care and Use of Animals by Awardee Institutions, and the National Institutes of Health Guide for the Care and Use of Laboratory Animals. Approval of submitted protocols may take at least 1 month and must be granted before any animal may be ordered or used within Texas Tech University or handled in the wild.

Obtain and submit the ACUC form to the ACUC office Box 43132; 742-3722 ext 286; <http://www.depts.ttu.edu/iacuc/>. The current ACUC Chair, Dr. Lou Densmore, Department of Environmental Toxicology, is available to assist you with your form. The ACUC regularly meets to review all applications. All forms are renewed annually. Forms must be signed by the Faculty PI or Graduate Advisor. All animal users must enroll in or provide evidence that they have appropriate training (as defined by ACUC committee) and must participate in the ACUC Occupational Health and Safety Program.

Role of the Major Advisor

- Advises students of opportunities and appropriateness of intended coursework and research for meeting career objectives.
- Sees that their new student obtain keys, desk, and mailbox.
- Advises on selection of graduate committee, coursework, and research plan.
- Organizes and attends all graduate committee meetings, including seminars.
- Advises as needed during progress of research.
- Organizes comprehensive exams (Ph.D. only).
- Reads and critiques drafts of thesis or dissertation in a timely and constructive manner.
- Attends seminars and helps students prepare presentations.
- Organizes final defense.
- Reads and signs final version of thesis.
- Answers requests for recommendation concerning employment or further study.
- Makes sure that funded research results in publication in the open literature.

Role of the Department Graduate Advisor

The Department Graduate Advisor (Richard Stevens) is generally a tenured full professor appointed by the Department Chair. Our department has historically maintained this position to ensure we maintain quality graduate students, complete and archive required paperwork, ensure the quality of the degrees awarded, and maintain the standards of the Department at the Graduate School or University level.

The Department Graduate Coordinator has responsibility to ensure that the graduate degree process is followed and has the authority to:

- Approve composition of committee (based on Graduate School requirements);
- Approve changes to composition of the graduate committee;
- Review and approve degree plan to ensure the plan meets Department course requirements, Graduate School credit hour requirements, semester hour enrollment requirements, TTU residency requirements, and graduate committee membership requirements;
- Assure application to candidacy is complete;
- Assure copies of results of exams (qualifying exam, comprehensive exam, final exam) are maintained to resolve potential conflicts with Graduate School.
- Gather annual reports of graduate student progress.

NRM Staff

Darla Anderson	darlande@ttu.edu	806-834-2137	PSS 251
<ul style="list-style-type: none"> Undergraduate academic advisor 			
Kay Arellano	kay.arellano@ttu.edu	806-834-0933	Goddard 009
<ul style="list-style-type: none"> Administrador for departamental scholarships Alumni coordinator (contact with employment &/or address changes after graduation) Coordinator of NRM alumni Facebook page Back up for questions, registration, or add/drop (prior to semester deadline) if the graduate secretary is out of office 			
Madeline Braman	mbraman@ttu.edu	806-834-6681	PSS 260
<ul style="list-style-type: none"> Assistant Undergraduate academic advisor 			
Adrian Gonzalez	adrian.gonzalez@ttu.edu	cell 806 241 0687	Range Barn
<ul style="list-style-type: none"> Range Barn Manager Coordinator of NRM fleet reservation system Maintains/coordinates vehicle safety training Range Barn use/access and Range Barn stall access/security Assists/arranges for vehicle repairs 			
Tish Griffin	latisha.griffin@ttu.edu	806-834-5124	Off-Site
<ul style="list-style-type: none"> All new employee paperwork/hiring Travel requests and travel vouchers Key requests Driver approvals 			
Rachel Montoya	rachel.montoya@ttu.edu	806-834-1284	PSS 263
<ul style="list-style-type: none"> Graduate applications Graduate School liaison: all Graduate School paperwork submissions start with Rachel Graduate academic program questions Assist with registration (add/drop) Desk assignments for graduate students Initiate key requests NRM Website NRM Social Media 			

Ashley Olguin ashley.olguin@ttu.edu 806-834-7359 PSS 255

- Business Coordinator
- Purchasing

Mary Valdez l.valdez@ttu.edu 806-834-5903 PSS 259

- Works with faculty and staff on all financial elements within the Department
- Coordinates with Tish on ePAFs and hiring
- Handles Voyager card (fuel card) and truck log sheet monthly statements