

GRADUATE STUDENT HANDBOOK

DEPARTMENT OF
FISH, WILDLIFE AND CONSERVATION ECOLOGY
AT
NEW MEXICO STATE UNIVERSITY

Spring 2026 update

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INTRODUCTION

The Department offers graduate work leading to a Master of Science (M.S.) degree with a major in Fish, Wildlife and Conservation Ecology or a Doctor of Philosophy (Ph.D.) degree in Wildlife and Fisheries Ecology. The graduate program is designed to prepare students for work in research and applied management of our natural resources. Graduates from the program often seek employment with various state and federal government agencies, the private sector, or academia. Faculty in the Department of Fish, Wildlife and Conservation Ecology also advise graduate students in other departments on campus.

Opportunities for both laboratory and field research abound in our modern facilities, on over 90,000 acres of University-owned land in the Chihuahuan Desert outside Las Cruces, and in the millions of acres of state and federally-managed lands encompassing alpine meadows, extensive forests and grasslands, and diverse desert landscapes across New Mexico. The New Mexico Cooperative Fish and Wildlife Research Unit, associated with the Department since 1988, are members of the Graduate College and offer training and support for graduate students.

With a diversified faculty working in a broad range of terrestrial and aquatic systems, prospective students have excellent opportunities to explore a wide variety of subdisciplines in fish and wildlife sciences. Research programs in the Department include conservation biology, conservation genetics, ecology, and management, especially relating to biogeography, population ecology, decision analysis, aquatic ecology and fisheries management, disease ecology, wetlands management, wildlife-habitat relationships, and spatial modeling, representing all major taxonomic groups (birds, fish, herpetofauna, and mammals). The human dimension of fisheries and wildlife management is an important consideration within all subdisciplines of study. An individualized, flexible program of study involving graduate courses available across campus is developed for each student with coursework and research designed to complement the background, interests, needs, and abilities of each student.

Check out our [website](#) to learn more about our faculty and programs.

HANDBOOK

The purpose of this handbook is to highlight the major expectations, program requirements, policies, and resources for graduate students in the M.S. and Ph.D. programs in the Department of Fish, Wildlife and Conservation Ecology. The intent is not to duplicate every university, graduate school, and college policy that might be applicable to graduate students. Therefore, the handbook should not be considered a comprehensive source of information on all university policies, procedures, and requirements. Graduate students are expected to read and be familiar with the graduate school forms, requirements, and policies, as well as those of the university and college. It is also the expectation of the graduate program committee that graduate students should be capable of seeking information outside of the handbook and beyond those sources listed below.

Other Important Resources:

For most information, including important graduate school deadlines and forms, consult the [Graduate School](#) website.

For a list of offered courses and academic programs, review the [Graduate Catalog](#).

If you are a graduate assistant, review university resources for [Graduate Assistants](#) and review the [Graduate Assistant Handbook](#) for employment guidelines.

Graduate students are also responsible for following NMSU [System Academic Regulations and Policies](#) and NMSU [Administrative Rules and Procedures](#).

Software Available for Students:

There are various specialized software products available to students at no charge, including ESRI products (e.g., ArcGIS Online, ArcPro, Survey 123), as well as the Adobe Creative Cloud. If interested in getting access to any of these products, visit the ACES IT [website](#) or email ACES IT for assistance at aces_help@nmsu.edu.

GRADUATE FACULTY

- Wiebke J. Boeing**, Professor (Ph.D. 2002, Louisiana State University) Aquatic ecology
- Martha J. Desmond**, Professor and Department Head (Ph.D. 1997, University of Nebraska) Avian ecology and management and conservation biology
- Jennifer K. Frey**, Professor (Ph.D. 1994, University of New Mexico) Ecology and conservation of mammals
- Fitsum Abadi Gebreselassie**, Associate Professor (Ph.D. 2010, University of Bern, Switzerland) Statistical ecology, Integrated population models, capture-recapture models, population dynamics, Bayesian inference
- Obed Hernandez Gomez**, Assistant Professor (Ph.D. 2017, Purdue University) Disease ecology, herpetology, conservation genetics
- Jay V. Gedir**, Senior Research Scientist (Ph.D. 1999, University of Alberta) Vertebrate population dynamics, large mammal ecology and management, and reintroduction and conservation ecology
- Zachary B. Klein**, Associate Professor (Ph.D. 2019, University of Idaho) Fisheries management, fish conservation, and fish ecology
- Kelly Jones**, Professor (Ph.D. 2011, University of Wisconsin-Madison) Human dimensions of conservation, environmental economics, social-ecological systems
- Theresa M. Laverty**, Assistant Professor (Ph.D. 2019, Colorado State University) Vertebrate population and community ecology, conservation biology, social-ecological systems
- Abigail J. Lawson**, Affiliate Assistant Professor and Assistant Unit Leader-Wildlife New Mexico Cooperative Fish and Wildlife Research Unit (Ph.D. 2019, Clemson University) Quantitative ecology, decision analysis, threatened and endangered species, avian ecology
- Brian Millsap**, Senior Research Scientist (Ph.D. 2018, New Mexico State University) Raptor ecology, Bayesian inference, integrated population models, wildlife policy, wildlife law
- Kasey C. Pregler**, Assistant Professor and Assistant Unit Leader-Fisheries New Mexico Cooperative Fish and Wildlife Research Unit (Ph.D. 2019, Colorado State University) Quantitative ecology, conservation genetics, environmental drivers of population dynamics, conservation of imperiled fishes
- Rossana M. Sallenave**, College Professor (Ph.D. 1994, University of Guelph) Aquatic ecology and environmental toxicology
- Aaron Young**, Assistant Professor (Ph.D. 2022, University of Idaho) Avian ecology, habitat ecology and management, quantitative ecology

FINANCIAL ASSISTANCE

Teaching and Research Graduate Assistantships

Graduate assistantships are available through both teaching and funded research projects. The program has a limited number of teaching and research assistantships to support graduate students. Every effort is made to grant financial support to those students who seek it; however, because assistantships are limited in number, not all requests for financial assistance can be met.

Graduate assistantship salaries vary by level (G1, G2, and G3), which is determined by previous education and level of completion of the degree program. For complete information on assistantship salaries, see [here](#). Tuition for graduate assistants is free starting Fall 2026 for up to 9 credit hours and at least 0.25 FTE assistantships.

A waiver of the out-of-state tuition rate is provided to non-resident graduate students supported on assistantships during their first year in the program. All graduate students are strongly encouraged to fulfill the residency requirements as outlined [here](#) and complete this [form](#) before the first year is completed.

Students may be offered a teaching or research assistantship. A 0.25 FTE assistantship requires an average of 10 hours/week of work, whereas a 0.50 FTE requires an average of 20 hours/week. Assistantships are intended to provide financial support in exchange for students contributing to the research and/or teaching mission of the university while pursuing a graduate degree. Students are not being paid to work on the thesis or dissertation research or to earn a graduate degree, but rather to assist with teaching courses or contributing towards meeting the broad goals of a research project.

Offers of assistantships will specify start and end dates. Duration of appointment letters will vary depending on the source of funding, type of assistantship, and major professor. Renewal of assistantships is contingent upon satisfactory performance (both academic and work performance on assistantship) and will be at the discretion of the Department Head (teaching assistantships) or major professor (research assistantships).

The total duration of any assistantships is determined at the discretion of the Department Head in the case of teaching assistantships or the major professor in the case of research assistantships derived from external funding secured by the major professor.

Assignment of Duties for Assistantships

Students supported on assistantships are obligated to meet and prioritize their assigned assistantship duties.

Course assignments for teaching assistantships are made by the Department Head. Specific duties will be assigned by the instructor of the course to which the TA is assigned.

Duties for research assistantships are assigned by the major professor who secured external funding. These duties may or may not align with the thesis or dissertation research and could include tasks that support the broader function of the major advisor's lab. Working on the thesis or dissertation is on the student's own time (i.e., beyond the assistantship's weekly time commitment). Coursework and activities related to thesis or dissertation research such as proposal writing, emails, administrative tasks, networking, service or professional development, do not count towards assistantship duties, unless explicitly discussed as being included with the student's major professor.

Health Insurance

NMSU does not currently offer a mandated graduate student health insurance plan for domestic students. Health insurance plans in New Mexico can be found online at the Government's [Health Care](#) portal or at the NM [Health Insurance Marketplace](#). Establishing New Mexico residency will allow for reduced health insurance premium rates for non- international students on the New Mexico Health Insurance Marketplace.

The health center at NMSU offers health care services for full-time graduate students through [the Aggie Health and Wellness Center](#).

International students should contact [International Student and Scholar Services](#) for information on [health insurance requirements](#) and plans.

Financial Aid and Scholarships

Information on available graduate student scholarships within the Department can be found [here](#).

Information on student loans and other types of financial assistance is available from the [Financial Aid Office](#).

Additionally, there are a number of scholarships available to graduate students from the Graduate School; information on the requirements and deadlines of these awards can be found [here](#).

PROFESSIONAL CONDUCT

All faculty, staff, students, technicians and volunteers associated with the Department or projects conducted by FWCE faculty are expected to conduct themselves in a professional manner, including when involved in activities wherein the student is identified as affiliated with FWCE. The Department has a zero-tolerance policy for discrimination and sexual harassment.

Graduate Student Complaint and Grievance Procedures

NMSU has multiple mechanisms for addressing concerns and resolving problems students may encounter. Should a student have a concern, the Department suggests first consulting with their major professor and/or graduate supervisory committee. If the major professor is unable to resolve the problem or if the concern is regarding the conduct of the major professor, the student is encouraged to meet with the Department Head.

If the complaint cannot be resolved at the Departmental level, the student should contact the [Graduate School](#) or other relevant offices at NMSU for assistance and resolution. A comprehensive site where different types of incidents, concerns, and complaints can be reported is found [here](#).

Student grievances pertaining to the employment/assistantship terms and conditions covered under the Graduate Student Union Collective Bargaining Agreement should follow procedures outlined in the Graduate Workers Union & [NMSU Collective Bargaining Agreement](#).

Graduate Student Discrimination Reporting Procedures

Cases of sexual harassment or other forms of unlawful discrimination should be elevated to the [Office of Institutional Equity](#). The Department Head requests that they be notified of any complaint or issue; however, students do have the option to file confidential complaints with the Office of Institutional Equity if desired. NMSU has a [strict policy](#) of non-tolerance for discrimination.

ROLE OF FACULTY SPONSORS FOR STUDENTS

Faculty members who sponsor the admission of students into the graduate program assume the following responsibilities:

- 1) Faculty must be willing to serve as the major professor for all students they sponsor. The student must be aware that if the major professor's expectations are not met, then the major professor has the right to recuse themselves as the student's advisor. Requests for changing major professors will be handled on a case-by-case basis and must go through the Departmental Head and the graduate student's supervisory committee. Changing major professors is not encouraged, but it is permitted, depending on the individual circumstances as reviewed by the Department Head and graduate supervisory committee. Except in cases of extenuating circumstances, any change in major professor is generally expected to occur early in the first year of graduate study. Furthermore, if a graduate student changes their major professor, the original major professor and the department are not obligated to continue financial support of the student or their thesis or dissertation research project. If a major professor leaves the university, the professor and student should work together to determine whether the student leaves with them or stays in the department, and if the latter, ensure a new faculty advisor is appointed and that a funding source has been identified. The Department Head may also be consulted. Additionally, except under rare, extenuating circumstances, the original major professor maintains the right to allow or disallow the use of data collected by the students and staff supported by the research grants/contracts (see also point 6 below). In the event of a change of major professor, the new major professor is responsible for the financial support of the student and the thesis or dissertation research project. Changing to a new major professor will usually result in the development of a new topic for the graduate student's thesis or dissertation research.
- 2) In most cases, faculty are responsible for identifying a source of funding for the graduate student prior to admission of the student into the program. Funding could include research grants or contracts secured by the sponsoring faculty member, teaching assistantships, or scholarships. In some cases, grants or fellowships may be awarded directly to the prospective student (e.g., Fulbright Award or NSF Graduate Research Fellowship Program).
- 3) Faculty are responsible for the initial orientation of their new students to the Department and University. They should point graduate students to any provided department-level and university-level orientations during their first semester.
- 4) Faculty are responsible for monitoring the progress of graduate students to ensure that timely progress is being made towards completion of the M.S. or Ph.D. program. This includes ensuring that students develop a research proposal and form a committee within their first year, and making sure the committee meets regularly to assess student progress.
- 5) Faculty are also responsible for ensuring that the Graduate Student Assessment form is completed for their graduate students. This includes a form that is completed by the advisor and committee during the student's original research proposal meeting and at the final defense, as well as an assessment form completed by all faculty attending the students final research defense presentation. These forms are accessible to all faculty members on OneDrive and can be completed online.
- 6) Per NMSU policy, only faculty members (and some regular employees) can serve as Principal Investigator(s) (PI) on research projects. The PI is the individual responsible for securing research funding and is responsible for project leadership, including but not limited to scientific, technical, and legal aspects of research projects (<https://arp.nmsu.edu/chapter-11/11-20.html>). As such, students working on a thesis or dissertation project should recognize the oversight role of the PI (typically the major professor), and except under extenuating circumstances, must abide by the guidance of the major professor.

RESPONSIBILITIES AND EXPECTATIONS OF STUDENTS

All graduate students admitted to the M.S. or Ph.D. program in the Department assume the following responsibilities:

- 1) Observe and maintain the highest academic, ethical, and professional [standards of conduct](#). Any student found guilty of academic misconduct shall be subject to disciplinary action, including dismissal from the program and university. Academic misconduct includes but is not limited to cheating or knowingly assisting another student in committing an act of cheating or other forms of academic dishonesty; plagiarism, which includes but is not necessarily limited to submitting materials as one's own work when such work has been prepared by another person, copied from another person, or created using generative artificial intelligence (AI). Copying material, whether parts of sentences, whole sentences, paragraphs or entire articles, without proper acknowledgement constitutes plagiarism and will result in further disciplinary action. Students must cite all sources of information, including generative AI. Even in the absence of university-level discipline for violations of the code of academic conduct, the student's major professor can, in consultation with the graduate supervisory committee, recuse themselves from serving as the major professor in cases of academic misconduct. This will likely result in loss of financial and research support and access to research data collected under the grant or contract obtained by the major professor.
- 2) Follow all university, college, and departmental policies and procedures on the proper use of facilities, vehicles, and research equipment. Failure to follow departmental policies and procedures may result in restrictions in use of facilities, vehicles, and research equipment.
- 3) Conduct themselves in a manner that reflects positively on the University, College, and Department, including but not limited to when on campus, driving a university vehicle, or in the field at research sites. Students represent the University, Department, and their major professor and should behave accordingly.
- 4) Adhere to all stipulations in all state and federal research permits, including NMSU IACUC and/or IRB permits. In most cases, the PI/major professor obtains all research permits, and the graduate student acts as a sub-permittee. The PI is ultimately responsible for ensuring that there are no permit violations. Permit violations can result in the loss of permits and can seriously impact current and future research. If the graduate student violates the stipulations of any institutional, state or federal permit, disciplinary action can include removal of the student from the research permit, removal from the research project, major professor recusal from the student's committee (see 1 this section), and or student removal from the program.
- 5) Be responsible for making sure that all graduate school forms are completed by the required deadlines. See graduate school website for [deadlines](#) and [forms](#).
- 6) Students who are supported as research or teaching assistants are NMSU employees and are directly supervised by their major professor who secured the funding for the research assistantship or the Department Head and course instructors in the case of teaching assistantships. Hence, in most cases graduate students have both a student-mentor and an employee-supervisor relationship with their major professor. Students supported in teaching assistantships are obligated to meet assigned teaching needs and to prioritize these duties.

- 7) During their first semester, students should discuss required training with their major professor to ensure that all university health and safety requirements are met. Commonly required trainings include Employee Safety, Hazardous Communication, Animal Worker Safety, and Defensive Driving. Other training requirements may also be needed depending on the research activities engaged in by the student.
- 8) During their first semester, students are expected to meet with their major professor and discuss data ownership and publication rights. In general, students do not own the data, nor do the students have use/publication rights for data if the grant or contract was secured by their original major professor. All data ownership remains with the major professor securing the contract or grant, the university, and the granting agency. Data ownership does not reside with the student if the original grant or contract was funded through a proposal developed without the student's involvement or prior to the student's arrival at NMSU. The data is owned by NMSU and the PI on the project. In rare circumstances, data ownership may extend to the student. In these cases, an agreement regarding data ownership must be developed and agreed to in writing by all involved parties. The agreement should clearly stipulate who owns the data and who has the right to publish using the data. If a student changes major professors, except in extenuating circumstances, any negotiations surrounding data ownership are void. In the event of voided negotiations, the student relinquishes their right to the use and or publication rights for data collected under a grant or contract. Please see section 9c for information regarding data ownership following a change of major professor.
- 9) All students have the right to change major professors during their course of study, but before making this decision they should recognize that they should:
 - a. Have a discussion, preferably before accepting a graduate position, with their major professor on their expectations of graduate students. In most instances, problems can be avoided by knowing what is expected of graduate students in the lab.
 - b. Find a new major professor before severing ties with their original major professor; other faculty members in the department are not obligated to serve as a major professor for students wishing to change major professors.
 - c. Recognize that they do not have the right to the use of the data and or publication rights for data collected under a grant or contract secured by their original major professor. All data ownership remains with the major professor securing the contract or grant, with NMSU, and with the granting agency, not with the student. In the instance that a student changes their major professor, any negotiations surrounding data ownership are void. The student is expected to negotiate an agreement surrounding data ownership and publication rights during their first semester with the new professor.
 - d. Recognize that they are not entitled to the continued support or equipment, such as vehicles or lab space, provided by their original major professor or the department. The decision on the use of such support resides with the principal investigator of the grant or contract and the university per university policy.
- 10) Students who do not maintain the minimum 3.0 GPA, which is the minimum standard set by the Graduate School, or who fail to adequately progress through the graduate program, as determined by their graduate supervisory committee, may be subject to disciplinary action. Students will have to clearly demonstrate correction of past infractions and future progress if they wish to continue. The student will be given an opportunity to demonstrate improvement, but if the student fails to meet the expectations of their graduate supervisory committee, the major professor can then take steps to recuse and halt any potential financial support. In these cases, students are not entitled to continued financial support from the major professor or department or access to the data collected while employed as a research assistant under the original major professor's research funding.

DEGREE REQUIREMENTS FOR A MASTER OF SCIENCE DEGREE

1) General

University requirements stipulate a minimum of 30 semester hours for a master's degree (Thesis option). Of those credits, at least 15 must be in courses numbered 500 or above and at least 15 must be for work in the major field – these courses are generally wildlife and fisheries courses, but appropriate courses from other programs such as biology, chemistry, molecular biology, statistics, and range management, may be appropriate. Programs involving a thesis should include at least 4 credit hours of FWCE 599 (Master's Thesis) toward their 30-credit hour requirement. The Graduate Catalog details for the M.S. degree can be viewed [online](#).

University requirements are that all students who are employed on teaching or research assistantships are required to register for a minimum of 9 credit hours during each spring and fall semester throughout the course of their degree program or as long as they are employed as a TA or RA, including after all required coursework has been completed. Master's students may register to take one (1) credit hour rather than nine (9) credit hours during their final semester. Students defending their thesis during the summer, will be required to register for at least 1 thesis credit (FWCE 599) during the summer session in which they defend their thesis.

2) Supervisory Committee and Program of Study

The graduate student's supervisory committee will normally be established prior to the student's second semester in graduate school. The committee consists of a minimum of three members, including the advisor and one faculty member from outside the Department who serves as the representative for the Dean of the Graduate School. The Dean's Representative is meant to ensure the graduate student is treated fairly throughout their graduate journey and should not be a faculty member with a vested interest in the student graduating or publishing (e.g., a co-PI on the student's supporting grant or a close collaborator of the student).

Students electing to take a minor are required to complete the required number of credit hours stipulated by the department awarding the minor (generally 9 to 14 credits). Students should contact the department awarding the minor to determine specific credit hours and course requirements. To receive the minor, the student must plan to include a committee member from the minor department and demonstrate knowledge of the minor field in their final exam. The supervisory committee is to serve as a collective source of advice and mentoring for the student, not strictly an examining committee. The committee's responsibility is to review and approve the student's research proposal and course of study, provide guidance in the design and execution of the research project, critique the thesis, and participate in the thesis defense. The committee typically meets with the student within the first or second semester to review and approve the research proposal. The student should meet with their supervisory committee at least once per academic year after the proposal has been accepted by the committee.

However, the major professor or the student can request additional meetings; the potential need for flexibility in this general approach is also recognized.

While the Graduate School no longer requires the program of study form be filed with the University, it is strongly encouraged that students complete this form, or a similar type of form, in consultation with their advisor and graduate supervisory committee (Appendix B). This program of study form should be completed by the end of the second semester and submitted to the supervisory committee.

3) Course Requirements

The following courses are required for all students:

- Per graduate school policy, courses that are used to address deficiencies or satisfy prerequisites

for graduate-level coursework cannot be counted as requirements for a master's degree.

- Students should take coursework from a variety of faculty. Students may not take more than half of the minimum credits required for a master's degree with the same professor, excluding FWCE 599 Master's Thesis credits.
- **A minimum of 6 credits** of Quantitative Foundations (eligible courses listed below)
 - Courses in this category are designed to build a foundational knowledge in statistical concepts that serve as the basis for understanding applied modeling tools. Classes focused on specific types of models, analyses, or other statistical applications (e.g., occupancy models, spatial analysis) are considered Ecological Techniques and will not be approved under this category.
 - Students without a strong statistics background are encouraged to enroll in A ST 505. The decision will be left to the A ST faculty to determine if the student has sufficient background to skip A ST 505 and move on to other A ST courses (e.g., 506, 507, 509). However, A ST prerequisite may still be enforced rigidly by A ST faculty. The onus to get a waiver/override for any A ST prerequisite is on the student.
- **A minimum of 9 credits** from Ecological Concepts, Organismal Biology, Ecological Techniques (eligible courses listed below)
 - Courses in this category will provide breadth and depth in the areas described above, and their applications, including applied modeling tools.
- **A minimum of 4 credits** of FWCE 599 (Master's Thesis)
- **An additional 11 credit hours** including no more than two credits of FWCE 599 are needed to meet the M.S. degree requirements and should be determined with the graduate supervisory committee.
- Note that courses taught as special topics (FWCE 535) may apply to the Quantitative Foundations or Ecological Concepts, Organismal Biology, Ecological Techniques with approval from the supervisory committee and Department Head.
- The list below shows typical courses that meet minimum Departmental and Graduate School course requirements for the master's degree, as determined by the faculty and Department Head.

Quantitative Foundations (minimum 6 credits): Eligible courses

- | | |
|--|--------|
| • A ST 505, Statistical Inference I | 4 cr |
| • A ST 506, Statistical Inference II | 3 cr |
| • A ST 507, Advanced Regression | 3 cr |
| • A ST 509, Statistical Models for Complex Data Structures | 3 cr |
| • A ST 511, Statistical Methods for Data Analytics | 3 cr |
| • A ST 515, Statistical Analysis with R | 3 cr |
| • A ST 540, Predictive Analytics | 3 cr |
| • A ST 550, Special Topics | 1–4 cr |

- A ST 555, Applied Multivariate Analysis 3 cr
- A ST 567, Applied Linear Models I 3 cr
- A ST 568, Applied Linear Models II 3 cr
- FWCE 509, Population Ecology 3 cr
- FWCE 523, Model Selection and Multimodel Inference in Ecology 2 cr
- FWCE 526 Demographic Modeling & Bayesian Inference in Wildlife Management 3 cr
- FWCE 557, Ecological Biometry 3 cr

***Other courses may be eligible to fulfill course requirements with consent of the advisory committee and department head.*

Ecological Concepts, Organismal Biology, Ecological Techniques (minimum 9 credits): Eligible courses

- BIOL 467, Evolution 3 cr
- BIOL 484, Animal Communications 3 cr
- BIOL 488, Principles of Conservation Genetics 3 cr
- BIOL 562, Advanced Genomics Technology 3 cr
- BIOL 566, Advanced Bioinformatics and NCBI Database 3 cr
- BIOL 568, Communities and Ecosystems 3 cr
- BIOL 581, Physiology of Animals 3 cr
- BIOL 587, Behavioral and Evolutionary Ecology 3 cr
- FWCE 510, Wildlife Ecology Teaching Practicum 3 cr
- FWCE 512, Scientific Writing 3 cr
- FWCE 524, Structured Decision Making in Fish and Wildlife Management 3 cr
- FWCE 525, Evidence-Based Conservation and Management 3 cr
- FWCE 531, Mammalogy 4 cr
- FWCE 537, Wildlife Damage Management 3 cr
- FWCE 541, Conservation Genetics 3 cr
- FWCE 542, Wildlife Disease Ecology and Management 4 cr

- FWCE 546, Conservation Social Sciences 3 cr
- FWCE 547, Wildlife Law and Policy 3 cr
- FWCE 559, Aquatic Ecology 4 cr
- FWCE 567, Herpetology 4 cr
- FWCE 571, GIS for Natural Resources 4 cr
- FWCE 582, Ichthyology 4 cr
- GEOG 552, Landscape Ecology 3 cr
- GEOG 557, Fundamentals of Biogeography 3 cr
- GEOG 573, Introduction to Remote Sensing 3 cr
- GEOG 578, Fundamentals of GIS 3 cr
- RGSC 513, Advanced Rangeland Ecology 3 cr
- RGSC 516, Arid Land Management 3 cr
- RGSC 518, Watershed Methods and Management 3 cr
- RGSC 575, Climate Studies, Water and Society 3 cr
- RGSC 585, Land Cover Analysis for Natural Resources 3 cr

***Other courses may be eligible to fulfill course requirements with the consent of the advisory committee and department head.*

Thesis Credits (minimum 4 credits, up to 6 credits)

- FWCE 599, Thesis (4 cr required for thesis students) 4-6 cr

Independent Study Courses

- FWCE 548, Graduate Problems up to 6 cr
- FWCE 598, Special Research Programs up to 6 cr

***Independent study courses may be used to fulfill course requirements with the consent of the advisory committee and department head.*

4) Thesis option

The thesis is intended to provide evidence of scholarship and original research and should be publishable in a peer-reviewed scientific journal. Master's programs involving a thesis require no more than 6 and no fewer than 4 credits of thesis (FWCE 599). Additional thesis credits can be taken to maintain continuous enrollment or meet the 9-credit hour enrollment requirement, but only a maximum of 6 thesis credits will be counted towards the 30-credit degree requirements.

5) **Non-Thesis Option**

Selected students are admitted into this program based on discussions among the student, major professor, and Department Head by the end of the first semester. Students electing the non-thesis option must do so in consultation with their major professor and must notify the Department Head and Chair of the Graduate Studies Committee.

Non-thesis students are required to complete a non-thesis project and have a non-thesis defense examination.

Non-thesis programs require a minimum of 30 course credits as well as an additional 4-6 credits of FWCE 558 (non-thesis project) credits, for a total of 34-36 credits.

Non-thesis course requirements:

- A ST 505, Statistical Inference, 4 credits
- FWCE 558, Non-thesis Project, 4–6 credits
- FWCE 548 and/or 598, 0–6 credits
- Other formal courses numbered 450 and above except FWCE 548, 558, 595, 598, 599, as well as some courses offered in other departments. Qualifying courses will be determined at the discretion of the student's advisory committee.
- **TOTAL CREDITS** 34–36 credits minimum

DEGREE REQUIREMENTS FOR A DOCTOR OF PHILOSOPHY DEGREE

1) General

The Ph.D. degree program requires a total of 66 credit hours, including a minimum of 30 credits of graduate work excluding dissertation credits and 18 doctoral dissertation credits (FWCE 700). Students who have already completed a Master of Science program can transfer a maximum of 24 credits from their Master of Science program to the doctoral program. Additionally, students that enter the program having only completed a bachelor's degree must also complete the Master of Science degree requirements for FWCE (see details above). The Graduate Catalog details for the Ph.D. program can be viewed [online](#).

University requirements are that all students who are employed on teaching or research assistantships are required to register for a minimum of 9 credit hours during each spring and fall semester throughout the course of their degree program or as long as they are employed as a TA or RA, including after all required coursework has been completed. Doctorate students can enroll in six (6) credits in their second-to-last semester and one (1) credit hour rather than nine (9) credit hours during their final semester. Students defending their dissertation during the summer will be required to register for at least one (1) doctoral dissertation credit (FWCE 700) during the summer session in which they defend their dissertation.

2) Supervisory Committee and Program of Study

The graduate student's supervisory committee will normally be established prior to the end of the student's second semester in graduate school. The committee consists of a minimum of four members, including at least two members from the FWCE graduate faculty, one of which is the advisor, and one member from outside the Department who serves as the representative for the Dean of the Graduate School. The Dean's Representative is meant to ensure the graduate student is treated fairly throughout their graduate journey and should not be a faculty member with a vested interest in the student graduating or publishing (e.g., a co-PI on the student's supporting grant or a close collaborator of the student). The doctoral supervisory committee can include a professional member from outside of academia, such as an agency or organizational representative. The supervisory committee is to serve as a collective source of advice and mentoring for the student, not strictly an examining committee. The committee's responsibility is to review and approve the student's research proposal and course of study, provide guidance in the design and execution of the research project, critique the dissertation, and participate in the dissertation defense. The committee typically meets with the student within the first or second year to review and approve the research proposal. The student should meet with their supervisory committee at least once per academic year after the proposal has been accepted by the committee. However, the major professor or the student can request additional meetings; the potential need for flexibility in this general approach is also recognized.

While the Graduate School no longer requires the program of study form be filed with the University, it is strongly encouraged that students complete this form, or a similar type of form, in consultation with their advisor and graduate supervisory committee (Appendix B). This program of study form should be completed by the end of the second semester and submitted to the supervisory committee.

3) Course Requirements

The following courses are required for all Ph.D. students:

- Complete a minimum of 6 semesters, with at least two occurring after the comprehensive exam.
- A maximum of 6 credits of FWCE 699 (Doctoral Research) may apply toward graduation.
- Complete a **minimum of 30 credits of graduate** work excluding dissertation credits (FWCE 700 Doctoral Dissertation). This must include 2 credits of FWCE 690 Doctoral Seminar and 2 credits

of BIOL 540 Science and Ethics.

- **Complete 18 credits of FWCE 700 Doctoral Dissertation** after passing the comprehensive exams.
- At least 15 credits of the required elective courses must come from FWCE courses numbered 500 or above. A maximum of 9 credits of coursework below 500 but at or above 450 can count toward doctoral credit hours.
- Maintain a minimum grade point average of 3.0.
- Enroll in at least 9 credits per semester full-time. The exception to this is that a doctorate student may enroll for only 6 credits in their second to last semester and enroll for only 1 credit during their final semester if coursework and comprehensive exam requirements have been fulfilled.
- Successfully complete a qualifying exam (if a Ph.D. student without a master's degree), proposal defense, comprehensive exam, and dissertation defense.
- The list below shows courses that meet Departmental and Graduate School course requirements for the Ph.D. degree. Graduate-level courses other than those listed below may be used to fulfill degree requirements with permission from the supervisory committee.

Required Courses

- | | |
|---|-------|
| • BIOL 540, Science and Ethics | 2 cr |
| • FWCE 690, Doctoral Seminar (take twice) | 2 cr |
| • FWCE 700, Doctoral Dissertation | 18 cr |

Elective Courses

Quantitative Courses

- | | |
|--|--------|
| • A ST 505, Statistical Inference I | 4 cr |
| • A ST 506, Statistical Inference II | 3 cr |
| • A ST 507, Advanced Regression | 3 cr |
| • A ST 509, Statistical Models for Complex Data Structures | 3 cr |
| • A ST 511, Statistical Methods for Data Analytics | 3 cr |
| • A ST 515, Statistical Analysis with R | 3 cr |
| • A ST 540, Predictive Analytics | 3 cr |
| • A ST 550, Special Topics | 1–4 cr |
| • A ST 555, Applied Multivariate Analysis | 3 cr |
| • A ST 567, Applied Linear Models I | 3 cr |

- A ST 568, Applied Linear Models II 3 cr
- FWCE 509, Population Ecology 3 cr
- FWCE 523, Model Selection and Multimodel Inference in Ecology 2 cr
- FWCE 526 Demographic Modeling & Bayesian Inference in Wildlife Management 3 cr
- FWCE 557, Ecological Biometry 3 cr

Ecological Concepts, Organismal Biology, Ecological Techniques

- BIOL 562, Advanced Genomics Technology 3 cr
- BIOL 566, Advanced Bioinformatics and NCBI Database 3 cr
- BIOL 568, Communities and Ecosystems 3 cr
- BIOL 581, Physiology of Animals 3 cr
- BIOL 587, Behavioral and Evolutionary Ecology 3 cr
- FWCE 510, Wildlife Ecology Teaching Practicum 3 cr
- FWCE 512, Scientific Writing 3 cr
- FWCE 524, Structured Decision Making in Fish and Wildlife Management 3 cr
- FWCE 525, Evidence-Based Conservation and Management 3 cr
- FWCE 531, Mammalogy 4 cr
- FWCE 537, Wildlife Damage Management 3 cr
- FWCE 541, Conservation Genetics 3 cr
- FWCE 542, Wildlife Disease Ecology and Management 4 cr
- FWCE 546, Conservation Social Sciences 3 cr
- FWCE 547, Wildlife Law and Policy 3 cr
- FWCE 559, Aquatic Ecology 4 cr
- FWCE 567, Herpetology 4 cr
- FWCE 571, GIS for Natural Resources 4 cr
- FWCE 582, Ichthyology 4 cr
- GEOG 552, Landscape Ecology 3 cr

- GEOG 557, Fundamentals of Biogeography 3 cr
- GEOG 573, Introduction to Remote Sensing 3 cr
- GEOG 578, Fundamentals of GIS 3 cr
- RGSC 513, Advanced Rangeland Ecology 3 cr
- RGSC 516, Arid Land Management 3 cr
- RGSC 518, Watershed Methods and Management 3 cr
- RGSC 575, Climate Studies, Water and Society 3 cr
- RGSC 585, Land Cover Analysis for Natural Resources 3 cr

Independent Study

- FWCE 535, Special Topics (as approved by committee) variable
- FWCE 548, Graduate Problems variable
- FWCE 699, Doctoral Research variable

DEGREE REQUIREMENTS FOR A MINOR IN FISH, WILDLIFE AND CONSERVATION ECOLOGY

A graduate minor in the Department requires at least 9 credit hours of 500-level graduate courses with a FWCE prefix. See graduate level course descriptions below for a complete list of FWCE courses.

Total credits: 9-10

GRADUATE LEVEL COURSE DESCRIPTIONS

The course descriptions for courses that meet Departmental and Graduate School course requirements for the M.S. and Ph.D. degree programs are listed below. Not all courses are offered every year, and many courses are only taught in either the fall or spring semester. All courses and when they are offered can be viewed in the [Graduate School Catalog](#).

FWCE 430. Avian Field Ecology, 4 cr

Principles of avian ecology and management with an emphasis on taxonomy, physiology, behavior and field studies. Includes weekly field trips focusing on identification and behavior of Southwest birds.

FWCE 470. The Natural History Museum in Modern Society 3 cr

Introduction to the role of natural history museums in modern society, including basic research, public education, service, and applied research in biodiversity conservation. Emphasis on experiential learning. Includes paper discussions, activities, required full-day Friday field trips, and a term project. Prerequisite(s): BIOL 111G and BIOL 111GL.

FWCE 472. Wildlife Museum Internship 1-6 cr

Substantial directed work experience in various functions of the wildlife natural history museum developed by the student in consultation with the faculty curator. Internships may involve aspects of collection development and management, public education programs, or other related museum activities. Internship must be approved by the faculty curator. Prerequisite(s): BIOL 111G and BIOL 111GL and consent of instructor.

FWCE 509. Population Ecology 3 cr

This course introduces students to the fundamental theories and quantitative methods of population ecology. It covers topics such as population growth and regulation, demographic analysis, species interactions, and spatial population dynamics. Students will gain hands-on experience in applying these concepts by implementing relevant models and analytical techniques using the open-source statistical software R and Program MARK.

FWCE 510. Wildlife Ecology Teaching Practicum, 3 cr

This doctoral-level practicum provides hands-on experience in teaching undergraduate courses in wildlife and fisheries ecology. Students will engage in course planning, instructional delivery, and assessment under faculty supervision. Emphasis is placed on applying evidence-based teaching practices, communicating ecological concepts effectively, and fostering inclusive learning environments. Participants will also reflect on their teaching, receive feedback, and develop a professional teaching portfolio. Designed for future educators and academic professionals, this course prepares students for teaching roles in higher education and science communication. May be repeated once for credit with departmental approval. Prerequisite(s): Doctoral standing in the Department of Fish, Wildlife and Conservation Ecology.

FWCE 512. Scientific Writing, 3 cr

This graduate-level course will guide students through the development of a scientific manuscript suitable for submission to a peer-reviewed journal. We will cover the structure of a scientific paper, how to approach drafting each section, as well as give guidance on the submission and peer-review process, and other ethical considerations such as coauthorship. By the end of this course each student will have produced a manuscript based on their research focus.

FWCE 523. Model Selection and Multimodel Inference in Ecology, 2 cr

This course will introduce students to the theory and practice of model selection and multimodel inference in ecology. Both techniques are widely used in ecology, natural resources, and related disciplines and have become essential tools in gaining reliable inference from data. A substantial number of novel model selection techniques have emerged in recent years, and are accompanied by their unique drawbacks and potential pitfalls. The objective of this class is to provide students with background knowledge to select the appropriate model selection and inferential tools and interpret the results with confidence and accuracy. The course will comprise a mixture of short lectures, lab exercises, and discussions of the primary literature. There are no course prerequisites, though students are encouraged to have successfully completed at least one semester of graduate-level statistics.

FWCE 524. Structured Decision Making in Fish and Wildlife Management, 3 cr

This course will introduce students to the theory and application of structured decision making (SDM). SDM incorporates human-centered values into the decision making process, identifies a set of actions to achieve those values, and creates models that connect actions to outcomes. Though SDM has long been used in business contexts, SDM has recently been applied to diverse problems in wildlife and fisheries management at local, state, and federal levels. Unlike other decision processes that strive to separate management and scientific endeavors, SDM is a collaborative process that unites managers and scientists, and adds transparency to decision making to promote buy-in and trust. The course will comprise a mixture of lectures, discussions of the primary literature, lab exercises, and mock workshop sessions.

FWCE 525. Evidence-Based Conservation and Management, 3 cr

This course will explore theories and concepts that are fundamental to applied conservation management and evaluation. There is increasing need to justify and evaluate conservation and management actions, and this course will provide students with the insight and knowledge on how to consult the best evidence in conservation planning and how to set up and evaluate a conservation action plan. This course also provides insight into systems thinking, which is needed to address the complex problems faced by conservation managers. Finally, this course teaches students a specific adaptive management framework that has been adopted by several leading conservation organizations and agencies. While this course is focused on biodiversity conservation, the concepts covered about systems thinking and applied conservation planning and management will be relevant to a broader audience interested in environmental and natural resources management or stewardship.

FWCE 526. Demographic Modeling and Bayesian Inference in Modern Wildlife Management, 3 cr

This course introduces students to the practical application of demographic models in wildlife management. It explores how wildlife laws and regulations are created in the United States, how science is being formally incorporated into the regulatory process, and how advanced quantitative methods are used to connect wildlife ecology with wildlife law. Students will gain hands-on experience using popular software such as R and JAGS to implement these methods within a Bayesian framework.

FWCE 531. Mammalogy, 4 cr

Classification, identification, anatomy, physiology, life history, and ecology of mammals. Field trips may be required. Taught with FWCE 431.

FWCE 535. Special Topics 1-4 cr

Specific subjects to be announced in the *Schedule of Classes*. Maximum of 4 credits per semester. No more than 9 credits toward a degree.

FWCE 537. Wildlife Damage Management 3 cr

Introduction to basic need and appropriate methods for resolving human-wildlife conflicts and management of animal damage. Socioeconomic, ecological, and political factors. Field trips required. Students are responsible for all requirements for FWCE 437 plus additional work.

FWCE 541. Conservation Genetics, 3 cr

This course will provide a broad introduction to the use of molecular markers to address questions in ecology, evolution, behavior, and especially conservation. We will begin by learning about genetic variation and basic population genetic principles, then we will explore the applications of genetic markers for understanding relatedness, population structure, and conservation of biodiversity. Finally, we will discuss how to apply and interpret molecular approaches in conservation.

FWCE 542. Wildlife Disease Ecology and Management, 4 cr

This course will provide students with an understanding of the ecological and evolutionary complexity inherent to host-pathogen interactions in wildlife systems. FWCE 442/542 introduces students to parasite and pathogen diversity, core concepts in disease ecology (e.g., pathogen population dynamics, transmission, disease models, virulence), host-pathogen coevolution, community ecology of host-pathogen interactions, and the importance of pathogens in conservation and management. In the laboratory, students will learn basic techniques to isolate pathogens from living organisms, detect pathogens using molecular tools, and model disease outbreaks using bioinformatics. Field trips are required. Prerequisite(s): FWCE 2110, FWCE 330.

FWCE 546. Conservation Social Sciences, 3 cr

This course provides an overview of social science concepts and research important to the conservation and management of wildlife and natural resources. The course will introduce students to the social, psychological, and economic underpinnings of human dimensions research, and specific approaches used to change human behaviors to improve conservation outcomes. Some of the approaches covered in the course include economic incentives, behavioral nudges, and community-based conservation. Additionally, the course will provide an overview of the methods used by conservation social scientists including participatory, qualitative, and quantitative methods. Students will be challenged to approach human dimensions issues from multiple perspectives. The concepts covered about human dimensions will be relevant to a broad audience interested in environmental and natural resource conservation, management, and stewardship.

FWCE 547. Wildlife Law and Policy, 3 cr

Types and forms of law and policy that collectively serve to referee, organize, and establish the norms of human interaction with the natural world, with emphasis on specific State and Federal statutes. The course examines multiple foci, including why laws exist, what they are intended to accomplish, where they come from, what forms they take, and how they evolve.

FWCE 548. Graduate Problems, 1-3 cr

Individual studies in fishery or wildlife science and represents guided, graduate-level coursework that are tailored to a small number of students. These classes should be given a subtitle. No more than 6 credits of this course count toward the degree. Not available to non-thesis students.

FWCE 557. Ecological Biometry, 3 cr

This course introduces students to fundamental descriptive and inferential statistical methods commonly used in ecological research. Topics include data visualization, estimation, hypothesis testing, and statistical modeling. Students will develop essential skills in summarizing and analyzing ecological data using R, a powerful open-source statistical software. Emphasis will be placed on practical applications of statistics to real-world problems in ecology.

FWCE 558. Non-thesis Project var. cr

Individual study of a nonscientific nature. No more than 6 credits toward a degree. Available only to non-thesis students.

FWCE 559. Aquatic Ecology, 4 cr

Ecological functions of plant and animal communities in aquatic ecosystems with emphasis on physical and chemical properties, productivity, species interactions, population dynamics, and concepts for diagnosing problems and restoring aquatic ecosystems. Taught with FWCE 459. Prerequisite(s): FWCE 301 or BIOL 301, CHEM 1225G, MATH 1430G.

FWCE 567. Herpetology, 4 cr

Origin, evolution, behavior and ecology of reptiles and amphibians.

FWCE 571. GIS for Natural Resource Scientists 4 cr

Practical GIS class for students with little or no GIS experience. Class focuses on (i) learning to use industry-standard software and (ii) applications in natural resource management.

FWCE 582. Ichthyology, 4 cr

Classification, morphology, identification, life history, and ecology of fishes.

FWCE 598. Special Research Programs, 1-3 cr

Individual investigations, either analytical or experimental and represents time spent on a project that is not covered under thesis research. Maximum of 3 credits per semester. No more than 6 credits of this course count towards degree requirements. Not available to students in the non-thesis program.

FWCE 599. Master's Thesis variable credits

Thesis credits. This includes any work directly related to the thesis, including proposal writing, data collection, and thesis writing.

FWCE 690. Graduate Seminar, 1 cr (every semester)

This doctoral-level seminar provides an interdisciplinary forum for engaging with a distinguished seminar series featuring guest speakers from academia, government agencies, national laboratories, non-governmental organizations and industry. Through weekly presentations and discussions, students gain exposure to cutting-edge research, policy-relevant insights, and real-world applications across a range of fields. The course emphasizes critical analysis, cross-sector dialogue, and professional development. Students will prepare for and respond to each seminar through guided readings, written reflections, and facilitated discussions. Designed to foster intellectual breadth and career-relevant perspectives, this seminar supports doctoral students in connecting their research to broader societal challenges and opportunities. May be repeated up to 2 credits.

FWCE 699. Doctoral Research

Research units that are performed prior to the Ph.D. student taking their comprehensive exam. A maximum of 6 credit hours may apply toward graduation.

FWCE 700. Doctoral Dissertation (must have advanced to candidacy)

Research units that are performed after a Ph.D. student takes their comprehensive exam. Students must complete 18 credit hours after passing the comprehensive exam.

APPENDIX A - THE GRADUATE SCHOOL PROCESS

STEPS FOR COMPLETING THE MASTER OF SCIENCE DEGREE

- 1) Prior to arrival, the student should contact the Department Administrative Assistant (575-646-2245) to discuss acceptable documents for verification of work eligibility and completion of forms. In compliance with E-Verify, one of your documents must include a photo.
- 2) Complete all required training as specified by the major professor during the first semester. Note that some specific TA or RA duties might require immediate completion of some training.
- 3) Course Plan: By the end of the second semester, the graduate student and their major professor are encouraged to complete a draft of their program of study; this template form can be used (Appendix B), or an alternative format can be used. This form is a tentative summary of the student's coursework and serves as a guide to ensure Departmental and graduate supervisory committee requirements are met.
- 4) Graduate Supervisory Committee: Near the end of the first semester, the student and their major professor should establish the graduate student supervisory committee. By the second semester, the full committee should meet to discuss the student's proposed course plan and to review and accept the student's research proposal. In addition, students who were admitted with coursework deficiencies must develop a plan in conjunction with the major professor and the committee to make up the deficiencies.
- 5) Once a year, the major advisor and graduate student should complete the Graduate Student Review Form (Appendix C). This form is optional but ensures the student is making sufficient progress in their graduate degree program and in meeting department program learning outcomes. The form should be signed by the student and the major professor.
- 6) Proposal Defense: The student should defend their proposal to their committee by the end of the second semester of their studies. The student will prepare a short presentation summarizing the proposal chapters and then answer questions related to their proposal from the committee.
- 7) Thesis Defense and Graduation: The thesis defense includes a public presentation of the original research, followed by a closed question and answer session with the supervisory committee. After a successful defense, the final exam form should be returned to NMSU's Graduate School within 10 days. Note that it is possible for a student to fail an exam or have the potential to re-take the exam provided the committee has decided to adjourn.
- 8) Deadlines for Graduating in the Spring and Fall are published each year by the Graduate School and should be obtained by graduate students. Important dates and deadlines are always published in the [Graduate School Calendar](#). All graduate forms are available on the [Graduate School Forms](#) page.
- 9) Final Thesis: To graduate and participate in the commencement ceremony, the thesis must be submitted to the Graduate School for final approval in the correct format by the required deadline, see [here](#).

STEPS FOR COMPLETING THE DOCTOR OF PHILOSOPHY DEGREE

- 1) Prior to arrival, the student should contact the Department Administrative Assistant (575-646-2245) to discuss acceptable documents for verification of work eligibility and completion of forms. In compliance with E-Verify, one of your documents must include a photo.
- 2) Complete all required training as specified by the major professor during the first semester. Note that some specific TA or RA duties might require immediate completion of some training.
- 3) Course Plan: By the end of the second semester, the graduate student and their major professor are encouraged to complete a draft of their program of study; this template form can be used (Appendix B), or an alternative format can be used. This form is a tentative summary of the student's coursework and serves as a guide to ensure Departmental and graduate supervisory committee requirements are met.
- 4) Graduate Supervisory Committee: Near the end of the first semester, the student and their major professor should establish the graduate student supervisory committee. By the second semester, the full committee should meet. In addition, students who were admitted with coursework deficiencies must develop a plan in conjunction with the major professor and the committee to make up the deficiencies.
- 5) Once a year, the major advisor and graduate student should complete the Graduate Student Review Form (Appendix C). This form is optional but ensures the student is making sufficient progress in their graduate degree program and in meeting department program learning outcomes. The form should be signed by the student and the major professor.
- 6) Qualifying Exam: Students with a Master of Science degree do not need to take a qualifying exam. Students with a bachelor's degree must take a qualifying exam after completion of at least 18 credit hours. The qualifying exam consists of an oral exam administered by the student's committee.
- 7) Proposal Defense: The student should defend their proposal to their committee by the end of the fourth semester of their studies. The student will prepare a short presentation summarizing the proposal chapters and then answer questions related to their proposal from the committee.
- 8) Comprehensive Exam: This exam covers all phases of coursework and is required of all Ph.D. students. It should be taken after passing the proposal defense and before the end of the sixth semester, and when sufficient progress has been made toward fulfilling the research goals. The examination has both written and oral portions. The written portion may be in the form of a research proposal or consist of questions prepared by the student's committee. The student must pass the written portion before taking the oral portion. Students cannot register for 700-level courses until both parts are passed. If a student does not pass, they have the opportunity to retake the exam no sooner than 3 months and no later than 12 months after their initial attempt.
- 9) Dissertation Defense and Graduation: The dissertation defense is completed after all degree requirements are met. A minimum of 2 semesters must elapse between the comprehensive exam and dissertation defense. The defense includes a public presentation of the original research, followed by a closed question and answer session with the supervisory committee. Note that it is possible for a student to fail an exam or have the potential to re-take the exam provided the committee has decided to adjourn.
- 10) Deadlines for Graduating in the Spring and Fall are published each year by the Graduate School and should be obtained by graduate students. Important dates and deadlines are always published in the [Graduate School Calendar](#). All graduate forms are available on the [Graduate School Forms](#) page.
- 11) Final Dissertation: To graduate and participate in the commencement ceremony, the dissertation must be submitted to the Graduate School for final approval in the correct format by the required deadline, see [here](#).

APPENDIX B – PROGRAM OF STUDY FORM

This form is **optional** but strongly encouraged. Graduate students should complete the form before the completion of approximately 2 semesters, and it should be approved by the supervisory committee and updated as needed. It should be filed with the front office.

Last Name:	First Name:
Banner ID:	E-Mail:
Major:	Area of Concentration:
1st Minor:	2nd Minor:

Course of Study

Courses completed at NMSU (Please use * to designate the Courses that are in progress or not yet taken.)

Course# with Prefix:	Course Title:	Credit Hours	Grade:

Add more lines as needed

APPENDIX C – ANNUAL GRADUATE STUDENT REVIEW FORM

This form is **optional** but strongly encouraged. Graduate students and advisors should meet to discuss and complete this form annually. It can also be completed at a committee meeting and should be shared with the student's supervisory committee. It should be filed with the front office.

Student Name:	Banner ID:
Semester Admitted:	Expected Semester to Finish:
Advisor(s):	Committee Members:
Date of Meeting:	

Student progress toward degree requirements:

☐ Program of study form (Appendix B)/course plan completed	☐ Data collection completed
☐ Committee formed	☐ Data analysis initiated
☐ Thesis or Dissertation proposal reviewed and approved by committee	☐ Data analysis completed
☐ Data collection initiated	☐ Comprehensive exam completed (PhD students only)

Student progress toward FWCE program learning outcomes (PLOs):

PLO 1- Design and Conduct Original Research: Student will be able to design and implement original research that advances the science and practice of fish, wildlife and conservation ecology.	☐ Achieved ☐ Substantial progress ☐ Moderate progress ☐ Limited progress ☐ Minimal or no progress
PLO 2 – Knowledge Proficiency: Student will be able to critically evaluate and integrate established and emerging theories and concepts related to ecological, social, and/or interdisciplinary science aspects of fish, wildlife and conservation ecology.	☐ Achieved ☐ Substantial progress ☐ Moderate progress ☐ Limited progress ☐ Minimal or no progress
PLO 3 – Quantitative and Methodological Proficiency: Student will be able to demonstrate advanced competency in selecting, justifying, and applying ecological, social, and/or interdisciplinary science methodologies relevant to fish, wildlife and conservation ecology.	☐ Achieved ☐ Substantial progress ☐ Moderate progress ☐ Limited progress ☐ Minimal or no progress
PLO 4 – Professional and Communication Skills: Student will be able to effectively communicate	☐ Achieved ☐ Substantial progress

scientific information and collaborate with stakeholders to advance the science and practice of fish, wildlife and conservation ecology.	☐ Moderate progress ☐ Limited progress ☐ Minimal or no progress
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For any PLOs where the student is novice or developing, specific actions or recommendations that are suggested for the student should be noted here:

PLO number:	Recommended action:

Advisor's signature:

Student's signature:

Date: