# GUIDELINES FOR MASTER'S AND DOCTORAL DEGREE PROGRAMS IN THE DEPARTMENT OF FISH AND WILDLIFE RESOURCES

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All current graduate students in the department are required to follow these guidelines.

Department of Fish and Wildlife Resources

University of Idaho

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The following guidelines elaborate upon, but work within, policies outlined in the University of Idaho's General Catalog, Graduate Catalog, and Graduate Handbook for Theses and Dissertations. These guidelines do not cover all regulations dealing with graduate study and thesis or dissertation preparation; students must also familiarize themselves with the Catalog and Handbook. In cases of apparent conflict between policies in these guidelines and policies of the UI College of Graduate Studies, the latter will take precedence.

All graduate students in fisheries resources in the Department of Fish and Wildlife Resources are expected to achieve and demonstrate proficiency in fisheries management, ecological fundamentals, aquatic ecology, aquaculture/fish health management and population ecology. Each student will emphasize one of these three areas in his or her studies, with a more thorough understanding expected for the chosen discipline. All graduate students in wildlife resources are expected to achieve and demonstrate proficiency in wildlife management, ecological fundamentals, and wildlife habitat and population ecology. All graduate students are required to enroll in one seminar during their tenure and encouraged to attend other departmental seminars (e.g. Fish/Wlf 501) and to routinely attend other university-sponsored seminars. Graduate students are expected to present the results of their research at one or more regional, national, or international professional meetings.

#### PROGRAM FOR MASTER OF SCIENCE DEGREE

Required steps for the master's program are itemized in Table 1. The responsibility for the completion of these steps falls to the student.

#### Thesis Degree

A master's degree with thesis in the Department of Fish & Wildlife Resources usually involves selection of a research topic, formulation of hypotheses to be tested by field or laboratory sampling and experimentation (or computer simulation), and preparation of a thesis. The thesis should demonstrate originality, the ability to synthesize new insights and the ability to draw supportable conclusions. (See the university's Graduate Handbook for Theses and Dissertations.)

#### Appointment of Major Professor and Committee

The major professor should be appointed during the student's first semester in residence. The committee is selected by the student in conjunction with the major professor and approved by the department head and the College of Graduate Studies. The committee for a master's degree must consist of at least three people and at least one half of the members must belong to the graduate faculty. The major professor chairs the committee, at least one other member must be from the Department of Fish and Wildlife Resources, and at least one member must be from a supporting field. The committee provides advice on and approves the study and research proposals, and conducts examinations as required. The student is responsible for submitting all required forms to the College of Graduate Studies.

#### Planning of Degree Program

Study Plan - The program for a thesis degree requires a study plan and a research proposal.

During the first semester in residence, the student prepares, in conference with the major

professor and committee, a master's study plan outlining all course work to be completed to fulfill the requirements for the degree. The study plan will be based upon the student's previous course work and desired career directions as well as the student's strengths and weaknesses, and will support the research plan. The study plan is entered by the student on VandalWeb, after which the major professor will review the plan. The College of Graduate Studies and the Registrar's Office will then work to create a personalized degree audit for the student.

Instructions for graduate students about the electronic study plan process are available on-line from the help menu in degree audit and at: <a href="http://www.registrar.uidaho.edu/transcripts-and-records/student-degreeaudit.html">http://www.registrar.uidaho.edu/transcripts-and-records/student-degreeaudit.html</a>

Research Proposal - Within the first year of residency, the student must present her/his research proposal in a departmental seminar. Following the seminar, the student will meet with the graduate committee and any interested graduate faculty to discuss and defend the proposal. The committee should approve the research proposal before any major research effort is undertaken. The research proposal should:

- 1. Closely review significant previous research on the subject.
- 2. Describe the hypotheses to be tested or questions to be investigated.
- State objectives of the proposed research and rationale for each objective.
- 4. Describe the proposed experimental design and/or methodology, including methods to be used for analysis of data (thesis program and, where applicable, non-thesis program).
- 5. Present a schedule for completion of the program.

Following the presentation, non-faculty will be excused and the committee and other faculty members present will discuss the plan with the student. The committee will advise the student on necessary modifications in the experimental design.

The "Application for Advanced Degree" form must be completed at the beginning of the semester in which the student intends to graduate. The date for filing this application is stated in the calendar in the *Time Schedule*. Before filing the application, the candidate and the major professor must jointly ascertain that the candidate has met all degree requirements or will do so by completion of current registration.

#### Non-thesis Degree

A non-thesis degree in the Department of Fish & Wildlife Resources involves selection of a research topic and preparation of a review or survey paper. The non-thesis option requires preparation of a review or survey paper based on collection and analysis of existing information. The review paper should demonstrate originality, the ability to synthesize new insights and the ability to draw supportable conclusions. (See the university's Graduate Handbook for Theses and Dissertations.)

#### Appointment of Major Professor

The major professor should be appointed during the student's first semester in residence.

Although appointing a committee is not required, it is highly preferred by many of the faculty.

The committee is selected by the student in conjunction with the major professor and approved by the department head and the College of Graduate Studies. The student is responsible for submitting all required forms to the College of Graduate Studies.

#### Planning of Degree Program

Study Plan - The program for a non-thesis degree requires a study plan and a research proposal. During the first semester in residence, the student prepares, in conference with the major professor (and optional committee), a master's study plan outlining all course work to be completed to fulfill the requirements for the degree. The study plan will be based upon the

student's previous course work and desired career directions as well as the student's strengths and weaknesses, and support the research area or plan. The study plan is entered on-line by the student and is approved by the student's committee, department head and the College of Graduate Studies.

The "Application for Advanced Degree" form must be completed at the beginning of the semester in which the student intends to graduate. The date for filing this application is stated in the calendar in the *Time Schedule*. Before filing the application, the candidate and the major professor must jointly ascertain that the candidate has met all degree requirements or will do so by completion of current registration.

#### Final Defense of Thesis

#### Thesis Plan

Format - The preferred form for the thesis will be as one or more manuscripts suitable for submission to a referred scientific journal (the format must satisfy requirements in the Graduate Handbook for Theses and Dissertations, published by the College of Graduate Studies). The major professor will ordinarily be the second author on thesis manuscripts submitted for publication. Students must also prepare timely progress and completion reports on their research findings as required by the major professor or funding agency.

Review - After the thesis draft has been approved by the major professor, the student will submit it to the committee for a review period of at least 14 days. When amendments required by the committee have been completed and approved, the committee will sign the "Request to Proceed with Final Defense of Thesis/Dissertation" and agree to the time and place for the thesis defense.

Defense - An announcement of the student's defense will be distributed to all college departments one week prior to the defense and a copy of the thesis will be posted in the departmental office. Procedures for the defense will be as follows:

- 1. The major professor will chair the defense.
- 2. The student will present a summary of the research to the committee and interested faculty and students and will address general questions from the audience on the research.
- 3. Following the presentation, the general audience will be excused, and the student and committee will reconvene. Other faculty are welcome.
- 4. The committee may then question the candidate on
  - a. Methods, results, conclusions, and other relevant points of the thesis, and
  - b. General knowledge.
- 5. After the student is excused, the committee and other faculty present will assess the student's performance.
- 6. The committee will vote on the candidate's performance on the defense.

Following the defense, each committee member will sign the "Final Examination Report" indicating if the student passed or failed the defense. Majority vote is required to pass. The major professor will forward the final defense report to the College of Graduate Studies. Following defense of the thesis, the student must make any final changes required by the committee before signatures can be obtained on the "Authorization to Submit Thesis/Dissertation" form. Should a defense be failed, refer to the Graduate Catalog for procedures.

#### Non-Thesis Plan

The format of the paper should generally follow guidelines established by the College of Graduate Studies for a master's thesis, but may be modified as dictated by the major professor

(and optional committee). If a committee is formed, the student will submit the paper to the committee members for a review period of at least 14 days, after the paper has been reviewed by the major professor. When amendments required by the committee have been completed, the survey paper must be presented and defended. After the defense, the "Report of Comprehensive Examination" should be filed by the advisor with the College of Graduate Studies (college guidelines require that committee members also sign this form). Defense of non-thesis research papers will follow the same guidelines established for defense of master's thesis (see earlier section).

#### PROGRAM FOR DOCTOR OF PHILOSOPHY DEGREE

Required steps for the doctoral program are itemized in Table 2. The responsibility for the completion of these steps falls to the student.

#### Philosophy

Graduate education is the acquisition of knowledge and tools to enable the student to become an independent thinker and self-directed professional. A graduate education is part of a lifelong process that only moves to a new phase with the completion of the degree. Graduate education should provide sufficient understanding of the central materials and concepts of a discipline to serve as a basis and a framework for critical thinking, reading, writing, synthesis, and research. In addition, a graduate education should provide a practical as well as a theoretical grasp of work as a natural resource professional. The successful doctoral student should be a good communicator of key concepts within the field of specialization, be able to formulate and address research questions and hypotheses, and present and publish papers. Successful completion of a doctoral degree is attained through the student having demonstrated mastery of all elements of their program.

The Ph.D. degree has one designation: "College of Natural Resources." However, dissertation topics must be chosen from disciplinary areas within a department of the college. A dissertation, required of all doctoral students, must display a significant level of originality and creativity using rigorous scientific methods in its conception and design. The doctoral student is responsible for developing, conducting, and writing the dissertation concordant with the highest academic standards.

### **Student Selection**

The admissions committee in either fisheries or wildlife, using the normal criteria, will select students in the doctoral program after review of credentials: GRE scores, GPA, academic and experiential background, and recommendations. Normally, students entering the doctoral program will have completed a Master's degree. However, there may be cases where students accepted into a Master's program would move directly into the doctoral program without completing the M.S. degree. In those cases, the student must first reapply as a doctoral student and gain the approval of the admissions committee. There may also be exceptional cases where a student may apply directly to the Ph.D. program after receiving a bachelor's degree.

#### Appointment of Major Professor and Committee

Formal appointment of the major professor should be made within two semesters of registration. The committee for a doctoral degree must consist of *at least* four members and at least one half of the members must belong to the graduate faculty. The major professor chairs the committee, at least one other member must be from the Department of Fish and Wildlife Resources, and at least one member must be from a supporting field. In cases of a tie vote on passage of either the preliminary examination or on defense of the dissertation, the negative votes will prevail. The Major Professor and Committee form must be initiated by the student and approved by the department and the College of Graduate Studies. The student is responsible for submitting all required forms to the College of Graduate Studies (Table 2).

#### Planning of Degree Program

Study Plan - Within the first two semesters in residence, the student prepares, in conference with the major professor and committee, a program outlining all requirements for the degree.

The program includes a study plan and a research proposal. The study plan will be based upon the student's previous course work and desired career directions. At the initial committee

meeting, the student's strengths and weaknesses will be assessed by the committee and the study plan shaped accordingly. The study plan is entered on-line by the student and is approved by the student's committee, department head and COGS.

Research Proposal - Within the first year of residency, the student must present her/his research proposal in a departmental seminar. Following the seminar, the student will meet with the graduate committee and any interested graduate faculty to discuss and defend the proposal. The committee should approve the research proposal before any major research effort is undertaken. The research proposal should:

- 1. Closely review significant previous research on the subject.
- 2. Describe the hypotheses to be tested.
- 3. State the objectives of the proposed research and the rationale for each objective.
- 4. Describe the proposed experimental design and methodology, including methods to be used for analysis of data.
- 5. Present a schedule for completion of the dissertation.

Following the presentation, non-faculty will be excused and the committee and other faculty members present will discuss the plan with the student. The committee will discuss with the student proposed modifications in the experimental design.

#### Preliminary Examination

The preliminary exam shall ordinarily consist of both a written and oral portion. The exam may not be scheduled until the student has completed the majority of his or her course work, and must be taken at least two full semesters prior to defense. The total written exam time will not normally exceed five total days in length. The oral exam may be separated in time from the written exam by no more than one month. The purpose of the exam is a rigorous determination

of knowledge, comprehension, and evaluative capability with particular emphasis placed on the student's area of specialization. The written portion shall be taken from questions prepared by the committee members. At the discretion of the major professor and the committee, the written portion may also include questions prepared by other departmental faculty. If the committee so decides, the response to each written question will be evaluated by the committee member or departmental faculty member who submitted the question.

The oral portion of the exam will be administered following the written exam. The oral portion will be attended by the committee and any interested departmental faculty. The student's graduate committee will review responses to each written question, each evaluation of written questions by non-committee faculty, and the oral exam, and will make the final determination by majority vote on passage or failure of the exam. If an exam is failed, both written and oral portions must be retaken. If the student is allowed to retake a failed exam, it may be retaken within the following 3 to 12 months, and may be retaken only once. A student passing the preliminary examination is advanced to candidacy for the Ph.D. degree.

#### Preparation and Defense of Dissertation

Format - The preferred form for the dissertation will be as one or more manuscripts prepared in a format suitable for publication in a scientific journal (the format must also conform to requirements in the Graduate Handbook for Theses and Dissertations). The number of manuscripts prepared will depend upon the breadth of the dissertation research: all significant research completed should be reported. The student is expected to submit these manuscripts for publication (manuscripts may be submitted either before or after the degree is granted). The student will ordinarily be the senior author in dissertation manuscripts submitted for publication.

Students must also prepare timely progress and completion reports on their research findings as required by the funding agency.

Review - The student will, with the guidance of the major professor, prepare a draft of the dissertation in accordance with guidelines established by the College of Graduate Studies and the Department of Fish and Wildlife Resources. After completing the departmental "Thesis/Dissertation Advisor Approval Form", the student will submit the draft to the committee for a review period of at least three weeks. When amendments to the dissertation required by the committee have been completed and approved, each committee member will sign the "Request to Proceed with Final Defense of Thesis/Dissertation", which sets the time and place for the dissertation defense. Submission of the final draft to the College of Graduate Studies for review of the format is recommended but not mandatory.

Defense - Announcements of the final defense must be circulated according to college and university policy (see Graduate Handbook for Theses and Dissertations). In addition, a copy of the dissertation must be made available in the department office at least five working days prior to the defense. Procedures for the defense will be as follows:

- 1. The major professor will chair the defense.
- 2. The student will present a summary of the research to the committee and interested faculty and students and will address general questions from the audience on the research.
- 3. Following the presentation, the general audience will be excused. The student, committee, and other faculty will reconvene.
- 4. The committee may then question the candidate on methods, results, conclusions, and other relevant points of the dissertation.
- 5. After the student is excused, the committee and other faculty present will assess the student's performance.

6. The committee will vote on the candidate's performance on the defense. Majority vote is required to pass.

Following the defense, each committee member will sign the "Final Examination Report" indicating if the student passed or failed the defense. The major professor will forward the final exam report to the College of Graduate Studies. Following defense of the dissertation, the student must make any final changes to the satisfaction of the committee members before signatures can be obtained on the "Authorization to Submit Thesis/Dissertation" form. After obtaining all signatures on this page, except for the Vice President for Research and Graduate Studies, two copies of the dissertation and two additional copies of the title (signature) page and abstract are submitted to the College of Graduate Studies. The dissertation must be submitted no later than five weeks before the end of the semester in which the degree program is to be completed. Should the dissertation defense be failed, refer to the Graduate Catalog for procedures.

## TABLE 1

# REQUIRED STEPS FOR COMPLETION OF MASTER'S DEGREE

See <a href="http://www.uidaho.edu/cogs">http://www.uidaho.edu/cogs</a>

Procedure	Form Signed by	Time Frame
File form "Appointment of Major Professor and Committee." If a change is made, file form "Graduate Program/Committee Changes."	major professor, committee, and department head	filed before or at the same time as submission of study plan
File on-line form, "Master's Study Plan." If a change is made, file on-line form "Graduate Program/ Committee Changes"	major professor, committee, and department head	will not be processed unless "Appointment of Major Professor and Committee" form has been approved by the vice president for research and graduate studies
Present research proposal in departmental seminar	(approved by committee)	generally first or second semester
File "Application for Advanced Degree" with College of Graduate Studies	major professor	first two weeks of last semester
Submit draft to major professor		preferably 11-12 weeks before end of last semester

Procedure	Form Signed by	Time Frame
Revise draft as necessary		
Complete "Thesis/Dissertation Advisor Approval Form" which accompanies the draft to each committee member	major professor	available from department secretaries
Submit draft to committee		preferably 8-9 weeks before end of last semester
Revise draft as necessary		
File "Request to Proceed with Final Defense of Thesis/Dissertation" with College of Graduate Studies (thesis program only) <sup>1</sup>	major professor, committee	five days prior to the defense is advised but not required
File "Report of Final Defense" with the College of Graduate Studies (thesis programs) or "Report of Comprehensive Exam" (non-thesis programs)	major professor, committee	following defense
Notify FWR faculty of thesis or paper availability and scheduled date for defense		at least five days before defense

<sup>&</sup>lt;sup>1</sup>Submission of a thesis draft to the College of Graduate Studies for approval of format is recommended but not mandatory at this time.

Procedure	Form Signed by	Time Frame
Sign signature page of thesis	major professor, committee, department head, and college dean	
Submit thesis to College of Graduate Studies (two unbound copies, extra title page)		by College of Graduate Studies deadline
Paper and CD copy given to the department.		

## TABLE 2.

# REQUIRED STEPS FOR COMPLETION OF DOCTORAL PROGRAM

# See http://www.uidaho.edu/cogs

Procedure	Form Signed by	Time Frame
File the Appointment of Major Professor and Committee form	major professor, committee, and department head	first or second semester in program
Develop study plan and research proposal		first or second semester
Present research proposal in departmental seminar	(approved by committee)	generally first or second semester
File "Study Plan" with College of Graduate Studies on-line	major professor, committee, and department head	first or second semester
Take preliminary examination	administered by committee	no later than two semesters prior to the defense
File "Report of Preliminary Examination and Advancement to Candidacy" with the College of Graduate Studies	major professor, committee	immediately after preliminary examination
File "Application for Advanced Degree" with College of Graduate Studies	major professor	first two weeks of last semester
Submit draft to major professor		
Revise draft as necessary		
Complete "Thesis/Dissertation Advisor Approval Form" which accompanies the draft to each committee member	major professor	available from department administrative assistants
Submit draft to committee		preferably 9-10 weeks before end of semester

Procedure	Form Signed by	Time Frame
Revise draft as necessary		
File "Request to Proceed with Final Defense of Thesis/Dissertation" with College of Graduate Studies (sets time and place of dissertation defense). Submitting one copy of final draft to College of Graduate Studies for checking of format is recommended but not mandatory.	major professor, committee	no later than ten working days before examination
"Authorization to Proceed with Final Defense" is issued by College of Graduate Studies		issued by College of Graduate Studies when the above form is submitted
Notify FWR faculty of dissertation availability and scheduled date for defense		at least five days before defense
Defend dissertation		preferably several days before deadline for dissertation submission
Major professor files "Final Examination Report" with College of Graduate Studies	major professor, committee	immediately after defense
Submit dissertation to College of Graduate Studies - two unbound copies, two extra title (signature) pages and abstracts		by College of Graduate Studies deadline
Submit one copy of the final dissertation to the department in room 105.	major professor/student	
Paper and CD copy to the department		