Biology & Wildlife MS and PhD Degrees: Masters Degree

The minimum requirements for an MS degree are as follows:

- 30 credits of coursework (400- or 600-level), including at least 6 credits of thesis (F699)
- No more than 12 thesis credits may be counted toward the minimum number of credits. In other words, 18 credits must come from coursework
- At least 21 credits, including thesis credits, must be at the 600-level; this means that you can apply up to 9 credits of 400-level coursework to your degree

In practice, most students take many more than 6 credits of thesis (and usually more than 30 credits total).

Prior to the start of classes:

- Participate in an assessment interview. This interview will allow the faculty to evaluate the breadth of your previous training and direct you toward appropriate courses early on in your graduate career.
  - Your major advisor and two members of the MS assessment (comprehensive exam) committee will attend.
  - Students are expected to have or obtain a background in at least three broad areas of biology (e.g., ecology, cell biology, physiology) and experimental design.
  - Students without previous research background are expected to take Research Design in their first semester.
  - At the end of the interview, the departmental form entitled "Assessment Interview" (available from Carol Piser) should be submitted.
- Participate in our New Graduate Student Orientation and TA training (if you are a TA your first semester). Complete required safety training.

During your first semester:

- Form an advisory committee consisting of at least 3 people, including the committee chair. This is done in consultation with your major advisor (committee chair). Members of the committee are usually selected based on complementary expertise in areas of direct relevance to your research project.
  - The majority of faculty members, including the major advisor or co-advisor, must have an appointment in Biology and Wildlife.
  - Faculty from other departments or even from outside of UAF may be added as appropriate. Faculty from other departments within the University of Alaska system (UAF, UAA and UAS) do not require special permission.
  - To add a faculty member from outside of the UA system, the committee chair must submit a letter to the affiliate committee (via Carol Piser)
explaining why the expertise is needed, accompanied by a current c.v. of
the proposed faculty member.
  o You will need to turn in the form entitled "Appointment of Graduate
Advisory Committee", available through the Graduate School Web site.
  
- Start coursework

**By the end of your second semester:**

- Develop a graduate study plan (GSP), including a proposal for research.
  o The graduate study plan forms a contract between you and your
  committee. It outlines what you intend to do in terms of your research, and
  what courses you intend to take. It is a working document that is expected
to change as your work develops and can be amended and resubmitted at
any time prior to your advancement to candidacy, as long as you and your
committee agree. It must include a preliminary title, a detailed outline of
the research proposal (this may be substituted by the actual proposal), and
a list of required and recommended courses.
  o Turn in a GSP form at any time during the first year, **but no later than
the end of your second semester**.

- Hold at least one full committee meeting in which the GSP is approved and you
get feedback on your proposal.

- Complete the MS comprehensive exam by the end of the second semester.
  o M.S. students are required to write and orally defend a research proposal
to their graduate advisory committee by the end of their second semester
in the graduate program.
  o Research proposals must consist of a minimum of two pages (not
including references, figures, tables, or appendices) and follow the general
format of a Grant-in-Aid or introductory thesis chapter.
  o Proposals must be submitted to the graduate advisory committee two
weeks prior to oral defense.
  o For the oral defense, students will give a 15-20 minute presentation of
their proposal followed by an oral examination administered by their
graduate advisory committee on the theoretical background, the
experimental design, and significance of the proposed research. Proposal
defense questions will require students to justify the importance and
feasibility of research in a broader context.
  o Upon completion of the exam, submit a "Report on Comprehensive
Exam". An unsuccessful defense of the proposal will result in a
conditional pass for the MS comprehensive exam, and you will be
required to complete the proposal and defend it by the end of the
following semester.
Second year and beyond:

- Complete coursework.
- Hold at least one committee meeting per year. We recommend that you meet with your full committee at least once per semester.
- Submit an Annual Report, including substantive comments regarding academic and research progress provided by the committee chair and a research progress report written by the student, at least once per year. This is usually done in conjunction with a committee meeting. If you are within 2 years of completion of the degree (this is normally the case for all MS students after the first year), this must include a realistic timeline for completion of requirements. Note: If you do not submit an Annual Report, or if progress is considered unsatisfactory, you will be considered "not in good standing" and may not be eligible for TA and RAships. We will work with you and your committee to get you back on track and in good standing.
- Advance to candidacy
  - Upon completion of at least 9 credits of coursework (including all those listed on the GSP as required), approval of the GSP, and successful completion of the comprehensive exam, you can apply for advancement to candidacy. This makes you eligible for graduation.

Thesis production:

- An MS thesis usually consists of one or two manuscripts formatted for publication in a scientific journal, along with a general introduction to the topic. If there is more than one chapter, a general "Conclusions" section that draws on all the chapters and provides recommendations for future research is also expected. Even if you have only one manuscript chapter you can include a separate "Conclusions" section, but it is not required.
  - The Introduction should provide a rationale for the research, including an appropriate literature review. Journal articles often limit how long an introduction can be; this is your opportunity to show us how broadly you've read about this topic.
  - The thesis should follow all the Graduate School guidelines, including formatting; see the Graduate School Web site for these guidelines.
  - We highly recommend that you attend a thesis formatting workshop. These are offered by the Graduate School on a regular basis; check here for their calendar.
- Deadlines for submission of the thesis to the Graduate School are posted on Graduate School Web site. However, prior to submission, your thesis will need to be reviewed and approved by all committee members, the chair of the department, and the Dean of the College of Natural Science and Mathematics. Plan accordingly to meet the deadline.
Process:

- Work with your committee chair (major advisor) to produce a full first draft of each chapter. This will normally require several drafts.
- Once your committee chair is satisfied with the draft of your thesis, submit it to the remainder of your committee for comments. Usually all committee members will request further revisions.
- Once your whole committee agrees that the thesis is ready to be defended, set a date for your oral defense.
  - Plan on an hour-long public presentation (including questions) followed by a closed-door oral defense that can take up to two hours. All committee members must be present, either in person or via tele- or videoconference.
  - Defenses should be advertised at least 2 weeks prior to their occurrence. Please work with Carol Piser to schedule your defense and advertise it.
- Following a successful oral defense:
  - Complete the "Report on Thesis Defense" form, have it signed by all committee members, and submit to Carol Piser.
  - Incorporate all further changes requested by the committee.
  - Obtain signatures from all committee members on your signature page that is printed on thesis paper. Please include the names of the committee members below the signature lines.
  - Once all committee members have approved, submit your thesis electronically to the Department Chair (for Biology students: Christa Mulder, cpmulder@alaska.edu) or the Wildlife Program chair (for Wildlife students: Mark Lindberg, msllindberg@alaska.edu) for review, and send a copy to the department: fybio@uaf.edu. Expect this review to take up to two weeks; please take this into account when planning your defense. The chair will contact you with requests for further changes; once these have been approved, he or she will sign the your signature page.
  - Submit a hard copy of the thesis draft, including the signature page and recommendation from the chair, to the Dean of CNSM.
  - Once the Dean approves your thesis, submit it to the Graduate School in hard copy and electronically, with your signature pages and thesis submittal form.