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Thesis Guidelines

Overview

The MSES program at APU recognizes that graduate education in the sciences is in many ways qualitatively different from undergraduate education. In particular, graduate education emphasizes the development of individual research projects that are original and often publishable.

Because a thesis is required for the MSES degree and because progress and success in science is often based on publication record, the program encourages students to write their thesis in form and content suitable for submission to a peer-reviewed journal of their choice. Alternatively, the thesis may be a “gray-literature” professional report, particularly well-suited for projects done in conjunction with an agency.

The independent research and self-direction that a thesis requires may be a relatively new experience for students accustomed to conventional course-based learning typical of elementary through college education. Thus the MSES program encourages students to explore potential thesis topics early on.

Applicants are encouraged to think about thesis ideas early, even before enrolling in classes. This will provide MSES students with a headstart on their research, and in particular on one of the earliest classes taken – Research Methods (ES 601) – which has as its outcome a thesis proposal.

Students can consider their credits taken at APU as one of three types:

1. Content, conceptual, and knowledge-based courses. These include many of the policy and science classes required by the degree as well as seminar and directed study courses. These help students understand the overall context of their research work.

2. Skills, tool-based, and process-oriented classes such as GIS and quantitative analysis courses. These courses offer students experience with standard methods they will use to analyze, display, and communicate their work.

3. Research and experience based credits including internships, research, and thesis. These credits reflect the student’s own independent research tasks: data collection, analysis, and writing.

Together the three credit types described above will prepare the student conceptually, provide necessary tools, and encourage active participation as a scientist rather than as a technician.

The thesis process consists of (1) choosing a thesis topic, (2) selecting a thesis advisor and 2-3 additional thesis committee members, (3) writing and orally presenting a thesis proposal, (4) preparing for and conducting the thesis research, (5) analyzing the data and writing up the thesis, (6) defending the thesis, (7) presenting formatted copies of the thesis to the University and Consortium Library, and (8) submitting the thesis manuscript for publication.

Thesis Guidelines
Thesis Topics

Students generally find thesis topics through their own interests, through work-place opportunities, or through alerts about funding opportunities through friends, faculty, or postings. Because of contacts outside the University, faculty can sometimes place students with agencies or organizations to work on thesis projects related to management, policy, or environmental science in a “real-world” setting and where other resources are available (e.g. molecular lab, field station).

Some students come to the University with an idea, some funding, a project, or even all three already in hand. These sort of students can sometimes finish in less than two years by tailoring their courses and schedules to reach the goal of the thesis write-up and defense directly. Students who have not formed a thesis idea by the end of their first year are generally slower to finish their degree and rarely complete their degree in two years.

If the thesis idea is the student’s own, then funding may not be as important. Interest and passion go farther, sometimes, than money alone. If the thesis idea is not the student’s own, then generally a funded project will be more attractive than an unfunded one. The best combination is a funded, student-generated idea.

Thesis Advisor and Committee

Besides a thesis topic and proposal, first year graduate students should assemble a thesis committee of three or four members, chaired by their thesis advisor. This committee consists of APU faculty and perhaps one person from outside the University. All committee members should be equipped with appropriate credentials to help the student in some way with formulating, executing, analyzing, or reporting their thesis research.

The student’s thesis advisor (committee chair) will be the primary APU person with whom the student works on their thesis. The thesis advisor should be a faculty member who has experience and credentials close to the discipline chosen as the student’s topic, and with whom the student anticipates a productive, professional working relationship. The advisor must be an APU faculty member, although in practice students sometimes work more closely with people outside the University during the actual data collection phase. In this latter case, the primary responsibility of the Chairperson will be to ensure that the thesis and its defense satisfy University standards.

Committee members also advise the student’s project according to their skills or knowledge. In choosing committee members students should consider that the more members on the committee, the more who can veto the thesis. All committee members must agree that a thesis is adequate for defense. Each will be required to sign the Thesis Registration form and to designate the approximate contribution (in percent) to advising the student on their thesis work.

Students should choose their thesis advisor early in their first term, and finalize their committee during the second term. By default, the Director of the MSES Program is the student’s academic advisor until a thesis advisor is chosen, but a student should be thinking about whom he or she

Thesis Guidelines
would like as a thesis advisor immediately upon admission, and by the end of the first semester should have discussed their preference with the preferred advisor and the Director of the MSES Program. If a new advisor is selected, students should submit a Request for Change Major/Minor/Advisor form to the registrar.

Once students have chosen both an advisor and a thesis topic, they should discuss possible committee members with their advisor. A committee should be selected by the time the student presents their thesis proposal defense in the spring, and those committee members will be expected to sign the Graduate Thesis Proposal Approval form that is submitted after the defense.

**Thesis Proposal**

One outcome of the required Research Methods course (ES 601) taken by all first year fully admitted graduate students is a thesis proposal, due before the end of their first semester. While this proposal will very likely not be exactly what the student ultimately accomplishes, it is an excellent base plan that will serve as a basis for further research and subsequent modification. If the student later changes their thesis topic drastically, a second proposal may be required.

While working on the proposal, students should discuss with their advisor the possible need to submit their proposal for review by either the Off-Campus Risk Management Committee, the Institutional Review Board, or both. If your thesis research will take place outside the campus, you may be required to file a risk management plan (RMP) with the Off-Campus Risk Management Committee. The goal of an RMP is that the student recognizes and plans for risks inherent in the activity related to their credit-earning activity. Likewise, if your research involves human participants or animal subject, you may be required to file a proposal to the Institutional Review Board (IRB) to ensure that your proposed work treats those participants/subjects in an ethical and appropriate manner. Details about both these processes, including guidelines and forms for submission, are found on the APU intranet at their respective committee webpages: Off-Campus Risk Management’s site is found at MyAPU/Community, and IRB’s site is found under MyAPU/Academics. Please note that both of these processes take substantial time, so submission of your documents should take place early in the proposal process.

To fund thesis related expenses, students will often apply for grants and other funding with assistance from their advisor. The thesis proposal will be a key document in seeking these funds, as it will serve as the core of any proposal. Specific proposal requirements will seldom permit use of the thesis proposal without some modifications of length, order, and content, but the key ideas, figures, and even much of the text can often be used in grant proposals. For this reason, and because a final version of the proposal is not submitted for approval until after the first summer of fieldwork, it is a good idea to view the proposal completed in Research Methods as a living document that will be frequently updated to reflect ongoing changes in the thesis research goals, methods, and timeline.

In addition to the written proposal, each student will give an oral presentation of his or her proposal. This oral presentation is done during the spring semester of the student’s first year. It is a 30-45 minute public presentation open to all faculty and students in the Environmental Science
Department, including undergraduates. All MSES graduate students, regardless of their status, are required to attend these presentations.

During the first week of the spring session, each graduate student is expected to select a date and time for their presentation (typically Monday or Friday lunch hours), confirm the availability of their committee members, and provide the proposal presentation date and title to the administrative assistant. Students are responsible for publicizing (via posted flyers and an email announcement submitted to the administrative assistant for circulation) their presentation at least two weeks in advance of the presentation date. Following the proposal presentation, students should make any revisions necessary to their written proposal and submit the Graduate Thesis Proposal Approval form to the registrar. The signature of all committee members signifies that the student is ready to commence the actual thesis fieldwork and analysis.

**Thesis Research**

Students should prepare for their research by taking appropriate classes or seminars. These classes will provide them with conceptual underpinnings or specific analysis tools. Depending upon their specific circumstances, students may also be required to apply for research permits to conduct their work on public lands, to complete a risk management plan for University approval, and/or to apply for project funding. Other preparation might include buying or renting equipment, food, and lab space. In addition, students may need to make preliminary visits to research sites, lab facilities, and/or the workplaces of collaborators. The student must arrange these and all other logistics with the help and guidance of their advisor and other committee members, with whom the student should schedule periodic meetings.

It is worth stressing that all of these tasks, and indeed all others related to the thesis, are the responsibility of the student. This is one of the primary differences between graduate work and an undergraduate education: committee members, including the advisor, are not “teachers” whose primary job is to assign tasks and evaluate the student’s directed progress. They are coaches and collaborators who provide advice and mentoring to students who are expected to display initiation, self-motivation, and direction with respect to the research topic.

After the proposal and committee selection, the student should begin the thesis research. This is most efficiently accomplished during their summer following the first year. The best strategy for effective use of credits during this first summer is to devote 3-6 credits of elective requirements to Directed Study or Internship credit directly related to collecting thesis data, thereby lightening a student’s course load during the second year when thesis writing takes place. Thesis credits are typically not used during the first summer of data collection.

As an example, a student working at a genetics lab on caribou population data that will be used for her thesis should consider signing up for three credits of internship using the Practicum/Internship Contract form. Or, a student who will be in the Brooks Range documenting the northward spread of robins might consider a directed study entitled “Research on bird expansions” and submit an Independent/Directed Study Contract form. In either case, the student works together with the thesis advisor to craft the academic experience best suited to the student’s needs and situation.

**Thesis Guidelines**
Analysis and Writing

Six credits of thesis research (ES 69900) are required by the degree. These credits should be reserved for the second year of the program during the actual analysis, write-up, and defense stage of the thesis. To register for the first thesis credits requires the Graduate Thesis Proposal Approval form, which should have been submitted during the first spring term. This form will generally be completed after the thesis has been proposed both in written form and orally.

During the fall session, students who are actively working on the analysis and write-up of their data will register for thesis credits and work independently on the process of preparing the thesis document and defense. Their work will be guided by their advisor and other committee members, and also by their peers through a series of informally scheduled thesis seminar meetings attended by the MSES Program Director and other students. In this seminar, students will share and review their progress on the analysis of their data and preliminary drafts of their methods and results. The analysis process should be substantially completed, with drafts of the methods and results reviewed and revised, by the end of the fall term.

By December of their second year, students should be writing in earnest. Most students underestimate the effort and time required for thesis writing and revision. A student hoping to graduate in May should have their Introduction and Discussion sections written and a complete first draft nearing completion early in the spring term. Early drafts should be submitted to the Thesis Advisor only, with subsequent drafts circulated among the full committee. Recognize that you must allow time for your advisor and committee members, who have busy lives, to read and respond to drafts. A week or so for turnaround is common, and during holidays, breaks, and blocks it might be longer.

The student’s goal should be completion and approval of a final draft by March, allowing time to apply for May graduation and to focus on preparation of an oral thesis defense. In this case, “final draft” means that each committee member feels that the thesis is defensible, while acknowledging that minor revisions and formatting may yet be completed prior to graduation.

Thesis Defense

The defense is a 60-minute public oral presentation of the thesis (including 15 minutes for questions from the audience) followed by a 30-60 minute closed question and answer session that takes place between the thesis committee and the student. The defense is expected to be organized, polished, and practiced.

If the members agree with the student that the thesis is ready to be orally defended, then the student must find a time during which all members of the committee can meet for the defense. The defense must take place prior to graduation, and students should recognize that the availability of committee members, other faculty, and fellow students is increasingly limited as the end of the term approaches. Defenses should therefore occur before the last week of classes in a term. Except in unusual cases, defenses should not occur outside the fall and spring terms: holiday and summer defenses are poorly attended.

Thesis Guidelines
It will be up to the student to select a defense date and time, confirm the availability of their committee members, confirm with the registrar the reservation of a suitable room, obtain and test audio/visual equipment. These tasks are generally done with the help of the Environmental Science Department administrative assistant. Students are responsible for publicizing their defense (via posted flyers and an email announcement submitted to the administrative assistant for circulation) at least two weeks in advance of the presentation date. Committee members should be provided with paper copies of the most recent version of the thesis for reference during the defense.

**Thesis Formatting**

This thesis manuscript brought to the defense will be the penultimate draft and should include three copies of the signature page on high quality paper. The closed session is where the student can be expected to receive the committee’s signatures; however, one or more members may choose not to sign, pending further corrections and clarifications to the thesis document.

There are three paper copies of the final, agreed-upon document required of the student: one for the University and two for the Consortium Library. Each must have original signatures on the Signature Page. Thus, committee members must sign three Signature Pages each. Sample signature pages are available in this document and online. Please note that all committee members must also sign the *MSES Thesis Committee Approval* form and submit it to the Registrar’s Office prior to graduation.

The paper copy expected by Alaska Pacific University must be bound using soft or hardcover book style binding, at the student’s discretion. It should be printed on high quality paper. This copy will go to the Department administrative assistant, and should be supplemented by a complete electronic copy, in PDF format. At this time, students should decide whether they would like to permit the department to post the PDF of their thesis online. Optionally, another paper copy may be provided to the major advisor and/or committee members.

The second and third copies must be printed on good quality, white, 20-pound paper and measure 8-1/2 inches by 11 inches. Easy-erase types of paper will not be accepted. The student submits these two copies of the final version of the thesis to Christie Ericson, Serials Librarian in the Consortium Library. You can get directions to her office (116G) by contacting her directly at anlce@uaa.alaska.edu or 786-1990. That office then binds these two copies, and deposits both in the library. The library pays these binding costs.

Guidelines for the library copy:

- 8.5 by 11 inches, good quality, 20-pound white typing paper
- Laser printed, one-sided
- Double-spaced, 12 point, non-script font
- Top and left margins 1.5 inches; bottom and right margins 1.0 inch
- Number pages in the upper right corner

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*Thesis Guidelines*
• Title page, signature page and optional dedication page are unnumbered
• Acknowledgements: page (i)
• Abstract (150 words or less) as a succinct account of the work containing a statement of the problem, methods, results, and conclusions: page (ii)
• Table of contents: page (iii)
• List of figures (if applicable): page (iv)
• List of tables (if applicable): page (v)
• Preface (if applicable): page (vi)
• Body of thesis (text): begin with unnumbered page 1 and number all following pages using Arabic numbers.
• Place figures and tables in the text on the page following their first reference.
• Bibliography or References Cited: begin on new page and follow the sequential page numbering of text.

Additional personal copies of the manuscript can be bound, at student discretion, in any desired format. At present, no local bindery offers hardcover (library-style) binding. Personal hardbound copies can be ordered through Kater-Crafts Bookbinders (katercrafts@earthlink.net, 562-692-0665) for approximately $25/copy (3 copy minimum).

**Publishing**

Published findings are the foundation of science: all professional research (as opposed to “practice” studies conducted by students in classes) should be conducted with an intention to share the results in a public forum. Publishing is not a requirement for graduation from the MSES program, but students are strongly encouraged to submit their manuscripts to an appropriate scholarly journal. Choice of journal, submittal timeline, choice of co-authors (if applicable), and division of responsibilities should be discussed by the student and thesis advisor well in advance of graduation. Students are encouraged to write their thesis in the format appropriate for their target journal.
Thesis Writing Tips

Generally

- Be consistent, not creative in your writing
- Define acronyms in their first occurrence like this: "Graduate students at Alaska Pacific University (APU)…" then generally use the acronym. If you are not going to use the acronym, then do not define it!
- Put page numbers on each page. Double space, 12 point.
- Unless your thesis advisor says differently cite others published works as (Last Name, year) – that is, cite any fact you found in the literature by writing an open parentheses followed by the author as a single last name if one author, last-name-1 and last-name-2 if two authors, and last-name-1 et al. if three or more authors; then a comma; the year published; then a closed parentheses.
- Write each paragraph with a single topic sentence that makes a point that the rest of the paragraph elaborates or proves. Imagine somebody is reading this thesis and wants to get the important points. They are just skimming the thesis for important stuff and they get it by reading the first sentences of each paragraph.
- Write your results first, and show them to your advisor. Then write the methods, then the discussion, then the intro, then the literature cited.
- Make sure your advisor gives you the go ahead on the first draft BEFORE you give your thesis to the other committee members. Then give the revised draft to the second committee member. Then give the next revision to the third member (outside examiner) -- this will prevent wasting everybody's time with appalling initial drafts.
- If you get an edited manuscript or section back from your advisor or committee member, then revise it ASAP. ASAP. ASAP. Then give it back to your advisor. If you take your thesis seriously as a priority, then your advisor will too. If you look to be slacking, playing, working on other stuff, then your advisor may conclude this thesis is not a priority and will react accordingly.
- Put some effort into editing your manuscript. Nothing is more annoying to a reader than a writer who shows disrespect by not even re-reading their own manuscript. Why should your advisor care about your sub-par work if it is clear that you do not?
- Don't forget your acknowledgements section.

Title

- Keep it under two lines.
- Describe very specifically what you did and what you found. Don’t be vague.

Abstract

- Write it last.
- 150 words or less.

Introduction

Thesis Writing Tips
• Try for three, four, at most five paragraphs. If you need more, then write a first chapter of your thesis as a literature review. Usually two chapters are required: first a review, second the report of the original study done by the student.

• First paragraph introduces the subject with liberal references to reviews in the literature

• Second paragraph narrows the subject to your area of thesis work, and ends with a question, a controversy, or some other reason why your thesis work was done.

• The last paragraph is about your thesis specifically. Do not give away the punch line (i.e. major results).

• Paragraphs between second and last can expound and review literature if you need to explain in more detail why your thesis is needed.

**Methods**

• Generally DO NOT present methods in chronological order. Present from most general to most specific.

• Only include methods that relate to the results you will present.

• Study site description (if pertinent).

• Study organisms natural history (if pertinent).

• Use subheadings for different aspects and explain the methods including a description of sample units and sample sizes.

• Analysis: Describe your statistical or GIS analysis techniques. These are hypothesis testing techniques as well as any data transformations you have made.

**Results**

• Only results and facts you observed -- no speculation, no explanation, no references to others' studies.

• Write results in same order as the methods order used to get them (use subheadings in same order as in methods).

• Make good graphs! Good graphs mean:
  • Axes are labeled. Use format like this: axes label (units).
  • Keep graphs uncluttered. Keep stats on graphs to a minimum (put stats in text not on graphs – except for power point presentations).
  • Use error bars of standard errors if pertinent. Or box plots if you know what the box plot shows.
  • Use less ink and less color, NOT MORE.
  • Graphs need legends. Write a statement first of what the graph is – sort of like a title. Then, if needed a few descriptive sentences about what you need to say (like what the symbols in an error bar plot or box plot show)

• Are your results described in the following format?
  • Statement [reference to figure or table].
  • Descriptive statistics [means, standard errors, sample sizes].

*Thesis Writing Tips*
Thesis Writing Tips

- Comparisons [maintain parallel structure].
- Hypothesis testing statement [Test statistic, degrees of freedom, p-value].

Discussion

- Do not quote – paraphrase (i.e. no quotation marks! USE YOUR OWN WORDS!)
- Start with a one paragraph review of major results.
- Next some creative thought and analysis paragraphs (= speculation and explanation of the results) in following paragraphs that includes reference to others' studies (= scholarship).
- A paragraph or two about why your results are important in a wider context (otherwise who cares?).
- A paragraph about what should be done next, based on what you have found.
Sample Schedule

The sample schedule presented below provides a suggested sequence of events for a graduate student beginning in the fall term (recommended) and seeking to complete their thesis in two school years. Details may vary, especially for students who begin in the spring term or only attend school part-time. It is important to recognize that graduate school is a full-time commitment. Coursework, especially in the second year, is only a portion of the student’s responsibilities. The decision to work outside of school will therefore typically slow a student’s progress towards graduation.

Note that while deviations from this idealized schedule are common, one variant is strongly discouraged. August graduations are very difficult to pull off successfully: availability of committee members for feedback, final manuscript review, and signatures is typically very limited, and attendance at summertime thesis defenses will be disappointing. Summer defenses and graduations are therefore permitted only in unusual cases at the discretion of the student’s Advisor and the MSES Program Director.

As noted in the catalog, MSES students may take up to six (6) credits of upper division undergraduate course work in partial fulfillment of the MSES degree requirements. These courses (which may be taken at APU, UAA, or elsewhere) must be approved by the student’s advisor and by the MSES Program Director in advance of enrollment. Note the implication of this credit limit: because undergraduate courses are typically 4 units each, two of the 8 units earned in two undergraduate courses will not be counted towards the MSES Program’s 36 unit requirement. Discuss strategies for avoiding the extra expense of those credits with your advisor.

First Year Fall (9 credits)
Courses:  ES 601 Research Methods, 2 science/policy/elective courses
Thesis:   Select topic and advisor, submit Request for Change Major/Minor/Advisor form
          Prepare proposal and literature review
          Search for / contact potential funding sources

First Year Spring (9 credits)
Courses:  ES 602 Quantitative Methods for ES, 2 science/policy/elective courses
Thesis:  Refine thesis proposal
         Select committee
         Schedule and complete oral thesis proposal presentation
         Submit Graduate Thesis Proposal Approval form
         Submit proposal for funding, as appropriate
         Prepare for summer: methods, funding, equipment, assistants, risk management

First Year Summer (6 credits)
Courses:  ES 680 Directed Study and/or ES 685 Practicum
Thesis:  Conduct research
         Collate, clean, organize data in late summer or during fall block

Second Year Fall (6 credits)

Sample Schedule
Courses: ES 699 Thesis Research (analysis phase), 1 science/policy/elective course
Thesis: Attend thesis seminar
Analyze data and write drafts of Methods and Results
Complete first full draft during winter break, present to advisor before spring term

Second Year Spring (6 credits)
Courses: ES 699 Thesis Research (writing phase), 1 science/policy/elective course
Thesis: Revise thesis with comments from full committee
Schedule and present oral defense (April)
Apply for graduation, submit Thesis Committee Approval form, graduate (May)
Thesis Checklist

✓ Have you registered with the Registrars Office to graduate in the semester in which you are submitting your thesis?

✓ Have you checked with your advisor to verify that all required steps have been met for graduation?

✓ If you have deferred a thesis credit grade (with an IP form), have you had your deferred grade changed? You need a grade change, not a new grade submitted.

✓ If applicable, do you have permission letters for previously copyrighted materials? A copy of those letters must accompany your thesis.

✓ Does your thesis abstract adhere to the maximum word length of 150 words?

✓ Are all charts, graphs, and other special illustrative materials legible?

✓ Are all the pages in your thesis numbered consecutively?

✓ Do all the pages in your thesis conform to the margin requirements?

✓ Do your page numbers, headers, charts, graphs, and appendices conform?

✓ If you have colored charts, graphs, or photographs, have you made an extra set of originals or color photographs to submit with your thesis?

✓ Do you have all the approval signatures from your committee and the Dean, including signed cover pages and a completed MSES Thesis Committee Approval form?

✓ Have you made an appointment to have your thesis submitted to the library?

✓ Have you submitted complete paper and PDF copies of your thesis to the Department administrative assistant?
Risk Management Policy

Who needs to file a risk management plan (RMP)?

Any student participating in an independent learning experience for academic credit at APU that takes place outside the campus is required to file an off-campus risk management plan (RMP) with the Off-Campus Risk Management Committee (OCRMC). Thesis research often fits into this category, so many graduate students will need to participate in this process. Often, independent, credit-earning activities occur off-campus with programs and organizations that provide a student with an emergency plan. If the student is mostly independent of such organizations, or if the project occurs in a foreign country or a wilderness setting, then the student is required to formulate a RMP. The goal of a RMP is that the student recognizes and plans for risks inherent in the activity related to their credit-earning activity.

RMP Process

The entire process from writing to acceptance of an RMP requires several weeks. Students must (1) provide a digital copy of their RMP and (2) present their plan orally at a OCRMC meeting. Students must work with and inform their faculty advisors before starting to produce an RMP as an acceptable document. Students submit a digital RMP for committee review before November 1st (Fall) or April 1st (Spring), allowing the OCRMC adequate time to read the student’s RMP prior to the student’s presentation at the OCRMC meeting. Students are required to attend the OCRMC meeting on the second to last Monday of the semester at noon.

RMP Details

How do you prepare a RMP? Specific details to the RMP content are available on the APU Portal, found at the Communities Tab --> Risk Management --> Instructions Student RMP. If you have any questions regarding the RMP for a specific project, please contact the OCRMC Chairperson.
Thesis Credit / Leave of Absence Policy

Requirements for the MSES degree stipulate six credits of thesis research. These credits can be spread out over multiple terms, and should be handled by students carefully. The final (sixth) credit should not be completed until the student’s final semester.

If, during the semester when the sixth thesis credit has been registered, the student is unable to complete their thesis, they will need to register for at least one unit of coursework for each additional term (fall/spring) they are working towards thesis completion. This will typically take the form of additional thesis credits, thus forcing the student to register for (and pay for) more units than the six that can be counted towards the MSES degree.

If illness, family emergency, or other compelling reasons prevent a student from working on their thesis for an extended period during which they would prefer not to pay for ongoing credits, they should complete the Request for Special Consideration: Academic Leave of Absence form.
Environmental Science and Marine Biology Graduate Assistantships

Guidelines

The MSES department offers graduate assistantships to facilitate quality research and teaching and to attract and retain quality graduate students. Additional assistantships are available for graduate students studying marine biology topics. Graduate assistantships are tuition waivers offered on a competitive basis to students in the MSES Graduate Program. In exchange for a waiver of up to nine credit hours per semester, students work with a faculty advisor at the rate of 25 hours per credit on a teaching, research, or other project-oriented task agreed upon by the student and advisor.

Most assistantships are awarded to incoming graduate students for use during their first year of study, but some awards may be offered to continuing students to reward merit and accomplishments during their first year, and/or to leverage grant research funding. Students interested in Graduate Assistantships must reapply each semester. In all cases, students must register for and complete at least two credit hours above the number of credits awarded.

The Graduate Program Director will notify applicants of selection or rejection. Award decisions are made by the MSES director in consultation the Environmental Science Department Chair (for MSES assistantships) and the Marine Biology Program Director (for Marine Biology assistantships) and other faculty based on the following criteria:

- Student Assistantship Application with MSES application
- Student Merit/Qualifications (teaching, research etc)
- Departmental Instructional or Research needs

Application Procedures

1. New students should submit the Graduate Assistantship Application (available online) with their Graduate Application for Admission to the Office of Admissions. Continuing students should submit the Graduate Assistantship Application to the MSES Program Director by May 15 (application for fall semester) and December 15 (spring semester).

2. Continuing students should attach to their application a one-page narrative of their career goals, highlighting progress towards those goals within the MSES program. Additional recommendations, publications, or other documents may optionally be included. For new students, the Graduate Application for Admission will suffice.

3. The department will conduct the selection process. In some cases this may include an interview with the Program Director. The graduate Program Director will issue notification of selection or rejection as a graduate assistant to all applicants.

4. Graduate Assistants will be assigned to a supervising faculty member and will be evaluated by their supervisor as well as the Program Director.

Environmental Science Graduate Assistantships
5. Recipients of graduate assistantship will receive an award letter and conditions of the assistantship from the Financial Aid Office. This letter must be signed and returned within 30 days of receipt or the assistantship offer will be withdrawn.
Graduate Assistantship Application

Full Name: ________________________________

Mailing Address: ______________________________________________________________

City: __________________ State: ___________ Zip: _________________

Home Phone: __________________ Work Phone: __________________

Graduate Program: __________________ Date applied for admission: ____________
(New students only)

Term(s) for which you are applying for the assistantship:

☐ Fall 20___
☐ Spring 20___
☐ Summer 20___

Do you plan to maintain a job in addition to the assistantship during the term(s) indicated above: ☐ Yes  ☐ No

References (List two individuals for whom you have worked or professors/instructors you have studies under):

Name Address Phone number

______________________________________________________________

Signature Date

Assistantship Application Procedure

1. New students should submit the Graduate Application for Admission including application fee, transcripts from all prior institutions attended, and all additional materials required by the program to the Office of Admissions. Please note that MAT students must have completed at least one semester in the program prior to applying for the assistantship. MSCP students must have completed the first year of the program prior to applying for the assistantship.

2. New students should submit the Graduate Assistantship Application with their Graduate Application for Admission to the Office of Admissions; returning students should submit the Graduate Assistantship Application to the appropriate Program Director prior to the application deadline, as established by the programs. Please attach a one-page narrative of your academic and professional accomplishments as well as a brief statement of your career goals. If you have recommendations, publications or other documents you would like to submit to support your application, they must be attached to this form at the time of submission to the graduate program director. MAT students, please submit a 2-3 page typed, double-spaced essay including your background, philosophy of education and financial need.

3. The department will conduct the selection process. In some cases this may include an interview with the Program Director. The graduate Program Director will issue notification of selection or rejection as a graduate assistant to all applicants.

4. Graduate Assistants will be assigned to a supervising faculty member and will be evaluated by their supervisor as well as the Program Director.

5. Recipients of graduate assistantship will receive an award letter and conditions of the assistantship from the Financial Aid Office. This letter must be signed and returned within 30 days of receipt or the assistantship offer will be withdrawn.

Assistantship Application
GIS/GPS Field Research Grants

Guidelines

Funding is available to support Alaska Pacific University graduate students working on masters thesis projects. Projects must include a field component and use GIS and/or GPS technology.

Proposals must be submitted to the Environmental Science Administrative Office before April 14 of each year. Awards will be made by May 1 for one or more awards of up to $5,000 each. By submitting a proposal, the author is permitting that author's name and excerpts and descriptions be used by Alaska Pacific University and the Environmental Science Department in promotional materials, web pages, or other published forms. The authors of funded proposals also agree to submit a summary report of their accomplishments and findings to the Environmental Science Department within one year of the award. Except by prior arrangement, all equipment purchased with grant funds remains the property of the Alaska Pacific University, and must be returned to the Director of the MSES program upon completion of the proposed work.

Proposal Format

Each proposal must include:

1. PROJECT SUMMARY
   This is a standalone summary of the proposed activity and must be one page or less. It should concisely describe the purpose and need for the project, objectives, methods, and significance of the work. It should be understandable to a scientifically literate lay reader.

2. PROJECT JUSTIFICATION AND DESCRIPTION
   This section should not exceed 10 pages, including all text, figures, maps, tables, and other supporting materials.

   Justify your proposed research and describe why the proposed project is significant and should be performed. Review significant work in the field and its relationship to the proposed work. Include notable gaps in current knowledge or capabilities. Provide research questions, objectives and hypotheses, if appropriate. Indicate how results of your proposed work will realistically be used.

   Provide a detailed project plan. Describe major tasks and how these will be carried out. Justify the size and scope of the activity, including a sampling strategy and explanations for the type and number of samples collected. Describe your experimental design, if applicable. Where appropriate, provide illustrations of special sampling gear or operations, a map or maps of activity locations. Provide a detailed schedule and a description of existing facilities, systems or equipment that will be available for the proposed activities. Finally, describe the administrative responsibilities for the project, the team composition including names of key individuals and thesis committee members and the assignments of team members to the
major tasks. Provide estimates of the time in hours or days that team members will work on the activity.

End the section with a brief description of how the expected methods will incorporate GIS and/or GPS and the field protocols.

3. LITERATURE CITED
   Please use Chicago "Documentation Two" citation style, discussed on-line at the Duke University Library site: http://www.lib.duke.edu/libguide/citing.htm. There is no length limit for the number of citations.

4. BUDGET
   Provide both A) a tabular itemized list of requested items with cost per item, and B) a narrative description of, and justification for, each item. Support is available for up to $5000. Equipment, travel, lodging, living expenses and other direct project expenses are eligible for support. Tuition costs are not allowed.

5. BIOGRAPHICAL SKETCH(ES)
   Provide a biographical sketch of yourself and any team members critical to the success of the proposed work. Each sketch should be one page or less, written in narrative format. Demonstrate that you and your team have the skills and experience necessary to carry out your proposed activities.
Graduate Office Space Policy

In addition to existing computer labs that are used extensively by MSES students (the GIS lab on the 3rd floor of Grant Hall is primary; computer labs in Carr-Gottstein and Atwood Hall provide secondary opportunities), the ES Department has one small office set aside for the exclusive use of graduate students. This room, Grant Hall 313A, has two computers, a phone, desks and chairs, bookshelf, lockers (bring your own padlock), and trashcan. This space is shared, and it is up to the graduate students to manage their own use of the office and its resources to make room for all users. In the case of competing needs, the established policy is to prioritize usage by students near the completion of their theses. As with all computers on campus, the hard drive in this office should be used for short-term storage of documents and data only, with regular backups to a student’s own zip drive, external hard drive, or other storage medium.
Sample Title and Signature Pages
THE EFFECTS OF WIND VELOCITY ON CARBON DIOXIDE FLUX
IN A SUBARCTIC ENVIRONMENT

by

Royal C. Harding

Presented to the Faculty of
Alaska Pacific University
In Partial Fulfillment of the Requirements
For the Degree of
Master of Science in Environmental Science

May 2008
May 2008

THE EFFECTS OF WIND VELOCITY ON CARBON DIOXIDE FLUX IN A SUBARCTIC ENVIRONMENT

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Royal C. Harding

THESIS

APPROVED: Thesis Committee

________________________________________  _________
Chairperson: (typed name)  Date

________________________________________
(typed name)

________________________________________
(typed name)

ACCEPTED: __________________________________  _________
Academic Dean  Date

Sample Signature Page