Honors Thesis Guide

HONR 399, Honors Pre-Thesis
Spring 2020
# HONORS THESIS GUIDE

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Introduction

The Honors thesis may seem like a daunting task, but with the help of the Honors staff and your faculty thesis adviser, it will be one of your most rewarding academic experiences. Pursuing a thesis topic of your choice is a wonderful opportunity to experience firsthand the creative processes that are fundamental to universities. You will benefit from the mentorship provided by your thesis adviser and the advice and support of your committee. Our hope is that by completing the Honors thesis, you will appreciate and understand the challenges, complexities, and rewards of creative activities. The thesis will help you improve your critical thinking, problem solving, oral and written communication and time management skills.

Many of our Honors Program graduates say that the Honors thesis is one of the highlights of their undergraduate academic experience. The thesis allowed them to explore areas of their most passionate interests, engage in the process of discovery, and work one-on-one with outstanding faculty. The Honors thesis has benefits beyond college as well. Former students have used their theses to gain entrance into graduate programs and to secure their first job after graduation. The thesis shows that you are creative and hard working—characteristics highly valued in today’s graduate programs and the job market.

Common elements of theses include engaging in creative activity, using your imagination, pursuing your curiosity, developing a productive relationship with your faculty thesis adviser, working hard and making a formal paper and oral presentation on your thesis work. There also is significant variation in theses. The thesis related to a senior vocal recital is very different from a thesis based on laboratory research. The thesis requirements recognize these differences so that you will have the flexibility to be creative in your own areas of interest and expertise. If your thesis is research based, it will increase your understanding of what it is like to conduct research in a particular field.

The following is an outline of the typical thesis experience from beginning to end, although some students’ plans will differ depending on their major, study abroad and internship schedules.

1. Students enroll in HONR 399, Honors Pre-Thesis (1 credit), a semester or two before they plan to complete their thesis. Due to the nature of their academic programs, students in Human Development and Family Studies and Engineering should complete HONR 399 the semester before they plan to complete the thesis. In HONR 399, students select a tentative thesis topic, identify a faculty thesis adviser, and complete their Honors Thesis Preliminary Proposal.

2. After HONR 399, students work with their faculty thesis adviser to develop the Honors Thesis Formal Proposal that is submitted to the Honors Program office. Students register for HONR 499, Senior Honors Thesis (3 credits) via RAMweb. You are encouraged to complete the Honors Thesis Formal Proposal in the semester preceding your enrollment in HONR499, but it is not officially due until the third week of the semester in which you are registered for thesis.

3. HONR 499 does not have regular class meetings. Students work with their faculty thesis adviser to complete their research/creative activity. Students submit a penultimate (next to last) draft of their written work to their faculty thesis adviser and committee; complete their formal oral presentation on their thesis; and then submit the final electronic copy which incorporates the recommendations (if any) from the thesis adviser, to the Honors Program office. The faculty thesis adviser determines the thesis grade based on the quality of the research/creative activity, written work, and oral presentation. The faculty member submits the thesis grade to the Honors Office with the presentation outline by the last day of finals week.
For students who entered the Honors Program FA16 and thereafter, there is no difference in thesis requirements for Track 1 and Track 2 students. For those students entering the Honors Program before FA16, you should be sure that you are aware of which curricular path you are following. Track 1 students are not required to complete a thesis in the major (although most do). For students entering the program prior to FA16, Track 2 students MUST have a thesis adviser in their major, or petition their department chair and the Honors Director to allow a professor from outside the major to supervise the thesis. See page 11-12 for details.

The information in the Honors Thesis Guide will help you navigate your way through the process of completing your Honors thesis. (An electronic copy of the Honors Thesis Guide may be found on the Forms page of the Honors Program website at http://honors.colostate.edu/senior-honors-thesis). It is not an exhaustive resource, so consult with your faculty thesis adviser or the Honors staff for additional information and guidance. This team of supporters and advisers is here to help make the Honors thesis a meaningful experience that you will reflect upon one day as a fabulous capstone to your education at Colorado State University.  

Good luck!

Honors Office
B102 Academic Village (Building B)
970 491-5679
Honors Thesis Timeline

HONR 399
Pre-thesis Course
Preferably completed one to two semesters before the student intends to complete his/her thesis or one semester prior if in Engineering or HDFS

Formal Proposal
Must be submitted to the Honors office no later than the end of the third week of the semester in which you are taking HONR 499.

Preliminary Proposal
Initial thesis proposal serves as the final project in HONR 399.
Refer to class syllabus for due date

HONR 499
Thesis Credit
Taken the semester you intend to complete your thesis (typically the senior year). Register for HONR 499 during the registration period for the semester but no later than the first week of the semester.

Spring 2020: Week of 1/20
Fall 2020: Week of 8/24/20

Pre-thesis Course
Preferably completed one to two semesters before the student intends to complete his/her thesis or one semester prior if in Engineering or HDFS

Penultimate Draft
Your thesis adviser and committee must receive a penultimate draft of the final written work by the end of the 13th week of the semester in which you are enrolled in HONR 499.

Spring 2020: Week of 4/13/20
Fall 2020: Week of 11/16/20

Oral Presentation
Must take place by the end of the 15th week of the semester in which you are enrolled in HONR 499. You should coordinate a date and time with your committee as early as possible. Provide details to the Honors Office at least one week in advance by filling out the electronic form at http://honors.colostate.edu/thesispresform

Spring 2020: Week of 4/27/20
Fall 2020: Week of 11/30/20

Final Copy
The final electronic copy is due to the Honors office by the last day of final exams week the semester in which you are enrolled in HONR 499. Email the final thesis to honors@colostate.edu or bring a CD or flash drive to the Honors office.

Spring 2020: Week of 5/11/20
Fall 2020: Week of 12/14/20

Thesis Evaluation Form
Due in the Honors office after the final copy of the thesis is completed and no later than the last day of final exams week
Honors Thesis Overview

Definition of the Honors Thesis
The Honors thesis is the quintessential capstone experience that allows students to explore academic areas of their most passionate interests, engage in the process of discovery, and make a creative contribution in their areas of interest and expertise.

The Honors thesis is a three credit experience supervised by a thesis committee of at least two faculty members (a faculty thesis adviser and a faculty committee member). The thesis has writing and speaking components. The writing component varies by the type of Honors thesis (e.g., research, design project, or artistry) and the length and style conforms to the accepted norms in these areas. Regardless of thesis type, the writing component must constitute a substantial and scholarly work appropriate to the discipline. The speaking component consists of either (1) a 15-20 minute formal oral presentation or (2) a poster presentation at a university-sponsored event or professional conference followed by a question and answer session. For either option, the thesis adviser and committee member must be present.

Track 1 and Track 2 (FA16 and after)
Although not specifically required to satisfy thesis requirements, students are strongly encouraged to pursue a topic related to their major and/or career. If a student selects a topic outside of the major, the thesis must reflect the rigor and knowledge of a senior and not a novice at the freshman, sophomore, or junior level.

Track 2
Track 2 students who entered the Program before FA16 must complete a thesis in their major which is supervised by a faculty member in that major. If a student chooses a thesis adviser in a different major, refer to pages 11-12 for approval process.

Format of the Honors Thesis
Honors theses come in a variety of formats but all include a formal written component and formal oral presentation. The final thesis copy is discussed beginning on page 13 of this thesis guide. The following formats have been utilized by students in the past:

- **Research paper** - This is a paper that includes first-hand data from experiments and surveys. It may include laboratory or field work and/or research including human subjects (with the guidance of an adviser trained in human subjects research and formal approval of the research project by the Research Integrity and Compliance Review Office). Approval is also required for projects involving the use of animal subjects, controlled substances, biohazards agents, and radon. Normally, approval is not required if surveys are used.

- **Scholarly research paper** - A paper that uses original and secondary published sources to formulate a question and make a creative contribution to the literature. The paper may be a review and synthesis of the literature or an original paper.

- **Business plan** – Primarily for students in the College of Business. The student conceptualizes a business, including a plan for marketing, finance, and implementation. Students who are interested in entrepreneurship often choose this format.

- **Portfolio** – Primarily for fine arts majors. A formal compilation of a student’s artistry created as part of their fine arts classes. This option will include a formal reflection paper (see page 15 for more information about this paper).
• **Education unit** – Primarily for students who are student teaching as part of their education certification. Students create an additional educational unit that includes lesson plans, instructions, and pedagogy beyond what is required for student teaching. This option will include a formal reflection paper (see page 15 for more information about this paper).

• **Fine arts display or performance** - Presentation of a student’s creative artistry (e.g., dance, music, and vocal recitals; art, film, theatrical performance, and photography exhibits). This option will include a formal reflection paper (see page 15 for more information about this option).

• **Design project** – Most engineering majors complete a year-long senior design project (e.g., robotics and human- or solar-powered vehicles). Groups of students work together to complete projects which are used to fulfill the Honors thesis requirement. Honors students must submit formal reflection and individual contribution papers to the Honors office to satisfy the writing component of the thesis. Computer Information Systems students may choose to design and implement a database system for their design project.

### Coordinating the Honors Thesis with Major Requirements

Honors students are strongly encouraged to investigate linking their Honors thesis with major requirements such as a departmental thesis, design project, artistic project, research, and/or capstone. In some cases, a major requirement can be augmented to satisfy the requirements of the Honors thesis. It is important to note that students must include a reasonable “value added” component (additional quality work that fulfills three Honors thesis credits) to convert a major requirement into an Honors thesis; they cannot simply double count a departmental requirement for the Honors thesis.

If your department requires a group project/thesis (e.g., most engineering majors must complete a group senior design project), please refer to Appendix II (page 26) for guidelines about supplementing it with reflection and individual contribution papers to fulfill the Honors thesis requirement.

Examples of some majors that have made special arrangements to link major requirements with the Honors thesis include the following departments. (Please note: Departmental requirements change so you must verify these arrangements with your academic or thesis adviser.)

- **Anthropology** – Honors students who are Anthropology majors will complete the Senior Honors Thesis, HONR 499, in order to graduate. This will be undertaken according to the thesis guidelines outlined by the Honors Program, and the thesis adviser must be an anthropology faculty member. The Anthropology Department also has a Capstone requirement, ANTH 493, which is a one credit course. A student taking the Anthropology Capstone course must be simultaneously enrolled in one of the Anthropology 4A courses. (A list of these courses is available in the Anthropology Department office.) It is expected that Honors Program students take ANTH 493 and present the results of their honors thesis research along with all the other Anthropology majors who will also be presenting their research that semester. However, while Anthropology majors will be presenting research that is tied to the particular 4A course they are taking, Honors students’ research will be based on their Honors thesis research. Honors Program students will be graded for both their HONR 499 and ANTH 493 by the faculty member who is supervising their thesis.

- **Art** - The primary activity for the Honors thesis in Art is creating works of art in the student’s concentration (e.g., graphic design, metalsmithing, or sculpture). The Honors thesis includes the student’s portfolio, the seven page formal reflection paper, and the formal oral presentation to the committee.

- **Biochemistry B.S. program** – All students in this major must complete a thesis for departmental graduation requirements, and all Honors Biochemistry majors should register for BC499 A or B. Students may
complete a research-based thesis (BC 499A) or a literature-based thesis (BC 499B). Students should follow the Biochemistry department’s guidelines for the written thesis and oral presentation. Track 2 students will register for either BC 499A or BC 499B and this course will fulfill the HONR 499 requirement. Please check with your biochemistry thesis adviser for the specific department requirements. Students registering for BC499 are still required to complete HONR 399 (Pre-thesis). Students enrolled in BC499 are still required to submit the formal thesis proposal to the Honors Program Office by the end of the third week of the semester in which you’re enrolled in BC499, and email an electronic copy of your final thesis to honors@colostate.edu. On the Formal Proposal, please indicate that you are enrolled in BC499 rather than HONR 499.

- **Biochemistry B.S./M.S. degree program** - The M.S. thesis proposal will fulfill the Honors thesis requirement if the student satisfactorily completes the M.S. thesis, BC 699. Please note that students will complete their B.S. and M.S. degrees simultaneously. Please check with your BC thesis adviser for the specific department requirements.

- **Business** - Business students can choose a wide variety of options from design projects to business plans to scholarly research. For example, Computer Information Systems students may find an organization that needs a system and design a database and/or web interface for them. Accounting students have analyzed the possible implications of new accounting regulations. Marketing students can design an advertising campaign for a company or organization. Students from any concentration interested in Entrepreneurship can choose to build a business plan for a potential startup. Other students may want to work with a faculty member to gather data and analyze it for a research project. One student analyzed the types of documentation Information Systems groups used in industry.

- **Chemistry** - Chemistry majors wishing to complete an Honors thesis in their major should register for CHEM499 rather than HONR499. This will satisfy the AUCC Depth and Integration requirement; otherwise the student would need to register for CHEM493 (senior seminar). The Honors Program will substitute CHEM 499 for HONR 499, but the student must complete all the requirements and meet all the deadlines for HONR 499 when they take CHEM 499. This includes submitting the Honors Formal Proposal by the end of the third week of the semester. Advisers are still eligible for the thesis payment ($200) or students can apply for a thesis improvement grant ($400).

- **Economics** - Three credits of Honors thesis may count as an upper division economics elective as long as it is supervised by a member of the Economics faculty. Departmental credit will be allowed for either HONR 499 or ECON 495 (Economics Independent Study) but not for both.

- **Engineering** – Honors students in the College of Engineering may use their senior design project (Senior Design I and II) as partial fulfillment of the Honors Thesis Requirements or complete an Honors thesis that is separate from the senior-year project. Students who wish to use their senior design project toward completing the Honors thesis requirements must complete the project and augment it with at least a seven page formal reflection paper, a three to five page formal individual contribution paper (for group projects), and a formal oral presentation (refer to page 26). Presentations given during Engineering Week will satisfy the formal oral presentation requirement provided the thesis adviser and committee member are present. Engineering students who plan to use their senior design project in partial fulfillment of the Honor thesis requirement should enroll in HONR 399 in the fall of their senior year.  

  **Biomedical Engineering** A non-tenure track Biomedical Engineering instructor or non-BME faculty member may serve as an honors thesis advisor as long as the student’s committee has one regular or associate BME faculty member who is also a CSU regular faculty member.
• **Interior Design** – The year-long senior design project undertaken as programming (INTD 400) and project (INTD 476), required of all ID majors, offers three options for the Honors thesis: a completely independent project not related to the design capstone topic, a seven page (plus illustrations/drawings) formal reflection paper (this option requires completion of the ID thesis by April 1) or a ten page scholarly investigation that expands upon a social problem related to the ID thesis, with illustrations and drawings.

• **Neuroscience** - Students in this major must complete a thesis for graduation requirements. Honors students should register for NB499 and follow the neuroscience department’s guidelines for the written thesis and oral presentation. Please check with your neuroscience thesis adviser for the specific department requirements. Students registering for NB 499 are still required to complete HONR 399 (Pre-thesis). Students enrolled in NB 499 are still required to submit the formal thesis proposal to the Honors Program Office by the end of the third week of the semester in which you’re enrolled in NB499, and email an electronic copy of your final thesis to honors@colostate.edu. On your Formal Proposal, please indicate that you are enrolled in NS499 rather than HONR 499.

Now is an excellent time to see if your major requires a thesis (or senior project). If it does, discuss with your thesis adviser how this departmental requirement (e.g., engineering senior design project) may be coordinated with the Honors thesis requirement. If your department does not require a thesis, ask your academic adviser whether the thesis credits may fulfill elective requirements in your major.

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**HONR 399, Honors Pre-Thesis**

The Honors thesis journey begins with enrolling in Honors Pre-Thesis, HONR 399 (1 credit). This course will help students to select a topic of study, choose a faculty thesis adviser, and develop an Honors Thesis Preliminary Proposal. HONR 399 is a series of class meetings and activities that will guide you through the requirements of the Honors thesis. The class will address the following areas:

- Selecting a thesis topic and thesis committee (faculty thesis adviser and at least one additional faculty committee member)
- Exploring the methods of creating your thesis
- Writing the thesis paper
- Preparing for the thesis presentation
- Connecting the thesis with your post-graduate plans

*Grading for HONR 399 is satisfactory/unsatisfactory and your grade is assigned by the HONR 399 instructor. If you do not complete the Preliminary Proposal by the deadline and/or attend all class sessions, you will receive a grade of “U” in the semester in which you are registered for HONR 399.*

**Honors Thesis Preliminary Proposal**

The Honors Thesis Preliminary Proposal is intended to help focus your ideas and generate a thesis topic related to your final thesis topic. You will develop the preliminary proposal with your faculty thesis adviser, who must approve and sign it before it is submitted to your HONR 399 instructor. If you wish to change your topic after the preliminary proposal has been approved, you do not need to resubmit a new one because the Honors Thesis Formal Proposal will explain the new topic in detail. However, you must complete a Preliminary Proposal in order to receive a grade for HONR 399.

The Honors Thesis Preliminary Proposal is the final project for HONR 399 and must be submitted to your HONR 399 instructor by the date shown in the HONR399 class syllabus. The Preliminary Proposal form is now online; you can only create one Thesis Preliminary Proposal for the class.
When you create your thesis preliminary proposal draft, your HONR399 instructor will be notified. After your instructor has viewed your draft, you will be able convert your draft to a final document. You may edit your draft until you submit it as final. At that time, an email will be sent to your thesis adviser to review it. Be sure to follow up with your thesis adviser and remind him/her to approve your preliminary proposal by the date specified in your HONR399 course. If your adviser does not approve it, it will become a draft and you will be able to resubmit it for approval.

The steps to submit your on-line preliminary proposal are:
1. Student creates draft
2. HONR399 Instructor reviews draft
3. Student edits draft and unchecks “draft” box to submit final copy to the thesis adviser
4. The Thesis Adviser reviews the final copy and selects one of the following options: Approve, Deny or See Me
5. If not approved, the student revises and submits a final copy to the Thesis Adviser

After completing the Honors Thesis Preliminary Proposal, students should continue working on their thesis by completing their Honors Thesis Formal Proposal. (The formal proposal is a more detailed, in-depth version of the Honors Thesis Preliminary Proposal.) The formal proposal is not an online process (at least not yet anyway) but the form is online. It can be found at www.honors.colostate.edu/thesis as a PDF or Word document.

A sample preliminary thesis proposal is included in Appendix III.

HONR 499, Honors Thesis

You should register for Honors thesis credit, HONR 499 (3 credits) in the semester you intend to complete your thesis (typically your senior year). It is advisable to plan to complete your thesis in the first semester of your final year. **You register for HONR 499 via RAMweb. This should be done during the registration period in October for spring graduates or April for fall graduates.** Your Honors Thesis Formal Proposal (complete with faculty adviser signature) is due in the Honors Program office no later than the third week of the semester in which you are enrolled in HONR 499. HONR 499 is similar to an independent study in that you are working directly with your faculty thesis adviser to create the learning experience. Therefore, it is important for you and your faculty thesis adviser to outline your goals, timeline, and expectations of the thesis before the beginning of the semester. There are no official class meetings for HONR499; instead you will have periodic meetings with your thesis adviser.

To give you an idea of the hours involved, three credits are equivalent to approximately 135 hours of class meeting and work outside of class per semester, which breaks down to about nine hours per week. (This is the same amount of time any 300- or 400-level class typically requires.) As you can see, it will take a serious commitment of time and effort to complete your Honors thesis!

**Honors Thesis Formal Proposal**

The Honors Thesis Formal Proposal is a comprehensive statement about your thesis topic and plans. Students should begin working on the Honors Thesis Formal Proposal soon after completing the Honors Thesis Preliminary Proposal. You will work with your faculty thesis adviser to develop the formal proposal and it must be approved by her/him. **It is recommended that you complete the Formal Proposal in the semester before you register for HONR 499. It must be submitted to the Honors Program office (not your HONR 399 instructor) for approval by the Honors Director no later than the end of the third week of the semester in which you are enrolled in HONR 499.** You will find an Honors Thesis Formal Proposal form in the back of this guide. A Word document version is available online so you can submit your typed copy (honors.colostate.edu/thesis).
If you wish to change your topic after submitting the formal proposal to the Honors Program office, another formal proposal must be approved by your thesis adviser and submitted to the Honors Program office before the third week of the semester for review by the Director of the University Honors Program. You will be contacted by Honors if there is a problem with the formal proposal; otherwise “no news is good news.” Also, please forward changes in titles immediately to the Honors Program office so that the information is correct for college commencement programs and the Honors Graduate Recognition and Reception ceremony. Send title changes via email to honors@colostate.edu.

A sample formal thesis proposal is included in Appendix IV.

Financial Support for the Honors Thesis
If requested, the Honors Program will provide some financial support either to the student or to the adviser for completion of the thesis. Students should consult with their adviser to determine whether they wish to:
   a) Apply for a thesis payment of $200 to the adviser’s department.
   b) Apply for a student Thesis Improvement Grant (a maximum of $400) to be awarded to the student for supplies/materials etc to be used in the completion of the thesis. Students MUST complete an application for the TIG. The application is on this website: honors.colostate.edu/thesis
   c) Request no financial support for the student or adviser.
The Formal Proposal form provides space for the student and adviser to indicate the option they have chosen.

Grading of the Honors Thesis
HONR 499 is graded on a traditional plus/minus grading scale (e.g., A+, A, A-, B+, etc.), and most students receive a grade of A+, A, or A- when they do high quality work and meet the expectations of their thesis adviser. Your faculty thesis adviser decides your final grade based on the quality of your work and feedback from your committee about the paper and presentation. The formal presentation of your Honors thesis comprises ten percent of your grade and thesis advisers use the form on the second page of the Honors Thesis Evaluation Form to evaluate it. (The Honors Thesis Evaluation Form may be found in the back of this guide and at honors.colostate.edu/thesis.) The Evaluation Form must be delivered to the Honors office after the final thesis copy is completed and no later than the last day of final exams week.

Grade of incomplete (“I”): If you will not be able to complete your thesis the semester in which you’re enrolled in HONR499, you must request approval for a grade of incomplete. First obtain written approval from your thesis adviser, then request approval from the Honors Director by emailing Donald.Mykles@colostate.edu and cc: your adviser. Include a brief plan for completing your thesis. Do NOT re-enroll in HONR499.

Awards and Recognition
Celebrate Undergraduate Research and Creativity
The Honors Program strongly encourages students to participate in the annual Celebrate Undergraduate Research and Creativity (CURC) symposium in April. It is the umbrella organization for the following competitions: All-University Undergraduate Research Symposium, Undergraduate Art Exhibition, Dance Concert, Theater Production, Creative Writing, Music Concerts, Engineering Days, and Design and Merchandising Fashion Show. Presentation of a poster at the CURC can satisfy the oral presentation component of the Honors Thesis if the thesis adviser and committee member are present. Prizes for the best creative works or research are awarded and Honors students typically have won more than half of the top awards. For more information, visit the Celebrate Undergraduate Research and Creativity website at curc.colostate.edu.

Human and Animal Subject Approval
If you are planning to use human or animal subjects in your thesis research, you should check with the campus Research Integrity and Compliance Review office to make sure you comply with the ethical conduct of research in this area. If you are not sure, a quick phone call or email should help determine whether you need to obtain
approvals (or not). RICRO’s website ricro.colostate.edu provides more information. Students who are conducting surveys and intend to use the results of those surveys in an undergraduate thesis do NOT need to obtain approval from the RICRO office.

### Honors Thesis Adviser and Committee

**Honors Thesis Adviser Selection and Responsibilities**

Selecting a faculty thesis adviser is as important as selecting a topic. You will work very closely with your adviser throughout the thesis experience, relying on him or her to guide the direction of your creative work, review and edit your writing, assist you with preparing for the thesis presentation, and advise you on everything from statistical analyses to the font of your final copy. Therefore, choose wisely! Do you like this individual on a personal basis? Will he or she be a good mentor and supporter? Is this person easily accessible in terms of scheduling appointments and responding to phone calls or email? Are you excited by the prospect of learning under his or her guidance? Is this person knowledgeable in the area of your topic? Questions like these will help you find a faculty thesis adviser who not only fits your academic interests but also your personal needs and preferences. The thesis adviser is the person responsible for regularly meeting with the Honors student, shaping the content of the thesis, and the final grade. The committee member offers comments and support, but the thesis adviser has the final say on the outcome and grade of the project.

Finding a faculty thesis adviser can be intimidating for students, especially if they have not had the opportunity to interact with faculty outside of the classroom setting. But once you start talking to faculty about your ideas and asking them for guidance, you will most likely be met with enthusiasm and a willingness to help. To start your search for a faculty thesis adviser, think of professors who have taught classes that you find interesting or with whom you have worked in other settings. You can search department websites to learn about faculty and their areas of interest/research. A potential thesis adviser should be listed on the departmental website as Assistant, Associate, Professor, or Professor Emeritus. Occasionally there are good reasons for a person without these qualifications described on page 12 to serve as your thesis adviser. If this is the case, you will need to follow the following process.

1) Email the department chair in your primary major and request approval for the proposed Honors thesis adviser (Track 2 students who have a thesis topic outside their major should email their department chair to request approval of a non-departmental adviser). The request should include:
   - A copy of the Preliminary or Formal proposal that explains the Honors thesis topic
   - The rationale for choosing the proposed thesis adviser
   - The email should cc the Director of the Honors program (Donald.Mykles@colostate.edu)

2) When approval is received, a copy of the email should be forwarded to the Director of the Honors Program (if the chair’s approval did not cc the director), and a paper copy of the approval should be attached to the Formal Proposal before it is turned in to the Honors Office.

It is helpful to meet one-on-one with potential thesis advisers because you will get a better feel for their personalities and interests. Explain the concept of the Honors thesis, articulate your expectations for their participation, and give them a copy of the *Thesis Adviser Guide* (available in the Honors office) and the *Honors Thesis Guide*, which is available in the Honors Program office and on the Honors website at honors.colostate.edu/thesis. The faculty thesis adviser’s responsibilities require that he or she meet with you several times to discuss ideas and review drafts of your work. The faculty thesis adviser will assign your HONR 499 grade based on the quality of your research/creative activity, written work, and oral presentation. If you change your thesis adviser between the time you submit your preliminary thesis proposal and formal thesis proposal, that change should be noted in your formal proposal. If your thesis adviser changes after the formal proposal is submitted, you must notify the honors office.
To be a faculty thesis adviser, he or she must:
1.) Work at Colorado State University as a regular full-time, regular part-time, or transitional academic faculty member above the rank of instructor (Assistant, Associate, Professor) or be Professor Emeritus
2.) Have attained a doctorate (Ph.D.) or the terminal degree in his or her field
3.) Be on campus during the semester in which you are completing your research (e.g., not on sabbatical leave)
4.) Be familiar with the Thesis Adviser Guide and the Honors thesis requirements (honors.colostate.edu/thesis).
5.) For Track 2 students who entered the Program before FA16, the thesis adviser must be a faculty member in the department of your major.

Exceptions to these criteria must be approved by the academic department chair and the Honors Program Director.

Committee Member(s) Selection and Responsibilities
The thesis committee consists of your faculty thesis adviser and at least one other faculty member. You and your faculty thesis adviser will select the additional committee member(s). The committee member(s) will serve as a resource, review the penultimate draft of your paper, forward comments to the faculty thesis adviser, participate in the thesis presentation, discuss recommendations for the final grade with the faculty thesis adviser, give you feedback on your presentation, and sign the affirmation statement on the Honors Thesis Evaluation form. The thesis adviser makes the final decision about recommendations and the final thesis grade. A thesis committee member guide is available on the honors website at honors.colostate.edu/thesis.

To be a committee member, he or she must:
1.) Work at Colorado State University as a regular full-time, regular part-time, or transitional academic faculty member above the rank of instructor (Assistant, Associate, Professor), or be Professor Emeritus
2.) Have attained a doctorate (Ph.D.) or the terminal degree in his or her field
3.) Be on campus during the semester in which you are completing your research (e.g., not on leave)
4.) Be familiar with the Honors thesis requirements (honors.colostate.edu/thesis)

Exceptions to these criteria must be approved by the thesis adviser, and the Honors Program Director. Students shall email the Honors Program Director with the name and professional standing of the committee member and cc the Honors thesis adviser which signifies the adviser’s approval.

Thesis Topics and Methods

Selecting a Creative Activity and Topic
Completing a thesis is a rigorous and time-consuming endeavor, so you should select a topic that is intellectually exciting, challenging, and fun. The following are some helpful hints about finding and choosing a topic:

- You can start a “topics file” where you keep track of potential areas of interest. Occasionally review your file to see if there are recurrent themes to your interests.
- For class paper assignments, choose topics that are potential thesis ideas and use them to explore the ideas further.
- Ask yourself the following questions: What courses have most engaged me? What am I most curious about? What do I enjoy? What academic interests am I most passionate about?
- Visit with faculty and discuss ideas with them. They have a great deal of experience and knowledge that may help you discover a topic.
- Many students are engaged in undergraduate research and this may make the selection of an Honors thesis topic and adviser a clear choice.
One of the best ways to select a thesis topic is to select your adviser first and work with this person on an area related to his/her own research interests.

Students in majors that require year long design projects (e.g., Engineering) will fulfill the Honors Thesis by completing a formal reflection paper and an individual contributions paper if participating in a group project.

The following list of Honors thesis titles is only a sample of what has been completed over the past few years. **We encourage you to visit the Honors Program office and read through past Honors theses to get a better idea about the thesis project. A sample list of thesis titles appears below.**

- Spin Effects on the Flight of a Volleyball
- PAYA: A Political Party for Apathetic Young Adults
- Modifications to a Cupola Furnace
- For the Love of Reading: The Use of Book Clubs in High School English Classrooms
- The Competitiveness of Hybrid Individuals of Yellow and Dalmatian Toadflax
- Insulin Resistance: An outdated genetic adaptation in horses and humans?
- Good Samaritan Urban Search and Rescue Robot
- Unlocking the Consumer Mind: Do Colors and Fonts Truly Matter?
- An Opportunity Analysis for Importing Fijian Beer
- In Pursuit of Flux: A collection of short stories
- Amendment 41: The Unintended Consequences
- The Jim Cramer, Mad Money Portfolio Strategy
- A Bilingual Booklet of the Musculoskeletal System for Elementary Students
- The Effectiveness of a Wellness Program
- Childhood Obesity in America: Causative Factors and Treatment Strategies
- Marketing to GenX – A Comparison to the Baby Boomers
- Design and Implementation of an on-line System for Ordering Food Baskets
- Lethal White and Pompes: Genetic Diseases in Livestock

A partial list of topics by major appears on the Honors website at honors.colostate.edu/thesis

**Thesis Methods**

Research, design projects, artistry, and scholarship methods and approaches vary. Therefore, it is important to meet with your faculty thesis adviser to discuss accepted guidelines for your thesis area. Excellent resources for research and the writing process are available at the Writing Center website (http://writing.colostate.edu/guides).

If you are involved with undergraduate research and plan to use your research for your Honors thesis, please clearly outline the expectations of your thesis with your faculty adviser. Without defined expectations, students who have been working in labs for extended periods of time (e.g., four years) may find that their faculty adviser expects them to incorporate four years of research activity into the Honors thesis.

Please remember that your thesis can be used for strategic purposes such as highlighting your talents, abilities, and expertise for graduate programs or job searches and interviews.

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**Writing the Honors Thesis**

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Writing Styles
Specific writing styles vary by discipline, so you should consult with your faculty thesis adviser for guidance about the writing style appropriate for your topic and audience. For each style, there are manuals to help you understand and stay within the boundaries of your discipline. Remember, the Writing Center has writing guides available on their website at writing.colostate.edu/guides/.

The written component of the thesis experience must incorporate the fundamentals of writing that you have learned in your Honors seminars. You need to pay particular attention to:

- organizing your writing for your particular audience;
- engaging in writing as a process which includes formal and informal writing, and writing multiple drafts that are reviewed and subsequently revised;
- utilizing the writing expertise you have learned while writing summaries, syntheses, evaluations, and arguments in your Honors seminars;
- strategizing for cohesion;
- editing and proofreading; and
- utilizing appropriate documentation styles.

Finally, a thesaurus and dictionary are essential tools to good writing. Comic and sometimes tragic results come from relying solely on your computer spell check. Although spell checking is necessary, it is not foolproof.

Penultimate Thesis Draft
Students submit the penultimate (next to the last and polished) draft of their thesis to their committee by the 13th week of classes and before the thesis presentation in the 15th week so that the committee has time to review it prior to the presentation. Due dates are listed on the page titled “Honors Thesis Timeline” at the front of this guide. The presentation should be scheduled no later than the last week of classes. The thesis adviser will compile comments and feedback given by the committee members and forward them to the student after the thesis presentation. The student will incorporate changes (if any) made by the faculty thesis adviser into the final thesis copy.

Final Thesis Copy
Students writing theses must submit an electronic copy of their final work to the Honors Program office by the last day of final exams week. (Note: There are two formats for the final thesis copy – please see below for more detail.) Due dates are listed on the page titled “Honors Thesis Timeline” at the front of this guide.

1) Students whose theses require a significant written component (e.g., research paper, scholarly paper, business plan, etc.) will submit an electronic final thesis copy to the University Honors Program office.

Specifications for the final copy of the Honors thesis:
- Papers must consistently follow a writing style appropriate for the type of research, design project, or scholarship focus of the thesis. The style and standards are determined by your thesis adviser.

- Papers will vary in length according to topic area. Please consult with your thesis adviser for guidelines regarding paper length.

- The written component must be submitted electronically to the University Honors Program office. Students who do not submit an electronic copy of their final thesis product will receive an “Incomplete” in HONR 499.
• The Honors Thesis Evaluation form must be submitted by the Honors thesis adviser to the Honors office or students will receive an “Incomplete” in HONR 499.

2) Students completing Honors theses that fall outside the boundaries of a traditional research paper (e.g., music recital or art portfolio) will submit to the Honors Program office some form of permanent record of their creative activity (e.g., video, portfolio, or audio CD) and an electronic copy of the seven page, typed formal reflection paper.

Specifications for the formal reflection paper:
• Papers must include (a) an explanation of the topic area and reasons for choosing it, (b) the steps taken to complete the project, (c) a description of the final work, (d) an assessment of the importance of the creative activity and how it contributed to the learning process and/or prepared you for a career, and (e) a brief reflection about the overall thesis experience.
• Papers must be typed and at least seven pages in length.
• The written component must be submitted electronically to the University Honors Program office. Students who do not submit this will receive an “Incomplete” in HONR 499.

Honors Thesis Presentation

The Honors thesis oral presentation is an opportunity to formally present your creative activities to your committee and is worth ten percent of your final HONR 499 grade. You must give a formal oral presentation on your thesis to the committee by the 15th week of the semester in which you are taking HONR 499. Due dates are listed on the page titled “Honors Thesis Timeline” at the front of this guide. If you are unable to present during the 15th week, you must receive permission from Dr. Don Mykles, the Honors Program Director, and your thesis adviser, to present at a later date. Email him at Donald.Mykles@colostate.edu and explain your request for a delay. Please cc your thesis adviser when you email Dr. Mykles. If you and your adviser opt to use a poster presentation for the oral presentation, the meeting name, date, and location must be included in the Thesis Evaluation Report. The poster presentation should be during the semester the student is enrolled in HONR 499. If the intended meeting is not during the semester the student is enrolled in HONR 499, the student can present the poster to the committee as preparation for the meeting.

The Honors thesis presentation differs from a graduate thesis defense in that it is shorter and intended to be a celebration of your learning experience. The presentation is approximately fifteen to twenty minutes in duration followed by a question and answer session with the committee. The formal oral presentation should draw upon the informative and persuasive speaking skills you have developed in the Honors seminars. Practice giving the presentation as you would with any formal speech. You need to pay particular attention to:
• writing, reviewing, and revising a complete sentence outline of your presentation;
• developing a much shorter “bare bones” outline for the actual extemporaneous presentation;
• introducing the presentation in a way that captures audience attention and interest, and previews the main points;
• developing a main body that presents key points (ideas) and perspectives, analysis, arguments, and results;
• focusing on a delivery that is well-organized and clearly presented;
• ending with a summary and conclusion; and
• using PowerPoint is acceptable as long as the presentation is formal, extemporaneous, and follows the presentation guidelines.

Having said this, please remember to review the relevant sections of The Speaker’s Handbook and work with your faculty thesis adviser on the desired format.
Students whose thesis is artistry (vocal recitals, dance performances, plays, films, or art portfolios) must also have a presentation followed by a question and answer session. In these cases, students typically present their formal reflection paper. (See the previous section, “Final Thesis Copy,” for more information about the formal reflection paper.) Note: Early in the semester, students should work with their major department to coordinate the logistics of the presentation, which include selecting a time with the committee and reserving a room for the presentation. If your department is unable to secure a room for the presentation, please contact the Honors Program office at 491-5679.

The Honors thesis presentation is open to the public. Students are responsible for notifying the Honors Program office at least one week before the presentation by filling out the electronic form at honors.colostate.edu/thesispresform. Details will be posted on the Honors Program website. Faculty, staff, students, family members, and other interested individuals are welcome to attend and it is expected that they will contact the student and/or adviser before the presentation date. The student must bring a copy of the Honors Thesis Evaluation Form to the formal presentation. Students preparing to give a thesis presentation are strongly encouraged to attend another student’s thesis presentation prior to scheduling their own presentation.

Following the formal oral presentation and question and answer session, the committee will excuse the student and audience, discuss the grade for the paper (if there are no substantial changes) and presentation, and complete the Honors Thesis Evaluation Form. (The form is included in the back of this guide and is available on-line at honors.colostate.edu/thesis). The committee will then give feedback to the student about his/her presentation. The evaluation form must be delivered to the Honors Program Office when the final copy of the thesis is completed and no later than the last day of final exams week. Please note that the thesis adviser determines the final grade and completes the oral presentation assessment for HONR 499. If the form is not submitted by the deadline for submitting grades at the end of the semester, the student will receive an “Incomplete” grade. This may delay the official graduation date, as students cannot graduate with an incomplete grade on their transcript.

Helpful Hints

Honors students who have completed the Honors thesis offer the following sage advice:

- Pick a topic that is VERY interesting to you.
- Start early! Don’t procrastinate!
- To stay motivated, set mini-goals that you can accomplish.
- Take a look at past Honors theses that are on file in the Honors office.
- Make bi-monthly appointments with your thesis adviser. This will keep you motivated as well as provide a good source of continuous feedback.
- Give yourself PLENTY of time to research/create your thesis. You can write about your topic more easily and more successfully when you’re well-informed.
- Utilize the library; you’ll be surprised by the number of resources it provides. The library staff has experts in different fields, so definitely seek them out.
- Revise constantly! Every time you add to your thesis, print it out and read over it again. Have a friend or someone else you trust read through it.
- Make sure your citations are accurate because this is an important paper that requires correct documentation.
✓ Outline your thesis presentation ahead of time, paying close attention to your time limit.
✓ The week before you present your thesis, start practicing in front of others.
✓ Communicate with your committee several weeks before the thesis presentation so they can set aside the date and time and provide them with a polished penultimate draft prior to the thesis presentation. Suggestions made by your adviser and committee member during the presentation, or after reviewing your penultimate draft, should be incorporated into the final version of your thesis.
✓ Check out the room in which you will be presenting to make yourself feel more comfortable on the big day.

Written by Bethany Hilgers, 2002 University Honors Scholar

Forms

Honors Thesis Preliminary Proposal, Page 18-19
Honors Thesis Formal Proposal, Page 20-21
Honors Thesis Improvement Grant Application, Page 22
Honors Thesis Evaluation and Oral Presentation Assessment Form, Pages 23-24

*Please note: Forms are available online as Word documents at honors.colostate.edu/thesis
Students are required to type the requested information and responses to questions on the forms.
Create

Student Details

CSUID

Semester: Fall of 2017
Semester Format: YEAR90
90 = fall
10 = spring
80 = summer
201790

Thesis Preliminary Proposal

399 Instructor

Proposal Title

Find Adviser By Email

*Email should look like: firstname.lastname@poastate.edu
*If you cannot find your adviser, please email honors.techsupport@poastate.edu

1. Interest: Explain why you are interested in this topic.

2. Describe your thesis: What are the creative activities, research questions, and/or design features that are foundational to your thesis?

3. Describe your methods and approaches: How will you discover answers to research questions, create artistry, and/or develop design projects?

4. Outcome: Describe the creative activity and the expected research result, final product, and/or artistic expression that is the core of your thesis.

Student E-Signature

Submit Draft

Back to List

HONORS THESIS
FORMAL PROPOSAL
Please type the information and responses to questions on this form or use the electronic version which can be found on the Honors Program website. Please complete this formal proposal with your adviser, obtain your adviser’s signature, and submit it to the Honors Program office no later than the third week of the semester in which you are registered for HONR 499. The Honors Program Director’s approval and the formal proposal are required in order to receive a grade for HONR 499 – Honors Thesis. (A Word version is available at www.honors.colostate.edu/forms)

Student Name:__________________________________ CSUID:__________________________________

Local Address:__________________________________  
Street  
City  
State  
Zip Code  

Phone Number:_________________________  E-mail:__________________________________________

Major(s) and Minor(s):__________________________________  Track 1 □  Track 2 □

Semester and year of graduation:__________________________________

Semester and year you will enroll in HONR 499:________________________

Thesis title:__________________________________

Faculty thesis adviser*: ___________________________  E-mail:__________________________________

  Title & Department:_____________________________  Phone:__________________________________

Committee member*: ___________________________  E-mail:__________________________________

  Title & Department:_____________________________  Phone:__________________________________

Committee member*: ___________________________  E-mail:__________________________________

  Title & Department:_____________________________  Phone:__________________________________

Financial support for Honors thesis:

Student and Adviser: Agree on and check one of the three following options:

☐ Thesis payment of $200 to adviser. Funds are transferred from the Honors Program budget to the adviser’s home department.

☐ Adviser supports student application for a Thesis Improvement Grant (TIG; $400 maximum).

☐ None of the above. Adviser declines thesis payment and the student will not apply for a TIG.

__________________________________  ____________________________
Faculty thesis adviser signature  Date

*The faculty thesis adviser and one additional committee member are required. Additional committee members are optional. Faculty with regular appointments (assistant, associate, and full professors) are approved to serve on thesis committees. Students must obtain appropriate approvals for others (refer to the Honors Thesis Guide for instructions); attach relevant correspondence conferring the approvals by the Honors Program.

Continued on back
Please attach a typed description of your thesis that thoroughly addresses the following areas:

2. An explanation of your interest in the subject.
3. Statement describing the central themes, research questions, design project, and/or creative activity.
4. A description of the major tasks that must be completed.
5. A list of 6-12 key resources (e.g., books, materials, people, journals) that are needed for your thesis. Please use proper citations for text documents.
6. A timeline to completion (NOTE – This timeline must include the date you will submit a penultimate draft to your adviser and committee members and the date you will present your thesis to your committee. Refer to the current online Honors Thesis Guide for specific due dates.)
7. A description of the final product. Note that all theses require a significant written component that includes a scholarly review of the topic with appropriate resources cited. Refer to the current online Honors Thesis Guide.
The Thesis Improvement Grant (TIG) is to help a student defray expenses directly related to a student’s thesis topic, such as supplies, travel, and other expendables. Purchase of equipment, books, tuition, etc. is not allowed. Requests should total between $100 and $400. To be eligible, students must (1) be enrolled in HONR 499 and (2) be in good academic standing in the Honors Program. The student should work with the adviser in preparing the application. To assure full consideration, completed applications must be submitted by 5 pm on the Friday of the 5th week of the semester. Awards are based on availability of funds. Those receiving a TIG are not eligible for an Individual Honors Enrichment Award for that academic year.

The application must be typed and be 1-2 pages in length. It must comply with the following format and be appended to the cover page, with student and faculty signatures:

1. Thesis title
2. Thesis description. Describe the background and scope of the thesis project or creative activity.
3. Budget. Provide an itemized budget, including a budget justification. Also include any other sources of funding, if any, and amounts from each source (e.g., scholarships, grants, personal funds, support from adviser, etc.). If there are no other sources, include a statement to that effect. The justification should explain why each item is needed for the thesis.

Total Request: $______________

Applicant Signature: ___________________________  Date: __________

Faculty Adviser Signature: ___________________________  Date: __________

All approved TIG requests require that the student complete an Honors Senior Thesis.

For Approval Committee Use Only

Modifications to Proposal:

Amount Approved: $______________

Approval: ___________________________  Date: __________

Director, University Honors Program

Office Use Only

Approved plus any adjustments: ___________________________
HONORS THESIS EVALUATION FORM

Please use this form to evaluate the student’s Honors thesis final product and oral presentation. This form must be submitted to the Honors Program office after the final thesis copy is completed and no later than the last day of final exams. Please remind your student to submit an electronic copy of his/her final thesis by the last day of final exams to the Honors Program office. Thesis advisers are encouraged to discuss the evaluation with the student prior to submitting it.

Section I affirms the completion of the Honors thesis final product and oral presentation. This section should be completed by the student’s thesis adviser and committee member(s). The thesis adviser determines and submits the final grade for HONR 499 after the final copy of the Honors thesis is completed.

Section II records the final grade for HONR 499. (The formal oral presentation comprises ten percent of the final grade.) This section should be completed by the thesis adviser after considering the comments of the committee member(s).

Section III provides assessment and feedback about the student’s oral communication abilities. This section should be completed by the thesis adviser after considering the comments of the committee member(s).

SECTION I: AFFIRMATION STATEMENT

We affirm that ________________ completed an Honors thesis final product and delivered a formal thesis presentation titled ________________ on ________________.

(Date)

Faculty Thesis Adviser: ____________________________ ____________________________

Name Signature

Committee Member(s)*: ____________________________ ____________________________

Name Signature

Name Signature

Name Signature

Name Signature

SECTION II: FINAL GRADE

Final letter grade for HONR 499, Senior Honors Thesis: __________

Please note: The Honors Program office will enter HONR499 grades into ARIESweb.

Faculty Thesis Adviser’s Signature: ____________________________

*The faculty thesis adviser and only one additional committee member are required. Additional committee members are optional.

**The final thesis grade reflects the quality of the creative project, the written component, and 10% for the formal oral presentation. Grading is based on a traditional +/- grading scale and most students who do high quality work and meet the expectations of their thesis adviser have earned an A+, A, or A-.

Continued on back
**SECTION III: THESIS ADVISER ORAL PRESENTATION ASSESSMENT**

Using the following evaluation standards, the thesis adviser assesses the student’s speech communication skills according to the criteria listed below.

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<th>Key:</th>
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<td>+ Excellent</td>
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<td>√ Satisfactory</td>
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<tr>
<td>- Needs Improvement</td>
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<td>0 Failed to Complete</td>
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<tr>
<th>Introduction</th>
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<tr>
<td>____________ Captured audience attention/interest</td>
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<td>____________ Previewed main points</td>
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<tr>
<th>Body:</th>
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<tbody>
<tr>
<td>____________ Main points clear</td>
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<tr>
<td>____________ Sources cited</td>
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<tr>
<td>____________ Main points supported</td>
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<tr>
<td>____________ Clarity of visual aids</td>
</tr>
<tr>
<td>____________ Organization logical</td>
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<td>____________ Management of visual aids</td>
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<tr>
<th>Conclusion:</th>
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<tr>
<td>____________ Summarized main points</td>
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<td>____________ Addressed audience questions</td>
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<td>____________ Enthusiasm</td>
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**Overall Impression:**

**Comments:**

**Thesis Adviser:** Please complete and submit sections I, II, and III of this two-page form to the Honors Office immediately after the final thesis copy is completed or no later than the last day of finals week.

**Campus mailing address:** Honors Program, 1025 Campus Mail
Appendix I: Honors Thesis Check Sheet

1. ____ Select your thesis topic and your thesis adviser (review adviser and committee member requirements on pages 11-12.)

2. ____ Complete the Honors Thesis Preliminary Proposal and submit it to your HONR 399 instructor.


4. ____ Select at least one committee member with your thesis adviser’s help. (Your committee is composed of your thesis adviser and at least one committee member.)

5. ____ Enroll in HONR 499 for the semester in which you plan to complete your thesis.

6. ____ Do your best to complete the Honors Thesis Formal Proposal and submit it to the Honors Program office the semester before you enroll for HONR 499. The proposal must be submitted to the Honors Program office no later than the third week of the semester in which you are taking HONR 499.

7. ____ Coordinate your formal oral presentation date and time with your committee.

8. ____ Reserve a room (usually in your adviser’s department) for your presentation.

9. ____ Provide the details for your oral presentation to the Honors Office at least one week in advance by filling out the electronic form at http://honors.colostate.edu/thesispresform. Honors staff will review and approve your presentation details before posting them on our website at www.honors.colostate.edu/news-and-events.

10. ____ Submit the penultimate thesis draft or formal reflection paper to your committee at least two weeks before your thesis presentation (by the 13th week of the semester in which you are taking HONR 499). The Honors Office does not need to see a copy of your penultimate draft.

11. ____ Give a formal oral presentation on your thesis to your committee by the 15th week of the semester in which you are taking HONR 499. Bring a copy of the Honors Thesis Evaluation Form to your formal presentation.

12. ____ The electronic copy of your final thesis product must be submitted to the Honors Program via email to honors@colostate.edu by the last day of final exams week. Students who do not submit the electronic copy and the evaluation form will receive an “Incomplete” in HONR 499. Students should check with their thesis adviser to be sure the evaluation form has been submitted.

IMPORTANT: If you will not be able to complete your thesis in the semester in which you’re enrolled in HONR499, refer to page 11 for instructions on requesting a grade of incomplete.
Appendix II: Honors Thesis Guidelines for Formal Reflection Papers

A formal reflection paper is required for: (1) engineering students who intend to use their senior design projects to partially fulfill the Honors thesis requirement; (2) visual and performing artists whose primary thesis component is an art portfolio, voice recital, music recital, dance performance, film, and so forth; and (3) any creative project such as a computer program or software that does not have a written component.

The formal reflection paper should be a substantial and scholarly work. Students will write at least a seven page (double spaced) paper that includes: (1) an explanation of the creative activity; (2) background and source materials for the creative activity (no creative activity is done in a vacuum); (3) the steps taken to complete the project; (4) a description of the significance and/or interpretation of the creative activity; (5) an assessment of how the creative activity contributed to the student’s knowledge; and (6) a brief reflection about the overall thesis experience. The thesis adviser may ask the student to address other areas. Engineers must also submit the group paper from their senior design project, and creative artists must submit voice recordings, video recordings, photographs, or film of their creative projects.

Engineers and others who are involved in group projects are required to write a three to five page paper (double spaced) which explains their individual contributions to the group project and the benefits and challenges of working in groups as an appendix to the formal reflection paper.

Students will follow a writing style recommended by their thesis adviser that is appropriate for the type of creative activity.

Students must submit the penultimate draft of their Honors thesis, the reflection paper and the individual contributions paper (for a group project) to their committee two weeks before the thesis presentation. The electronic copy of the thesis, reflection paper, and individual contribution paper (for a group project) must be submitted to the Honors Program office no later than the last day of finals week.

Students must give a fifteen to twenty minute formal, extemporaneous presentation on their creative activity and their formal reflection paper.
Appendix III: Sample Preliminary Proposal

<table>
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<th>HONORS THESIS</th>
<th>PRELIMINARY PROPOSAL</th>
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Please type the information and responses to questions on this form or use the electronic version which can be found on the Honors Program website. Please develop this preliminary proposal with your faculty thesis adviser, obtain your adviser’s signature, and submit it to your HONR 399 instructor by the due date. Your HONR 399 instructor and the Honors Program Director will review the form and place it in your file. Please keep a copy of your proposal for your records. (A Word version is available at www.honors.colostate.edu/forms)

HONR 399 Instructor Name: Anne Marie Merlin

Student Name: [Redacted] CSUID: [Redacted]

Local Address:

<table>
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<th>Street</th>
<th>City</th>
<th>State</th>
<th>Zip Code</th>
</tr>
</thead>
</table>

Phone: [Redacted] E-mail: [Redacted]

Major(s) and Minor(s): [Redacted]

Semester and year you intend to graduate: Spring 2015


Faculty thesis adviser*: [Redacted] Department: Microbiology, Immunology, and Pathology

Faculty thesis adviser campus address: [Redacted]

Faculty thesis adviser e-mail: [Redacted]

1. Interest: Explain why you are interested in this topic.

My interest in marine mammal conservation and research has developed throughout my undergraduate career, both in my classes and my participation in the Honors Undergraduate Research Scholars program. Before entering college, I harbored an intense passion to both conserve and rehabilitate injured wildlife. I was able to exercise this passion by volunteering for over two years at the Northwest Wildlife Rehabilitation Center, where I first witnessed how veterinary medicine and animal husbandry can be inseparably coupled to wildlife conservation. For over two years during my undergraduate career, I have been lucky enough to spend time with expert researchers in the areas of veterinary pathology and marine mammal research. Through these faculty members, I have become involved in research projects related to northern fur seal pathology and population dynamics. I attended The Wildlife Society's annual conference in Portland, Oregon in 2012 to present research on leptospirosis in fox squirrels in Larimer County. My participation in biomedical sciences and conservation biology classes has augmented my research experience and has allowed me to make connections to real-world applications of veterinary medicine and conservation biology. Therefore, it is appropriate for me to approach the subject of marine mammal conservation through research on the body measurements of northern fur seal pups over time and how they might relate to northern fur seal population decline.
Since volunteering with CSU AmeriCorps Compact Service Corps, I have developed a passion for teaching youth. The education portion of my thesis will allow me to share my knowledge and learning with youth in the community in hopes that they may be inspired to protect marine mammals.

2. Describe your thesis: What are the creative activities, research questions, and/or design features that are foundational to your thesis?

My thesis is based on northern fur seals in the Pribilof Islands of Alaska. The northern fur seal (*Callorhinus ursinus*) is a widely distributed member of the family Otariidae with a pelagic distribution across the North Pacific Ocean from the Sea of Okhotsk to the northern Bering Sea and as far south as 34° N. The current size of the population is approximately 1.3 million individuals, of which approximately 74% are found on the Pribilof Islands. Since 1998, the population on St. Paul Island has been declining at approximately 6% annually from unknown causes. A twenty-one year survey has identified the primary causes of pre-weaning mortality in this population to be emaciation and trauma. During that time, an increasing percentage of pups classified as low body weight were also observed. Multiple stressors have been found to adversely affect birth and body weight. These stressors can be related to maternal condition, such as low pre-pregnancy weight, low gestational weight gain, and physical and emotional stress. Environmental factors may also affect birth weight, including, in the case of Galapagos sea lions, sea surface temperatures. A purpose of my thesis is to investigate changes in the body size and condition of northern fur seal pups dying on St. Paul Island, Alaska from 1986 - 2013. Based on the results of this study, I will then design an interactive marine mammal conservation lesson plan aimed at teaching K-5 youth about marine mammal conservation.

3. Describe your methods and approaches: How will you discover answers to research questions, create artistry, and/or develop design projects?

From plentiful research conducted on the northern fur seal population in the Pribilof Islands, it has been discovered that pup production on the Pribilof Islands has been declining since the latter half of the 1950s and that this decline has intensified in the last decade. In 1998 the NFS was listed as ‘depleted’ under the marine mammal protection act, as it had declined by more than 50% from the 1950’s, but the cause of this decline is incompletely understood. Throughout this study period, a subjective trend of low birth weight’ pups was also identified. As part of a long term mortality study (1986-2013), dead pups were opportunistically collected from a catwalk system at the Reef and Vostochni rookeries of St. Paul Island, Alaska. Routine post-mortem examination was performed on dead pups. Body length, girth, blubber thickness, weight, biologic samples, and pathology data was collected. Fellow researchers and I collated all of the body measurement data into a common database. Descriptive and comparative statistics on this data will be computed using commercially available software (SAS) to assess changes in pup body measurements over the study period. Body measurements will be analyzed categorically over grouped years as well as continuously over individual years. Possible confounding variables will be accounted for in analyses.

After statistical analyses are generated for this data, I will collate the main ideas of this study into a presentation designed for youth in an elementary school in the Poudre School District. My lesson plan will consist of a presentation of pictures and basic facts about the northern fur seal. I will show the youth a map of the global distribution of the species. I will then continue to explain how human activities are negatively impacting populations of marine mammals throughout the world. This part of the lesson will involve an activity in which the youth must participate in a game showcasing, in a simple way, the population dynamics of a threatened species impacted by humans.
4. **Outcome:** Describe the creative activity and the expected research result, final product, and/or artistic expression that is the core of your thesis.

The goal of the research portion of my thesis is to investigate changes in the body size and condition of northern fur seal pups dying on St. Paul Island, Alaska from 1986 - 2013. Due to the often unpredictable outcomes of research, it is uncertain whether or not a statistically-significant trend in body measurements, including body weight, has occurred over time. If body weight has decreased over the study period, this decreasing trend may serve as important background in discovering the causes of the population's idiopathic decline.

The goal of the education portion of my thesis is to encourage a passion to promote conservation of marine mammals in K-5 youth. My lesson plan will not only inform the youth about the issues of survival many marine mammals face, but will provide the youth with daily routine changes they might be able to implement in order to impact the environment in a less detrimental way.

References


Appendix IV: Sample Formal Proposal

HONORS THESIS
FORMAL PROPOSAL

Please type the information and responses to questions on this form or use the electronic version which can be found on the Honors Program website. Please complete this formal proposal with your adviser, obtain your adviser's signature, and submit it to the Honors Program office no later than the third week of the semester in which you are registered for HONR 499. The Honors Program Director's approval and the formal proposal are required in order to receive a grade for HONR 499 - Honors Thesis. (A Word version is available at www.honors.colostate.edu/forms)

Student Name: __________________________ CSUID: __________________________

Local Address: __________________________ Street __________________________
City __________________________ State __________________________ Zip Code _______

Phone Number: __________________________ E-mail: __________________________

Major(s) and Minor(s): __________________________ Track 1 ☒ Track 2 ☒

Semester and year of graduation: Spring 2015
Semester and year you will enroll in HONR 499: Fall 2014


Faculty thesis adviser*: __________________________ E-mail: __________________________

Title & Department: Assistant Professor; Veterinary Pathologist Phone: __________________________

Committee member*: __________________________ E-mail: __________________________

Title & Department: Professor; Veterinary Pathologist Phone: __________________________

Committee member*: __________________________ E-mail: __________________________

Title & Department: __________________________ Phone: __________________________

Financial support for Honors thesis:
Student and Adviser: Agree on and check one of the three following options:

☐ Thesis payment of $200 to adviser. Funds are transferred from the Honors Program budget to the adviser’s home department.

☐ Adviser supports student application for a Thesis Improvement Grant (TIG; $250 maximum).

☒ None of the above. Adviser declines thesis payment and the student will not apply for a TIG.

Faculty thesis adviser: signature __________________________ September 10, 2014 Date

*The faculty thesis adviser and one additional committee member are required. Additional committee members are optional. Faculty with regular appointments (assistant, associate, and full professors) are approved to serve on thesis committees. Students must obtain appropriate approvals for others (refer to the Honors Thesis Guide for instructions); attach relevant correspondence conferring the approvals by the Honors Program.
Please attach a typed description of your thesis that thoroughly addresses the following areas:

2. An explanation of your interest in the subject.
3. Statement describing the central themes, research questions, design project, and/or creative activity.
4. A description of the major tasks that must be completed.
5. A list of 6-12 key resources (e.g., books, materials, people, journals) that are needed for your thesis. Please use proper citations for text documents.
6. A timeline to completion (NOTE – This timeline must include the date you will submit a penultimate draft to your adviser and committee members and the date you will present your thesis to your committee. Refer to the current online Honors Thesis Guide for specific due dates.)
7. A description of the final product. Note that all theses require a significant written component that includes a scholarly review of the topic with appropriate resources cited. Refer to the current online Honors Thesis Guide.

August 2013
HONR 499 Formal Thesis Proposal

1. Title
An education in marine mammal conservation: A retrospective review of northern fur seal (Callorhinus ursinus) pup body size and condition: St Paul Island, Alaska (1986-2013)

2. Interest
My interest in marine mammal conservation and research has developed throughout my undergraduate career, both in my classes and my participation in the CSU Honors Undergraduate Research Scholars Program. Before entering college, I harbored an intense passion to both conserve and rehabilitate injured wildlife. I was able to exercise this passion by volunteering for over two years at the Northwest Wildlife Rehabilitation Center, where I first witnessed how veterinary medicine and animal husbandry can be coupled to wildlife conservation. For over three years during my undergraduate career, I have been lucky enough to spend time with expert researchers in the areas of veterinary pathology and marine mammal health. With the guidance of these faculty mentors, I have become involved in research projects related to northern fur seal pathology and population-scale science. I attended The Wildlife Society Annual Conference in Portland, Oregon in 2012 to present research on leptospirosis in fox squirrels in Larimer County. I also appear as first-author on a publication in the Journal of Wildlife Diseases on the same topic. I volunteered at a wildlife rehabilitation center in Guatemala, thus gaining experience in the care of many different wildlife species. Therefore, it is appropriate for me to focus my honors thesis on research of the body measurements of northern fur seal pups over time and how trends in body measurements might relate to the northern fur seal population decline.

Since volunteering with CSU AmeriCorps Compact Service Corps, I have developed a passion for teaching youth. After I volunteered for CSU Campus Corps, I began working for B.A.S.E. Camp, a before and after school enrichment program for K-5 youth. These experiences have allowed me to interact with and teach children of a wide variety of backgrounds. The education portion of my thesis will allow me to practice my passion for teaching and will provide me with an opportunity to inspire youth in the community to respect and conserve terrestrial and marine mammals.

3. Project Components
Research conducted on the northern fur seal population of the Alaskan Pribilof Islands has discovered that pup production on the Pribilof Islands has been declining since the latter half of the 1950s and that this decline has intensified in the last decade⁵. In 1998 the northern fur seal was listed as ‘depleted’ under the marine mammal protection act, as it had declined by more than 50% from the 1950’s to 1998. The cause of this decline is as-of-yet idiopathic. Since the 1950s, a subjective trend of ‘low birth weight’ pups has been identified⁶. As part of a long term mortality study (1986-2013), dead pups were opportunistically collected from a catwalk system at the Reef and Vostochni rookeries of St. Paul Island, Alaska. Routine post-mortem examination was performed on dead pups. Body length, girth, blubber thickness, weight, biologic samples, and pathology data was collected. Fellow researchers and I collated all of the body measurement data into a common database. Descriptive and comparative statistics on this data are currently being computed using commercially available software (SAS) to assess changes in pup body measurements over the study period. Body measurements will be analyzed categorically over grouped years as well as continuously over individual years. Possible confounding variables will be accounted for in analyses. Using the results of analyses, I will then co-author a scientific manuscript to be submitted for possible publication.

After statistical analyses are generated for the data, I will summarize the results of this study in a PowerPoint presentation designed for youth in an elementary school in the Poudre School District. I will design an interactive marine and terrestrial education unit that may be implemented in a K-5 classroom. I will design a game that will convey to students population dynamics of both marine and terrestrial mammals and will emphasize the idea that conservation in each ecosystem is equally crucial.

4. Tasks
a. The northern fur seal body measurement data must be analyzed using commercially-available software (SAS) in order to identify any trends in body measurements.
b. Results from data analysis must be interpreted in the context of the northern fur seal population on St. Paul Island, Alaska.
c. A text to be submitted for publishing will be composed. This text will include final results of the research study and future implications of the research.
d. A two-day terrestrial and marine mammal conservation education unit for a Fort Collins K-5 classroom will be planned. Two interactive games conveying simple population dynamics of both terrestrial and marine species will be planned. All educational unit plans will be presented in a lesson plan portfolio.

5. References
5. Duncan, Colleen

6. Timeline
- September 24, 2014: Final data analyses conducted
- October 8, 2014: First draft of scientific manuscript completed
- October 13, 2014: First draft of terrestrial and marine mammal conservation unit plan completed
- Week of October 27, 2014: Penultimate draft of final written scientific paper and educational unit planning portfolio to be submitted to Dr. Colleen Duncan
- Week of November 10, 2014: Honors thesis presented to Dr. Colleen Duncan, committee member, Dr. Mykles, and Jack and June Richardson.
- Week of December 12, 2014: All final thesis materials submitted to Honors office

7. Final Product
The final product will consist of a scientific manuscript detailing the retrospective review of northern fur seal pup body size and condition on St. Paul Island, Alaska from 1986-2013. The manuscript will include introduction, objectives, methods, results, conclusions, and acknowledgements sections and will be written in a format acceptable to a professional journal. I will also submit a portfolio containing all of my lesson plans for a terrestrial and marine mammal conservation unit for K-5 youth.