



UNIVERSITY
HONORS
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University Honors Program Thesis Guide
Fall 2023

Colorado
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University

<p>UNIVERSITY HONORS PROGRAM THESIS GUIDE</p> <p>TABLE OF CONTENTS</p>
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University Honors Program Thesis Introduction and Overview	Page 3
Honors Thesis Timeline	Page 4
Common Formats of the Honors Thesis	Pages 5-6
. Coordinating the Honors Thesis with Major Requirements	Pages 7-8
.	
HONR 399, Honors Pre-Thesis	Pages 9-10
. Honors Thesis Preliminary Proposal	Page 10
. HONR 399 Timeline	Page 11
.	
Honors Thesis Adviser and Committee	Pages 12-14
. Selection and responsibilities of the Honors Thesis Adviser and the	
. Honors Thesis Committee Member(s)	
HONR 499, Honors Thesis	Page 15
. Honors Thesis Formal Proposal	Page 15
. Human and Animal Subject Approval	Page 16
. Fall 2023 Due dates	Pages 16-17
.	
Financial support for the Honors Thesis	Pages 18-19
Writing the Honors Thesis	Page 20
The Penultimate Draft	Page 21
Formal Reflection Paper and Individual Contributions Paper	Page 21
The Honors Thesis Formal Oral Presentation	Pages 22-23
Guidelines for the Honors Thesis Presentation	
Presenting the Honors Thesis as a Poster Session	
Steps Needed After the Formal Oral Presentation	Page 24
Appendices	
. I: Examples of Formal Proposals	Page 25

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INTRODUCTION AND OVERVIEW OF THE UNIVERSITY HONORS PROGRAM THESIS

The Honors Thesis may seem like a daunting task, but with the help of the University Honors Program staff and the Honors Thesis Committee, it will be one of the most rewarding academic experiences for UHP Students. Pursuing a self-chosen Honors Thesis is a wonderful opportunity to experience the creative processes that are fundamental to higher education. Honors Students will benefit from the mentorship provided by the Honors Thesis Adviser and the advice and support of the Committee Member(s). The hope is that by completing the Honors Thesis, Honors Students will appreciate and understand the challenges, complexities, and rewards of the creative activity that they choose. The Honors Thesis will improve creative and critical thinking, problem solving, oral and written communication and time management skills.

Many Honors Program graduates say that the Honors Thesis is one of the highlights of their undergraduate academic experience. The Honors Thesis has allowed graduates 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 Honors Thesis to gain entrance into graduate programs and to secure their first job after graduation.

Common elements of Honors Theses include engaging in creative activity, using imagination, pursuing curiosity, developing a productive relationship with the Honors Thesis Adviser, working hard, and writing a formal paper and presenting the Honors Thesis to the Thesis Adviser and Committee Member(s) with the Formal Oral Presentation. There are many variations in Honors Theses. An Honors Thesis of a senior vocal recital is very different from an Honors Thesis based on laboratory research. The Honors Thesis requirements recognize these differences so that Honors students have flexibility to be creative in their own areas of interest and expertise.

This Honors Thesis Guide will help the navigation of the process of completing the Honors Thesis. As always, if Honors Students or the Thesis Adviser and/or Committee Member(s) have questions about the HONR 399 and HONR 499 process, there is an [Honors Thesis Adviser Guide](#) and an [Honors Thesis Committee Member Guide](#). The Honors Student or any member of the Honors Thesis Committee can contact us at UHPHonorsThesis@colostate.edu for any clarification. We always hear that the Honors Thesis is a meaningful experience that is a fabulous capstone to the Colorado State University Honors experience!

UNIVERSITY HONRS PROGRAM

HONORS THESIS TIMELINE

Junior Year

- Register and complete HONR 399 before the end of the junior year. Engineering Senior Design Students should register for the first semester of their Senior Design year.

HONR 399 is a one-credit, five-week course that prepares the Honors Students for HONR 499, the Honors Thesis. In HONR 399, Honors Students will choose a potential Honors Thesis project, and a potential Honors Thesis Adviser. UHP students should register and complete HONR 399 before the end of the junior year. HONR 399 is also offered during the summer semester. Engineering Senior Design Students should register for HONR 399 in the first semester of their Senior Design year. All information about the Honors Thesis is included in this Honors Thesis Guide. Course work is submitted via the HONR 399 Canvas page, and the Preliminary Proposal is uploaded and signed by the Honors Student, the HONR 399 Instructor, and the Potential Thesis Adviser via the [HONR 399 Portal](#).

- After HONR 399 is completed, Honors Students should start to work on the [Honors Thesis Formal Proposal](#).

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Senior Year

- Register for HONR 499 for the semester in which the Honors Thesis will be completed.

HONR 499 The Honors Thesis Course

HONR 499, the Honors Thesis, should be taken the semester the student intends to **complete** the University Honors Program Honors Thesis. If the Honors Student did not secure the support of an Honors Thesis Adviser during the HONR 399 semester, the Honors student needs to do this before the submission of the Formal Proposal via the HONR 499 Portal. Select at least one [Committee Member](#) with the Honors Thesis Adviser's help.

The Honors Student can start the Honors Thesis at anytime before the HONR 499 semester, as long as a plan is in place with agreement from the Honors Thesis Adviser. It is recommended that the Honors Student take HONR 499 the semester before their last semester of their Colorado State University career. HONR 499 is also offered during the summer. HONR 499 does not have regular class meetings. Students work with their Honors Thesis Adviser to complete their Honors Thesis. The Honors Student can access more information through this Thesis Guide and via their HONR 499 Canvas page. The entire HONR 499 process is completed via the [HONR 499 Portal](#).

COMMON FORMATS OF THE HONORS THESIS

Common elements of Honors Theses include engaging in a creative activity, developing a productive relationship with the Honors Thesis Adviser, writing a formal paper and presenting the Honors Thesis to the Honors Thesis Adviser and Honors Thesis Committee Member(s). There are many variations in Honors Theses. An Honors Thesis related to a senior vocal recital is very different from a thesis based on laboratory research. The University Honors Program Thesis requirements recognize these differences so that Honors students have flexibility to be creative in their own areas of interest and expertise. These creative activities can be accomplished in a variety of formats. The following formats are some common types. This list is not exhaustive.

- Art Portfolio 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). This option will include a digital copy of the work and a formal reflection paper that will include a substantial scholarly component appropriate to the Honors Thesis. This will start with 6-12 peer reviewed articles that focus on the art form and technique(s) used in the Honors Thesis.
- Business plan – The student conceptualizes a business, including a plan for marketing, finance, and implementation. 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.
- Community Service Project- Honors students are able to work with a local non-profit organization and take on a project which uses their skills and areas of expertise to help the non-profit progress their cause. Contact anne.merline@colostate.edu for a connection to a non-profit in Fort Collins or Northern Colorado that best fits the interests of the Honors Student.
- Computer Information Systems- Some CIS students may choose to design and implement a database system for their design project that must include a substantial scholarly component appropriate to the discipline. Computer Information Systems students may also find an organization that needs a system and design a database and/or web interface for them.
- Education unit – Primarily for students who are student teaching as part of their education certification. Students create an educational unit that includes lesson plans, instructions, and pedagogy beyond what is required for student teaching. This option will include a formal reflection paper that must include a substantial scholarly component appropriate to the discipline.

- Engineering Senior Design Project – Most engineering majors complete a year-long Senior Design Project within their major. Groups of students work together to complete projects which are used to fulfill the Honors Thesis. The final product must include a formal reflection paper and an individual contributions paper explained in Appendix I.
- Fine arts 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 digital recording of the performance and formal reflection paper that must include a substantial scholarly component appropriate to the discipline.
- Literature Review - A Literature review is a paper is reviewing prior published research in any discipline. The purpose of this type of Honors Thesis is to survey “best practices” to fully understand the scope of an area of interest. An analysis after the literature is reviewed to synthesize the literature which is reviewed to show how this can be used in a particular setting.
- 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 or animal subjects with the guidance of an Honors Thesis Adviser who has formal approval of the research project by the [Research Integrity and Compliance Review Office](#).
- Scholarly research paper – This is 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.
- Honors Students can also use internship, study abroad, and laboratory experiences for their Honors Thesis. The rules on this are, you can be getting paid for what you do, but you cannot use the same academic work for credit for any two courses including HONR 499. Please contact The Honors Thesis Coordinator
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- Contact (UHPHonorsThesis@colostate.edu) to discuss any particular questions.

COORDINATING THE HONORS THESIS WITH SOME MAJOR REQUIREMENTS

Some departments have agreements with the University Honors Program that allow the Honors Thesis to coordinate with major requirements such as a departmental thesis, senior 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 the Honors Thesis requirements) to convert a major requirement into an Honors Thesis; students cannot use the same work for the departmental requirement as the Honors Thesis.

If the Honors Student’s major requires a group project, please refer to Appendix I for guidelines about supplementing the Honors Thesis with the formal 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 are listed below. Departmental requirements change. Honors student must verify these arrangements with the academic adviser in their major department.

- Anthropology – 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 ANTH 493 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 University 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 Honors Thesis.
- Biochemistry B.S. program – All students in this major must complete a Biochemistry Thesis for departmental graduation requirements, and all Honors Biochemistry majors should register for BC499A or B. The research-based thesis is BC 499A and the literature-based thesis is BC 499B. Students must follow the HONR 499 requirements in order to substitute BC499 for HONR 499.. Students registering for BC499 are still required to complete HONR 399. On the HONR 499 [Formal Proposal](#), the Honors Student should indicate that they are enrolled in BC499 rather than HONR 499. The Honors Program will substitute BC 499 for HONR 499, but the student must complete all the requirements, including the Formal Oral Presentation and meet all the deadlines via HONR 499 Portal when they take BC 499. All BC 499 students are added to the Canvas HONR 499 course, so that they are reminded of deadlines and procedures.

- 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 Honors Thesis Committee has one tenure-track or associate BME faculty member.
- 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 the BC Thesis Adviser for the specific department requirements. Students registering for BC 699 are still required to complete HONR 399. The Honors Program will substitute BC 499 for HONR 499, but the Honors student must complete all the requirements and meet all the deadlines for HONR 499 when they take BC 699. All BC 699 are added to the Canvas HONR 499 course, so that they are reminded of deadlines and procedures.
- Chemistry - Chemistry majors wishing to complete an Honors Thesis in their major should register for CHEM499 rather than HONR 499. This will satisfy the AUCC Depth and Integration requirement; otherwise, the student will 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. All CHEM 499 students are added to the Canvas HONR 499 course, so that they are reminded of deadlines and procedures.
- Economics - Three credits of HONR 499 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 Design Project. Engineering students who wish to use their Senior Design Project toward completing the Honors Thesis, must complete the project and augment it with at least a seven-page formal reflection paper, a 3 to 5 page formal individual contribution paper, and a formal oral presentation. Presentations given during Engineering Week will satisfy the Formal Oral Presentation requirement provided the Honors Thesis Adviser and Honors Committee Member(s) are present.
- Interior Design – The year-long senior design project undertaken as programming (INTD400) and project (INTD476), required of all ID majors, offers three options for the Honors Thesis: 1) a completely independent project not related to the design capstone topic, 2) a seven page (plus illustrations/drawings) formal reflection paper (this option requires completion of the ID Thesis by April 1, or 3) 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 neuroscience thesis for graduation requirements. Honors Students should register for NB499 and follow the neuroscience department's guidelines for the written thesis and oral presentation. Students must follow the HONR 499 requirements and deadline in order to substitute NB499 for HONR 499. On the Formal [Proposal](#), please indicate that the Honors student is enrolled NB499 rather than HONR 499.
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HONR 399, THE HONORS PRE-THESIS and the PRELIMINARY PROPOSAL

The Honors Thesis journey begins with enrolling in Honors Pre-Thesis, HONR 399. This course will help Honors Students to select a topic of study, choose an Honors Thesis Adviser, and develop an [Honors Thesis Preliminary Proposal](#). HONR 399 is a series of break-out sessions that will guide each Honors Student through the requirements of the Honors Thesis, HONR 499. The class will address the following areas:

- Selecting an Honors Thesis topic and an Honors Thesis Committee which consist of an Honors Thesis Adviser and at least one Committee Member.
- Exploring the methods of creating the Honors Thesis.
- Preparing the writing component of the Honors Thesis
- Preparing for the Honors Thesis Formal Oral Presentation

Grading for HONR 399 is satisfactory/unsatisfactory. If all class sessions are not completed, including all class assignments, are not completed, as well as the completion the [Preliminary Proposal Draft](#) and the final copy signed by the Honors Thesis Adviser, the grade of "U" for HONR 399, will be assigned and HONR 399 will need to be repeated to satisfy the University Honors Program requirements.

Honors Thesis Preliminary Proposal

The Honors Thesis Preliminary Proposal is intended to help the Honors Student focus their ideas and generate an Honors Thesis topic related to the final Honors Thesis project. During the HONR 399 semester the Preliminary Proposal is submitted. See the Due dates are on each semester's HONR 399 syllabus. The Honors Student will then later develop the Preliminary Proposal with someone on the instructional staff. Ideally, this person will end up being the Honors Student's Honors Thesis Adviser for HONR 499. A completed Preliminary Proposal needs to be signed by a potential Honors Thesis Adviser 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 the [HONR 399 Portal](#) by the date shown on the HONR 399 class syllabus.

Completing an Honors Thesis is a rigorous and time-consuming endeavor, so the Honors student should select a topic that is intellectually exciting, challenging, and fun. The following are some helpful hints about finding and choosing a topic:

Start a “topics file” to keep track of potential areas of interest. Occasionally review this file to see if there are recurrent themes to Honors Thesis interests.

HONR 399 assignments are designed to help the Honors Students choose topics that are potential Honors Thesis ideas and should be used to explore the ideas further.

The Honors Student should ask the following questions should be asked: What courses have most engaged me? What am I most curious about? What do I enjoy? What academic interests am I most passionate about? Honors Students should visit with faculty and discuss ideas with them. Faculty members have a great deal of experience and knowledge that may help the Honors Students discover a topic.

Honors Students can look at the [Spring 2021, Fall 2021, Spring 2022, Fall 2022, and Spring 2023](#) Honors Thesis titles for the University Honors Program Recognition Ceremony Programs to see what other students have accomplished during the Honors Thesis process. Unfortunately, due to student privacy laws, former Honors Theses cannot be viewed.

Steps to submit the on-line Preliminary Proposal are:

1. Student creates and saves the draft of the [Preliminary Proposal via the HONR 399 Portal](#).
2. Student submits draft of the Preliminary Proposal to the HONR 399 Instructor
3. HONR 399 Instructor reviews the draft. This can be approved or denied.
- 3a. If the draft is denied, the student is notified by email and revises the draft and submits the amended draft to the HONR 399 instructor.
4. When the draft is approved by the HONR 399 Instructor, it is returned to the student.
5. Student unchecks the “draft” box and submits the Preliminary Proposal Final Copy to the potential Honors Thesis Adviser
6. The Honors Thesis Adviser reviews the final copy of the Preliminary Proposal, and this can be approved or denied.
- a. If the final copy is denied the student revises and submits a Preliminary Proposal final copy to the potential Honors Thesis Adviser.
- b. When the final copy is approved by the potential Thesis Adviser, the HONR 399 Instructor and the Honors Student are notified. If all other HONR 399 course requirements are satisfied, the student will have completed HONR 399.

HONR 399, THE HONORS PRE-THESIS TIMELINE

HONR 399 The Pre-Thesis requirement

UHP students should register and complete HONR 399 before the end of the junior year. HONR 399 is offered during the summer semester. During the summer semester and it is taught on-line in a synchronous format. Engineering Senior Design Students should register for HONR 399 in the first semester of their Senior Design year. During the HONR 399 Semester, the students is guided in selecting the Honors Thesis topic and an Honors Thesis Adviser. This is to help the Honors Student complete the major goal for HONR 399 of submitting the Preliminary Proposal. The Preliminary Proposal is submitted by the Honors Student and approved by the HONR 399 Instructor, and is then signed by any CSU instructor to be complete. This process is completed via the [HONR 399 Portal](#). All deadlines are listed on the HONR 399 syllabus and are determined by each HONR 399 instructor.

After HONR 399 is completed, the Honors Student is encouraged to start on the [Honors Thesis Formal Proposal](#). If the Honors Student did not secure the commitment of their Honors Thesis Adviser during the HONR 399 semester, the Honors student needs to do this before the submission of the Formal Proposal via the HONR 499 Portal. After the Honors Thesis Adviser is selected, choose at least one [Committee Member](#) with the Honors Thesis Adviser's help. Please review the Honors Thesis Adviser and Committee Member requirements on the next pages.

THE HONORS THESIS ADVISER AND THE HONORS THESIS COMMITTEE MEMBER (S)

The two mentors with whom the Honors Student works throughout the HONR 499 semester are the Honors Thesis Adviser and the Honors Thesis Committee Member. The Honors Thesis Adviser is the person who works closest with the Honors Student and is the person who, with the input of the Honors Thesis Committee Member, submits the grade for the Honors Thesis. The Committee Member is responsible for reading the Penultimate Draft of the Honors Thesis submitted in the 13th week of the semester, as well as being present at the in-person Formal Oral Presentation.

Honors Thesis Adviser Selection and Responsibilities

Selecting an Honors Thesis Adviser is as important as selecting a topic. Honors students will work very closely with the Honors Thesis Adviser throughout the Honors Thesis experience, relying on them to guide the direction of the creative work, review and edit the student's writing, and assist the Honors Student with preparing for the Honors Thesis Formal Oral Presentation. Some questions that Honors Students can ask themselves are: Is individual likeable on a personal basis? Will they be a good mentor and supporter? Is this person easily accessible in terms of scheduling appointments and responding to phone calls or email? Am I excited by the prospect of learning under their guidance? Is this person knowledgeable in the area of the Honors Thesis? Questions like these will help the Honors Students find an Honors Thesis Adviser who not only fits their academic interests, but also fits the needs of the Honors Student's personality. The Honors Thesis Adviser is the person responsible for regularly meeting with the Honors Student, shaping the content of the Honors Thesis, and determining and submitting the final grade via the [HONR 499 Portal](#).

Finding an Honors 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 Honors Students start talking to faculty about ideas and requesting guidance, they will most likely be met with enthusiasm and a willingness to help. The Honors Student's search for an Honors Thesis Adviser, think of faculty who have taught classes that are interesting. Honors Students can search department websites to learn about faculty and their areas of interest/research. A potential Honors Thesis Adviser will be a part of the faculty directory on any departmental website.

It is helpful to meet one-on-one with potential Honors Thesis Advisers before they are asked to be the Honors Thesis Adviser because a meeting will allow the Honors Student to get a better feel for their personalities and interests. Explain the concept of the Honors Thesis, articulate the ideas and expectations for their participation, show them the Honors Thesis Adviser Guide and the [Honors Thesis Guide](#). The Honors Thesis Adviser's responsibilities require that they meet with the Honors student over the course of the HONR 499 semester to discuss ideas and review

drafts of the Honors Thesis. The Honors Thesis Adviser will assign the HONR 499 grade based on the quality of the research/creative activity, written work, and oral presentation. If the Honors Thesis Adviser changes after the Formal Proposal is submitted or approved, the student must notify the Honors Thesis Coordinator at UHPHonorsThesis@colostate.edu.

The requirements for Honors Thesis Adviser

1. Be employed at Colorado State University as a full-time, part-time, or transitional faculty member or Professor *emeritus*. Continuing, Contract and Adjunct faculty must have a continuing appointment in an academic department.
2. Have attained a doctorate (Ph.D.) or the terminal degree in their field
3. Be on campus during the semester in which the Honors Student is registered for HONR 499 (e.g., not on sabbatical leave) and be present on campus for an in-person Formal Oral Presentation.
4. Be familiar with the Honors [Thesis Adviser Guide](#) and the Honors Thesis requirements presented in the [Honors Thesis Guide](#).

Occasionally, there are good reasons for a person without all these qualifications to serve as the Honors Thesis Adviser. Any exceptions will be approved AFTER the Honors student has finished HONR 399, and as a part of the [HONR 499 Formal Proposal Process](#). If this is the case, the Honors student will need to follow the following process:

The Honors Student needs to upload the Formal Proposal to the [HONR 499 Portal](#) to begin the process of completing the Formal Proposal process. After the completed Formal Proposal is submitted, the Honors Thesis Adviser automatically is emailed. If the Honors Thesis Adviser indicates that they do not meet all of the requirements listed in the [Thesis Guide](#) as a part of this approval, the Honors Student is notified by email. To seek an exemption for this person to serve as the Honors Thesis Adviser, the Honors Student must forward a copy of the Formal Proposal to the student's Department Chairperson via email, and cc the University Honors Thesis Program staff with a compelling argument for an exception to the requirements for the Honors Thesis Adviser. If the Honors Student's Department Chairperson approves the request for the Honors Thesis Adviser, the Department Chairperson should respond to the Honors Student, the Honors Thesis Adviser and cc the [University Honors Program staff](#). The University Honors Program staff will approve the action via the HONR 499 Portal.

Honors Thesis Committee Member(s) Selection and Responsibilities

The Honors student and the Honors Thesis Adviser will select the Honors Thesis Committee Member(s). The Honors Thesis Committee Member(s) will serve as a resource, review the penultimate draft of the Honors Thesis, forward comments to the Honors Student and the Honors Thesis Adviser before the formal oral presentation, participate in the Honors Thesis Formal Oral Presentation, discuss recommendations for the final grade with the Honors Thesis Adviser, give feedback on the Formal Oral Presentation to the Honors student, and sign the affirmation

statement on the [HONR 499 portal](#).

An Honors Thesis Committee Member must:

1. Be employed at Colorado State University as a full-time, part-time, or transitional faculty member or Professor *emeritus*. Continuing contract adjunct faculty must have a continuing academic appointment in an academic department.
2. Have attained a doctorate (Ph.D.) or the terminal degree in their field
3. Be on campus during the semester in which the Honors student is registered for HONR 499 (e.g., not on sabbatical leave), and be present at the in-person on campus Formal Oral Presentation.
4. Be familiar with the Honors Thesis [Committee Guide](#) and the [Honors Thesis Guide](#).

Occasionally, there are good reasons for a person without all these qualifications to serve as the Committee Member(s). If this is the case, the following process is needed:

After the Honors Thesis Formal Proposal is uploaded to the [HONR 499 Portal](#), an email is sent to the Honors Thesis Committee Member. If the Honors Thesis Committee Member indicates that they do not meet all of the requirements listed, the Honors Student is notified via email. The Honors Student will email their Honors Thesis Adviser and cc the [University Honors Program staff](#) a compelling argument for an exception to the requirements for the Honors Thesis Committee Member via email. If the Honors Thesis Adviser approves the request for the Honors Thesis Committee Member, the Honors Thesis Adviser should respond to the Honors Student, and cc the [University Honors Program staff](#) who will approve the action on the HONR 499 Portal. The Honors Student, the Honors Thesis Adviser, and the Committee Member(s) are notified via email.

HONR 499, THE HONORS THESIS FORMAL PROPOSAL PROCESS

Honors Students should register for the Honors Thesis course, HONR 499, in the semester they intend to COMPLETE the Honors Thesis. It is advised to plan to complete the Honors Thesis in the first semester of their final year. Honors students should register for HONR 499 via RAMweb. The Honors Thesis Formal Proposal can be downloaded via the [HONR 499 Portal](#). Honors students will have to use Adobe Acrobat for the Formal Proposal. CSU students have access to Adobe Acrobat [here](#). The completed Formal Proposal is due no later than the third week of the semester in which the Honors student is enrolled in HONR 499. HONR 499 is similar to an independent study in which students are working directly with the Honors Thesis Adviser to create the learning experience. Therefore, it is important for Honors students and the Honors Thesis Adviser to list academic resources, outline the goals, timeline, and expectations of the Honors Thesis before the beginning of the semester. The Honors Thesis Formal Proposal is not complete without the Honors Thesis Adviser and Committee Member(s) signatures. There are no official class meetings for HONR 499; instead, Honors Students are expected to have periodic meetings with the Honors Thesis Adviser. These meetings need to be documented on the Honors Thesis Formal Proposal. To give an idea of the hours involved, any three-credit course is 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.

Honors Thesis Formal Proposal

The Honors Thesis Formal Proposal is a comprehensive statement about the Honors Thesis topic and plans. Students should begin working on the Honors Thesis Formal Proposal soon after completing the Honors Thesis Preliminary Proposal. Honors students will work with the Honors Thesis Adviser to develop the Formal Proposal. It must be signed by the Thesis Adviser and the Honors Thesis Committee Member(s). The Formal Proposal is submitted **no later than the end of the third week of the semester in which the Honors student is enrolled in HONR 499**. A signed Formal Proposal is approved by the University Honors Program staff. Two examples of completed Formal Proposals are in Appendix II.

If the Honors student wants to change the topic after submitting the Formal Proposal, another Formal Proposal must be uploaded to the HONR 499 Portal. The Honors student will first have to request that the original Honors Thesis be deleted from the HONR 499 portal, then a new Formal Proposal can be uploaded by the Honors student. The new Formal Proposal must be approved by the Thesis Adviser and Committee Member(s) again.

Human and Animal Subject Approval

If the Honors Thesis includes firsthand data from experiments or surveys, or it includes laboratory or fieldwork and/or meets the Federal Guidelines of research that includes human or animal subjects, MAY require further training and approval. The Honors student and the Honors Thesis Adviser should contact the [Research Integrity and Compliance Review Office](#). Please be forewarned that if the Honors Thesis requires IRB training, this process can be lengthy, so start early.

<p style="text-align: center;">UNIVERSITY HONRS PROGRAM FALL 2023 HONR 499 HONORS THESIS DUE DATES</p>
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The schedule of the HONR 499 Semester

This is the schedule for the Fall 2023 semester. All forms and links can be found at: <http://honors.colostate.edu/thesis>. All questions should be directed to UHPHonorsThesis@colostate.edu.

- 3rd week **FORMAL PROPOSAL** (FALL 2023 September 8, 2023, 11:59 pm) Completion of the HONR 499 Formal Proposal via the [HONR 499 Portal](#). This includes the proposal itself, and the signature of the Honors Thesis Adviser and the Honors Thesis Committee Member(s). Information about the requirements for the Honors Thesis Committee are on pages 12-14 of the Honors Thesis Guide. This approval process are steps 1-6 on the [HONR 499 Portal](#).
- 5th Week **THESIS IMPROVEMENT GRANT** (FALL 2023 September 22, 2023, 11:59 pm) After the submission of the Formal Honors Thesis Proposal, and if the Honors Thesis Improvement Grant option on the Honors Thesis Formal Proposal was chosen, this step needs to be completed via the [HONR 499 Portal](#). The TIG guidelines are on page 17 in the Honors Thesis Guide.
- 13th week **PENULTIMATE DRAFT** (FALL 2023 November 17, 2023, 11:59 pm) A penultimate draft of the Honors Thesis must be uploaded to the HONR 499 Portal by the end of the 13th week of the semester. The Honors Thesis Adviser and Committee Member(s) can download it from the HONR 499 Portal once it is uploaded it to the site by the Honors Student. This is STEP 8 on the [HONR 499 Portal](#) and described on page 19 of the Honors Thesis Guide.

-OR -

- 13th week **GRADE OF INCOMPLETE** (FALL 2023 November 17, 2023, 11:59 pm). If the Honors Thesis cannot be completed during the HONR 499 semester, the Honors student must request an approval for a grade of incomplete. First, the Honors student must request an incomplete via the [HONR 499 Portal](#). An email will be sent to the Honors Thesis Adviser. The request for the approval should include the reason that the Honors Thesis cannot be completed by the required deadlines, a brief plan for the completion of tasks, including the timeline for completing the Honors Thesis. The Honors Thesis Adviser will then approve the Incomplete request via the HONR 499 Portal. If an incomplete grade is approved, the University Honors Program staff will submit this during the grading period. An incomplete grade must be completed no later than two semesters after the HON 499 semester. After two semesters, the incomplete grade is then reported as an “F.”
- 14th week **FORMAL ORAL PRESENTATION DATE** (FALL 2023 December 4, 2023, 11:59 pm) Before the Honors Thesis Oral Presentation, the Honors Student must submit the time, date, and location of the Honors Thesis Formal Oral Presentation. This is step 9 on the [HONR 499 Portal](#).
- 15th week **THE FORMAL ORAL PRESENTATION** (FALL 2023 December 15, 2023 , 11:59 pm) The Formal Oral Presentation consists of a minimum 15–20-minute extemporaneous Formal Oral Presentation by the Honors Student followed by a question-and-answer session with the Honors Thesis Committee and guests. All Formal Oral Presentations must be on-campus and in person. Poster presentations at university, regional, or national professional meetings meet the Formal Oral Presentation requirement if both the Honors Thesis Adviser and Honors Thesis Committee Member(s) are present. Honors Students can also present their Honors Thesis at MRAD, MURALS, or CURC if both the Honors Thesis Adviser and Honors Thesis Committee Member(s) are present. See page 20 in the Honors Thesis Guide for full instructions.
- Finals week By the end of Finals Week (FALL 2023 December 15 ,2023, 11:59 pm) The Honors student needs to upload the final digital copy of the Honors Thesis, which incorporates the Honors Thesis Adviser and Committee Member(s) final recommendations for the Honors Thesis, formal reflection paper, and individual contributions paper to the [HONR 499 Portal](#). The Honors Thesis Adviser must grade the Honors Student’s Honors Thesis. **All members of the Honors Thesis Committee must also comment on the HONR 499 Portal**. These guidelines are on page 22 in the Honors Thesis Guide. This is step 10 on the [HONR 499 Portal](#).

Finals week **COMPLETION OF HONR 499** The last step in the Honors Thesis process is for the student to upload an abstract of their work which will be submitted to the Journal for Undergraduate Research. This database will be searchable for future Honors Students.

Honors Students receive their HONR 499 grade via RAMweb when grades are released.

FINANCIAL SUPPORT FOR THE HONORS THESIS THE THESIS IMPROVEMENT GRANT

The University Honors Program can provide some financial support either to the student or to the Honors Thesis Adviser for completion of the Honors Thesis. Honors Students should consult with their Thesis Adviser to determine whether they wish to:

- a) Apply for a payment of \$200 to the Honors Thesis Adviser or the Honors Thesis Adviser's department;
- b) Apply for a student [Thesis Improvement Grant](#) (TIG) (a maximum of \$400) to be awarded to the student. Students must complete an application for the TIG after the Formal Proposal has been approved by the University Honors Program Staff via the [HONR 499 Portal](#).
- c) Request no financial support for the student or the Honors Thesis Adviser. This choice is made as a part of the Formal Proposal via the HONR 499 Portal.

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. To be eligible, students must

- (1) be enrolled in HONR 499;
- (2) have a completed Formal Proposal submitted via the [HONR 499 Portal](#) and
- (3) be in good academic standing in the Honors Program. The student should work with the Honors Thesis Adviser in preparing the application. [The due date for the FALL 2023 semester is September 22, 2023, 11:59 pm.](#) Awards are based on availability of funds. Honors Students receiving a TIG are not eligible for an Individual Honors Enrichment Award for that academic year.

The application must be typed. It must include the following with the Honors Student and Honors Thesis Adviser signatures:

1. The Honors Thesis Title
2. Honors Thesis description which includes at least 500 words that explain the interest in the Honors Thesis topic, a statement describing the central themes, the research questions, the design of the project and/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 the Honors Student's department, etc.). If there are no other sources, include a statement to that effect. The justification should explain why each item is needed for the Honors Thesis.
4. Please indicate which account the TIG will be deposited in. This will be the Honors Student's account or a Departmental account. If the TIG funds are to be deposited in a student account via

Financial Aid. If there is an outstanding balance in the student's account, the funds go towards the balance and the student will be unable to draw on TIG funds.

5. A list of the major tasks that must be completed week by week. This will help the Honors student and the Honors Thesis Committee Members stay on track for all of the deadlines. The University Honors Program deadlines do not have to be included in this list.
6. Using the citation format that is specific to the discipline of the Honors Thesis, a bibliography of 6-12 key books or academic journals that are central to the Honors Thesis must be included. The literature should be peer-reviewed so that it acts as a basis for the Honors Thesis. This will assure that the Honors Thesis is based on the best practices and knowledge that are foundational to the Honors Thesis field of study and can meet the rigorous standards of academic research.
6. A simple description of the final product (research paper, business plan, fine arts performance etc.). If the Honors Thesis requires a formal reflection paper and/or individual contributions paper as outlined in Appendix II of the Honors Thesis Guide, include that as well.

WRITING THE HONORS THESIS

All Honors Theses require a written component. This is either a written Honors Thesis or an Honors Thesis that must include a Formal Reflection Paper that takes the Honors Thesis Committee through the Honors Thesis process and reflects senior-level writing. Any written paper or Formal Reflection Paper will include peer-reviewed literature that the Honors Student submitted as a part of the Honors Thesis Formal Proposal. This literature is based in the best practices and knowledge that are foundational to the Honors Thesis field of study and can meet Penulthe rigorous standards of the academic community.

Specific writing styles vary by discipline, so the Honors Student should consult with their Honors Thesis Adviser for guidance about the writing style appropriate for the discipline. For each style, there are manuals to help the Honors Student understand to follow the conventions of the discipline. The CSU 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 learned in the Honors seminars. Honors students need to pay particular attention to:

- organizing the writing for the 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 learned while writing summaries, syntheses, evaluations, and arguments learned in the Honors seminars;
- strategizing for cohesion;
- editing and proofreading; and utilizing appropriate documentation styles.

Penultimate Honors Thesis draft

Honors Students submit the penultimate (next to the last and polished) draft of their Honors Thesis to their the HONR 499 Portal **by the 13th week of classes** so that the Honors Thesis Committee has time to review it prior to the presentation. The Formal Oral Presentation should be scheduled no later than the last week of classes. The Honors Thesis Adviser will compile comments and feedback given by the Honors Thesis Committee Members and forward them to the student after the Formal Oral Presentation. The student will incorporate changes (if any) made by the Honors Thesis Adviser into the final written version of the Honors Thesis.

There is not a page requirement for any Honors Thesis. Thesis Advisers may set a requirement based on discipline specific guidelines. The important thing about any Honors Thesis is that the goals agreed to on the Honors Thesis Formal Proposal are met. All Honors Theses should

describe the Honors Thesis process from inception to completion, weaving in the necessary components of the process using 6-12 pieces of peer reviewed literature to ground the Honors Thesis in the academic literature.

Formal Reflection Paper

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 Honors 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 that shows senior-level writing.

The formal reflection paper should reflect the process of the project, as well as the integration of scholarly literature that is foundational to the creative project turned in as the Honors Thesis.

Students will write and submit a double-spaced digital version of a paper that includes: (1) an explanation of the Honors Thesis; (2) the inclusion of a subset of peer-reviewed literature (6-12 resources) that is foundational for the Honors Thesis. The scope and number of these articles are decided between the Honors student and the Honors Thesis Adviser; (3) the steps taken to complete the project; (4) a description of the significance and/or interpretation of the Honors Thesis as a reflection of the scholarly research in the student's field (5) an assessment of how the creative activity contributed to the student's knowledge; and (6) a brief reflection about the overall Honors Thesis experience. The Honors Thesis adviser may ask the student to include other information in this paper.

Individual Contributions Paper

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 Honors Thesis Adviser that is appropriate for the discipline of the creative activity.

HONORS THESIS FORMAL ORAL PRESENTATION GUIDELINES

The Honors Thesis Formal Oral Presentation is an opportunity for the Honors Student to formally present their creative activities to the Honors Thesis Committee. The Honors student must give a formal oral presentation of their Honors Thesis to the Thesis Committee by December 15, 2023 11:59 pm. If the Honors student is unable to present during the 15th week, the Honors Student must receive permission from the University Honors Program staff and the Honors Thesis Adviser to present at a later date by sending an email to both that explains their request for a delay. If the Honors student and the Honors Thesis Adviser opt to use a poster presentation for the oral presentation, the meeting name, date, and location must be uploaded to the HONR 499 Portal.

The Honors Thesis formal oral presentation differs from a graduate thesis defense in that it is shorter and intended to be a celebration of the Honors student's learning experience. The presentation is approximately fifteen to twenty minutes in duration followed by a question-and-answer session with the Honors Thesis Committee. The Formal Oral Presentation should draw upon the informative and persuasive speaking skills that the Honors student has developed in the Honors Seminars. The Honors Student should practice giving the presentation to others before the Formal Oral Presentation. Honors students need to pay particular attention to:

- developing a much shorter “bare bones” outline for the actual extemporaneous presentation.
- introducing the presentation in a way that captures audience attention and interest
The week before the Honors student presents their Honors Thesis, they should start practicing in front of others.
- Suggestions made by the student's Honors Thesis Adviser and Honors Committee Member during the presentation, or after reviewing the penultimate draft, should be incorporated into the final version of the Honors Thesis.
- The Honors student should check the room in which they will be presenting to make themselves feel more comfortable on the date of the Formal Oral presentation. The Honors Student should also be sure to check the podium and the connectivity of other devices.

- The introduction should capture the audience's attention and interest and previewed the main points.

- The body is assessed by the clarity and the support of the main points, the sources that are cited, a logical organization of the main points, and the clarity and management of visual aids.

- The conclusion should contain a summary of the main points, and the students should address

the audience's questions professionally which should demonstrate their critical and creative thinking.

- Following the formal oral presentation and question and answer session, the Honors Thesis Committee will excuse the student and audience, discuss the grade for the Honors Thesis and Formal Oral Presentation. The Honors Thesis Committee will also give feedback to the student about their presentation.
- The assessment for the delivery of the speech should include an assessment of the extemporaneous style, the articulation of the student's presentation, the use and professionalism of the presentation aids, the appropriate volume, rate, enthusiasm, and 90% eye contact with the audience during the presentation.
- Using presentation software is acceptable as long as the presentation is formal, extemporaneous, and follows the presentation guidelines.
- Students whose Honors Thesis is artistry (vocal recitals, dance performances, plays, films, or art portfolios) must also have a formal oral presentation. In these cases, students typically present their formal reflection paper which is explained in Appendix I.

Honors Thesis Formal Oral Presentations are open to the public. Students are responsible for filling out STEP 9 to report the date, time, and place of the Formal Oral Presentation by November 17, 2023, 11:59 pm. Faculty, staff, students, family members, and other interested individuals are welcome to attend.

Awards and Recognition

The Honors Program strongly encourages students to participate in one of many symposia on campus. Consider the annual [Celebrate Undergraduate Research and Creativity Symposium](#) (CURC), [Multicultural Undergraduate Research Art and Leadership Symposium](#) (MURALS) or [The Mentored Research and Artistry Distinction](#) (MRAD). Presentation of a poster at the CURC, MURALS, or MRAD can satisfy the Formal Oral Presentation only if the Thesis Adviser and Committee Member(s) are present.

STEP TAKEN AFTER THE FORMAL ORAL PRESENTATION

- 1) Students must submit a digital copy of their final work to step 10 on the [HONR 499 Portal](#) by the last day of finals week, which is December 22, 2023, 11:59 pm. This includes a digital copy of the Honors Thesis, and any additional formal reflection and/or individual contributions papers.
- 2) The Honors Thesis Adviser must submit the final grade based on the quality of the Honors Thesis work and feedback from the Committee Member(s) about the paper and Formal Oral Presentation. HONR 499 is graded on a traditional plus/minus grading scale (e.g., A+, A, A-, B+, etc). The Honors Thesis Adviser must present comments about the Honors Thesis and the Formal Oral Presentation and electronically sign their name on the [HONR 499 Portal](#).
- 3) All Honors Thesis Committee Members must submit a comment about the Honors Thesis and the Formal Oral Presentation, and electronically sign their name on the [HONR 499 Portal](#).
- 4) The last step in the Honors Thesis process is for the student to upload an abstract of their work which will be submitted to the Journal for Undergraduate Research. This database will be searchable for future Honors Students through the Journal of Undergraduate Research. This is step 11 of the HONR 499 Portal.
- 5) Once the HONR 499 Portal is complete with the components stated above, the grades are recorded via RamWeb.

APPENDIX I

HONORS THESIS FORMAL PROPOSAL

Download this typed and completed form to the HONR 499 Portal no later than the third week of the semester in which you are registered for HONR 499. Instructions for the Thesis Adviser and the Committee Members(s) to complete this process are in the Honors Thesis Guide, the Thesis Adviser Guide, and the Committee Member Guide.

Student Name: Jessica Price

CSUID: 123-34-7765

Email: helpinghands@colostate.edu

Major: Sociology

Semester and year of graduation: Fall 2023

Semester and year you will enroll in HONR 499: Fall 2023

Thesis title: Asset Based Community Development With Habitat for Humanity Fort Collins

Faculty thesis adviser*: Dr. Kind E-mail: kindness@colostate.edu

Title & Department: Professor in Sociology Phone: 970-688-5361

Committee member*: Dr. Money E-mail: moneymoneymoney@colostate.edu

Title & Department: Economist for CSU Phone: 970-855-9756

Committee member*: _____ E-mail: _____

Title & Department: _____ Phone: _____

Please attach a typed description of your Honors Thesis that thoroughly addresses the following areas:

1. Honors Thesis title.
2. An explanation of your interest in the subject.
3. A statement describing the central themes, research questions, design project, and/or creative activity.
4. A description of the major tasks that must be completed, including the dates that the Honors student will meet or check in with the Thesis Adviser during the semester and the parts/drafts of the Honors Thesis that will be completed for each date. This detail will help the Honors student and the Honors Thesis Adviser stay on task. This timeline can also include the date that the Honors Student will submit a Penultimate Draft to the Thesis Adviser and Committee Member(s) and the date that the Formal Thesis Presentation will be held. Refer to the HONR 499 Canvas Page for specific due dates.
5. A list 6-12 pieces of literature (books and academic journals) in a bibliographic form that are central to the Honors Thesis. This literature should be peer-reviewed so that it acts as a basis for the Honors Thesis and/or a formal reflection paper (if needed). This will assure that the Honors Thesis and/or formal reflection paper is based on the best practices and knowledge that are foundational to the field of study of the Honors Thesis and can meet the rigorous standards of the academic community.
6. A description of the final product. Please state the format of the final Honors Thesis. If the final project requires a formal reflection paper and/or an individual contributions paper as outlined on page 26 of the Honors Thesis Guide, please state that here as well.

- 7.

Honors Thesis Formal Proposal

1. Honors Thesis title.

Asset Based Community Development With Habitat for Humanity Fort Collins

2. An explanation of your interest in the subject.

As the cost of housing in Fort Collins and many other U.S. cities continues to escalate, the burden of rent or mortgage payment has become insurmountable for a growing number of residents. This burden unjustly falls on socially vulnerable residents that have suffered from uneven development, repeated violence, threats of displacement, and persistent discrimination. Over the years of my undergraduate career, I have become interested in understanding and addressing inequality and unaffordable housing. I have worked on projects related to climate gentrification, accessory dwelling units, urban growth boundaries, and Marxist geographies to name some of my previous research. Additionally, I have joined Habitat for Humanity at CSU which is a volunteer group focused on improving living conditions and constructing decent and affordable homes for families in need.

This project will provide me an opportunity to synthesize what I've learned in my Geography courses, utilize GIS to analyze the state of housing in Fort Collins, and hear from real people about their experiences with housing and community engagement. My goal is to create a project that challenges myself and others to think critically about issues related to social justice and look into solutions that genuinely consider the dreams and concerns of community members instead of projecting counterproductive remedies.

3. Statement describing the central themes, research questions, design project, and/or creative activity.

Asset Based Community Development, or ABCD, is a strategy that focuses on the aspirations and skills of community residents to determine which products, services, and partnerships will best serve their goals. This community development strategy has shaped Habitat for Humanity's Neighborhood Revitalization planning process which aims to improve the quality of life for neighborhood residents, provide housing resources for families, and induce further civic and community engagement. The central research question for this project is 'How can Asset-Based Community Development be deployed to

improve the quality of life in Fort Collins neighborhoods?. The theoretical basis of this research is Sherry Arnstein's Ladder of Citizen Participation, which models the varying degrees in which citizens are included and excluded from decision making in their communities. Research about the state of housing in Fort Collins and the impacts of historic and ongoing racist policies and practices will also be conducted to understand the necessity for community development centered on social equity.

This project will implement several activities, including GIS analysis and interviewing future Habitat for Humanity Homeowners. Using geospatial data from the U.S. Department of Housing and Urban Development (HUD), I will calculate and assess the burden of monthly housing costs for renters and owners based on the costs of homeownership or rent. Additionally, I'll analyze the availability of public housing, Housing Choice Vouchers, and Community Development Block Grant Activity agglomerated by census tracts in Fort Collins.

For the primary research portion of my thesis project, I will be interviewing future homeowners of a multifamily unit rezoning and development project in Fort Collins. This project is a partnership between Habitat for Humanity, Odell Brewing Co., Colorado Iron and Metal, and Hartford Homes to convert an overflow parking lot into affordable housing. My role in this project is to interview future residents to identify their hopes, dreams, and concerns which make up the core of Habitat for Humanity's Quality of Life Framework. Interview questions may include 'What are the most important community outreach products and services you would like to see offered in your neighborhood?', 'What interested in you applying to be a Habitat Homeowner?', 'What's your motivation in life and how could your community support your goals?', 'What are some positive or negative aspects of previous neighborhoods you've lived in?' or 'What are some concerns you have as a future homeowner and how can they potentially be alleviated?'

4. A description of the major tasks that must be completed.
 - a. Human subjects training for social / humanistic / behavioral research must be completed via Citi Program
 - b. A Kuali system protocol with the details of my research study, classification of my project, and consent forms that I'll be providing to human subjects must be submitted and accepted by the IRB at CSU
 - c. Interviews must be scheduled and conducted with future Habitat Homeowners through Kristin Candella, the CEO of Habitat for Humanity Fort Collins
 - d. HUD spatial data must be managed in ArcGIS Pro and several map layouts must be created to visualize Fort Collins housing data
 - e. A final research paper and poster for the Capstone Symposium must be composed

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.

Arnstein, Sherry R. "A Ladder of Citizen Participation." *Journal of the American Planning Association*, vol. 85, no. 1, Routledge, 2019, pp. 24–34, <https://doi.org/10.1080/01944363.2018.1559388>.

Berganini, Stefanie. *Neoliberal Dirt: Homelessness, Stigma, and Social Services In Fort Collins, Colorado*. Colorado State University. Libraries, 2019.

City of Fort Collins. "Housing Strategic Plan 2021" *City of Fort Collins*. 2021

Daniel Lim Consulting. "Anti-Racism Training Manual: Introductory Training Modules for Habitat for Humanity International and Affiliates" *Habitat for Humanity*. 2020.

Ferrier, Pat. "Odell brewing up affordable housing plan north of popular Fort Collins craft brewery" *Coloradoan*, 30 September 2021.

Gaber, John. "Building 'A Ladder of Citizen Participation': Sherry Arnstein, Citizen Participation, and Model Cities." *Journal of the American Planning Association*, vol. 85, no. 3, Routledge, 2019, pp. 188–201, <https://doi.org/10.1080/01944363.2019.1612267>.

Gould Ellen, Ingrid, and Ioan Voicu. "Nonprofit Housing and Neighborhood Spillovers." *Journal of Policy Analysis and Management*, vol. 25, no. 1, Wiley Subscription Services, Inc., A Wiley Company, 2006, pp. 31–52, <https://doi.org/10.1002/pam.20155>.

Habitat for Humanity International. "Applying Equity in the Quality of Life Framework: A guide for residents, community associations, and partners" *Habitat for Humanity*. 2021.

Habitat for Humanity International. "Improving Quality of Life in Neighborhoods: A guide for residents, community associations and partners" *Habitat for Humanity*. 2019.

U.S. Department of Housing and Urban Development Geospatial Data Storefront

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.)

- February 4th, 2022: Human Subjects Training completed
- February 4th, 2022: Research protocol submitted to IRB
- March 1st, 2022: Preliminary Research and GIS Analysis completed
- Week of March 14th, 2022: Interviews conducted with Habitat Homeowners

- April 11th, 2022: Penultimate draft of final research paper submitted to Dr. Anne Marie Merline and committee member, Dr. John Lindenbaum
 - April 27th, 2022: Honors thesis presented to Dr. Anne Marie Merline and committee member, Dr. John Lindenbaum
 - May 6th, 2022: All final thesis materials submitted to Honors office
 - May 6th, 2022: Final poster presented at the Capstone Symposium
7. A description of the final product. Please state the format of your final project. All Theses require a formal written component. Please see common options on pages 6-7 of the Honors Thesis Guide. If your final project requires a formal reflection paper and/or an individual contributions paper as outlined on page 26 of the Honors Thesis Guide, please state that here as well

The final product will be a research report consisting of primary qualitative interview data, secondary quantitative GIS analysis, synthesis of Habitat for Humanity training modules and manuals, and other secondary research related to nonprofit housing spillover effects, and housing in Fort Collins. The research paper will include introduction, methods, results, conclusions, and acknowledgements sections. The final project will not require a formal reflection paper and/or an individual contributions paper.

HONORS THESIS FORMAL PROPOSAL

Download this typed and completed form to the HONR 499 Portal no later than the third week of the semester in which you are registered for HONR 499. Instructions for the Thesis Adviser and the Committee Members(s) to complete this process are in the Honors Thesis Guide, the Thesis Adviser Guide, and the Committee Member Guide.

Student Name: Henry Allen CSUID: 543-62-7436

Local Address: 716 Biology Street Fort Collins CO 80525
Street City State Zip Code

Phone Number: 805-682-2221 E-mail: crabcakes@colostate.edu

Major(s) and Minor(s): Biology

Semester and year of graduation: Spring 2022

Semester and year you will enroll in HONR 499: Spring 2021

Characterization of Crustacean Hyperglycemic Hormone (CHH)

Thesis title: Superfamily Receptors in the Blackback Land Crab (Gecarcinus lateralis)

Faculty thesis adviser*: Dr. Clear Water E-mail: safetoswim@colostate.edu

Title & Department: Professor in Biology Phone: 970-155-1234

Committee member*: Dr. Rock E-mail: sedimentaryrocks@colostate.edu

Title & Department: Geologist in Geology Phone: 970-844-9436

Committee member*: _____ E-mail: _____

Title & Department: _____ Phone: _____

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

1. Honors Thesis title.
2. An explanation of your interest in the subject.
3. A statement describing the central themes, research questions, design project, and/or creative activity.
4. A description of the major tasks that must be completed, including the dates that the Honors student will meet or check in with the Thesis Adviser during the semester and the parts/drafts of the Honors Thesis that will be completed for each date. This detail will help the Honors student and the Honors Thesis Adviser stay on task. This timeline can also include the date that the Honors Student will submit a Penultimate Draft to the Thesis Adviser and Committee Member(s) and the date that the Formal Thesis Presentation will be held. Refer to the HONR 499 Canvas Page for specific due dates.
5. A list 6-12 pieces of literature (books and academic journals) in a bibliographic form that are central to the Honors Thesis. This literature should be peer-reviewed so that it acts as a basis for the Honors Thesis and/or a formal reflection paper (if needed). This will assure that the Honors Thesis and/or formal reflection paper is based on the best practices and knowledge that are foundational to the field of study of the Honors Thesis and can meet the rigorous standards of the academic community.
6. A description of the final product. Please state the format of the final Honors Thesis. If the final project requires a formal reflection paper and/or an individual contributions paper as outlined on page 26 of the Honors Thesis Guide, please state that here as well.

1. Honors Thesis title.

Characterization of Crustacean Hyperglycemic Hormone (CHH)
Superfamily Receptors in the Blackback Land Crab (*Gecarcinus lateralis*)

2. An explanation of your interest in the subject.

Conservation efforts rely on the proper understanding of molecular processes as much as the ecology and life history of both endangered and invasive species. The molting cycle, being so crucial for the growth and survival of crustaceans, is of special interest. The crustacean hyperglycemic hormone (CHH) superfamily includes the molt inhibiting hormone (MIH) which is one of the key molecules involved in the crustacean molting cycle. The receptors for this ligand family have not been successfully characterized for decades, however. This pilot research will create more opportunities for learning about these signaling pathways.

I am interested in learning how to use different bioinformatics software like BLAST, JALVIEW, MAFFT DASH, and IQTree as it is a quickly growing field and I have no doubt it will be at the forefront of scientific research in the near future. It has already had considerable effects on different fields like epidemiology, evolutionary and comparative biology, and phylogenetics. I will also be practicing widely applicable lab techniques like animal dissections, RNA extraction, DNA digestion, cDNA synthesis or reverse transcription, primer design, quantitative and non-quantitative polymerase chain reaction (qPCR, PCR), and ligand-receptor binding assays.

3. Statement describing the central themes, research questions, design project, and/or creative activity.

This work relates to the decapod crustacean molting cycle, specifically the signaling pathways that are seen in the blackback land crab (*Gecarcinus lateralis*). The CHH peptide superfamily includes MIH, which prevents crabs from entering the active stage of the molting cycle (premolt) by binding to receptors in the Y organ (YO), which is where ecdysteroids, the initial driving components of the molt cycle, are synthesized. The receptors for the CHH superfamily ligands are not well characterized in crustaceans, although they are most likely G-protein-coupled receptors (Mykles, 2021).

This research will reference a well identified CHH superfamily receptor, ion transport peptide (ITP) receptor, in insects, which are closely related to crustaceans under the Pancrustacea clade, in the Arthropoda phylum. Three ITPr sequences from the silk moth (*Bombyx mori*) will be used to perform BLAST searches across the blackback land crab transcriptome to obtain new putative CHHr sequences. These will be compared to the three identified ITPrs in phylogenetic analyses in order to

determine whether this study's newly identified sequences as well as previously identified putative sequences actually code for true CHHrs. (Nagai et al. 2014, Veenstra et al. 2015, Buckley et al. 2016, Tran et al. 2019, Rump et al. 2021).

Primers will be designed for selected sequences. PCRs will be performed to determine expression of the selected putative CHHr sequences throughout the molt cycle and in different crab tissues (YO, heart, claw muscle, hepatopancreas, testis, and gills) respectively. CHHr levels should be highest in the YO during intermolt, and low during premolt (mid- and late-premolt especially) and postmolt.

4. A description of the major tasks that must be completed.

- a) Phylogenetic analysis of putative CHH receptors: extract putative CHHr sequences from BLAST searches using the three identified ITPr sequences as a query. Align the hit sequences using MAFFT-DASH. Delete redundancies and trim the aligned BLAST hits in JALVIEW. Create a phylogenetic tree using IQTree.
- b) Primer design: select five new putative CHHr sequences from the BLAST hit results and design primers using the IDT DNA tool Primer Quest to perform PCRs and determine putative CHHr levels across different crab tissue types (YO, heart, claw muscle, hepatopancreas, testis, and gills).
- c) Quantitative assays: perform qPCRs to determine putative CHHr levels in the YO across different stages of the molting cycle.

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.

1. The blackback land crab transcriptome (Das et al. 2016) for multiple limb autotomy (MLA) and eyestalk ablation (ESA), and the Kozma and Perez Moreno et al. (in prep.) crustacean peptide database.
2. Three insect ITPr sequences from Nagai et al. 2014 paper and putative crustacean CHHr sequences from the Veenstra et al. 2015, Buckley et al. 2016, Tran et al. 2019, and Rump et al. 2020 papers.
3. BLAST, MAFFT-DASH, JALVIEW, and IQTree softwares.
4. RNA isolation and DNA digestion kits.
5. Reverse transcription or cDNA synthesis kit.
6. Primer sequences obtained from IDT DNA.

7. PCR and qPCR equipment.

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.)**

January 4th: Formal Proposal (Honors office)

March 7th: Written Portion Penultimate Draft (Adviser & committee)

April 4th: Presentation Penultimate Draft (Adviser & committee)

April 22nd: Penultimate Draft (Honors office)

May 5th: Final Presentation (Adviser & committee)

May 14th: Final Copy (Honors office)

May 14th: Thesis Evaluation Form (Honors office)

7. **A description of the final product. Please state the format of your final project. All Theses require a formal written component. Please see common options on pages 6-7 of the *Honors Thesis Guide*. If your final project requires a formal reflection paper and/or an individual contributions paper as outlined on page 26 of the *Honors Thesis Guide*, please state that here as well.**

The final product will be a research paper and a presentation outlining the work done and results obtained from it. The written portion will comprise of an abstract, introduction, materials and methods, results, discussion, and conclusion sections, as well as any supplementary material used in the study such as primer, nucleotide, and peptide sequences in fasta file format.

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