

University Honors Faculty-Mentor Capstone Project Handbook

A resource for faculty-mentors to guide them through the capstone project experience.



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Goal of the Capstone Project:

The goal of the University Honors capstone project is to enable an undergraduate student to explore, develop, and complete an original project resulting from faculty-mentored research or creative activity. Through this experience, a University Honors student contributes to the advancement of knowledge, or to a creative endeavor, consistent with the role of a research university.

Expectations of the Faculty-Mentor:

Only a full-time faculty member (Assistant Professor, Associate Professor, Full Professor, LPSOE, LSOE, or Cooperative Extension Specialist) is eligible to serve as a faculty-mentor. The faculty-mentor serves a crucial role in the exploration, development, and completion of a student's capstone project, which, typically, but not always, culminates in a written document and represents the final requirement for graduation with University Honors distinction. Listed below are suggestions that reflect a positive mentor-mentee relationship:

1. View an optional faculty-mentor orientation video provided by the Faculty Director of University Honors.
2. Read, and become familiar with, the "University Honors Faculty-Mentor Capstone Project Handbook."
3. Mentor no more than three University Honors students during a given academic year.
4. Provide quarterly progress reports regarding the student's research/creative activity to the Faculty Director of University Honors, who will serve as the instructor-of-record for a one-unit, letter-graded, in-progress, HNPG 199H course, which the student will enroll in each quarter while completing their capstone project.
5. Listen to the student, as they explain their idea for a capstone project, and guide the development of forming the idea into a realistic project, especially in the context of COVID-19.
6. Communicate with the student about the methodologies that are needed to develop the idea, including, but not limited to, the process and timeline involved with obtaining Institutional Review Board (IRB) approval, as needed.
7. Introduce the student to other personnel in the applicable research program, establish clear reporting lines between the student and the other personnel, and explain the culture of the research group, if applicable.
8. Inform the student of the unpredictable nature of research; the need for individual initiative, accountability, and adaptability; the prospect that the project may not achieve expected results, even if the student performs at full capacity; and the process of responding to a failed experiment, a null hypothesis, or inconclusive results.
9. Inform the student of the expected time commitment for conducting the project and for writing the final document and assist the student with developing, and adhering to, a realistic timeline.
10. Apply for funding from University Honors, if necessary, to support the student's research/creative activity.
11. Establish timelines and expectations for periodic progress reports from the student and meet with the student on a regular basis, at least bi-weekly, to monitor progress and offer support and guidance regarding research/creative activity, content, editing, troubleshooting, discipline-specific formatting, IRB approval (if applicable), research results, timeline, and expectations.
12. Review drafts of the abstract, prospectus, timeline, all project components, and the final project and provide feedback.
13. Assist the student in preparing their required oral presentation or poster presentation of the capstone project, help the student to identify an appropriate venue for the oral presentation or poster presentation (e.g., discipline-specific conference; Undergraduate Research, Scholarship,

- and Creative Activity Symposium; classroom setting; lab meeting; community event; etc.), and attend their oral presentation or help the student to identify another faculty member to attend.
14. Complete the University Honors Capstone Project Rubric (appended), which will be e-mailed to the faculty-mentor upon the student's submission of their capstone project. The rubric will be due no later than the end of finals week of the quarter of the capstone project submission. The rubric will be used solely as an evaluation tool for the capstone project and not as a mechanism for assigning a grade for HNPG 199H.
 15. Accept the invitation to attend the University Honors Cording Ceremony, which will occur near the end of spring quarter.
 16. Upon the student's completion of their capstone project, determine whether it is appropriate for University Honors to archive the student's capstone project in eScholarship, the open-access repository for UC scholarly works. If not appropriate, submit, in writing, a request for the project not to be archived in eScholarship to the University Honors Faculty Director, Dr. Richard Cardullo, at honorsdirector@ucr.edu
 17. Contact the student's University Honors Counselor, the Administrative Director of University Honors, or the Faculty Director of University Honors with any issues or concerns related to the student and/or their capstone project.

Expectations of the University Honors Student:

Completion of the University Honors capstone project involves effort beyond ordinary coursework. The responsibility for developing and completing the project rests with the student, in collaboration with their faculty-mentor. Throughout the capstone project experience, the student must demonstrate initiative, dedication, and determination, and be willing to invest the time and intellect to produce an original project consistent with the ideals of University Honors.

Each student will be responsible for securing a faculty-mentor. In consultation with their faculty-mentor, the student should utilize the resources provided in HNPG150 to develop their capstone project. The student should also consult with their designated Honors Counselor, as needed, for guidance. If a student experiences challenges with their capstone project that are not being addressed by their faculty-mentor, or if a student is experiencing challenges with their faculty-mentor, it is the student's responsibility to contact their designated Honors Counselor immediately.

It is important to understand that, consistent with the nature of an open-ended, intellectual activity, not every project in research or creative activity will lead to clear-cut conclusions. One of the many roles of the faculty-mentor is to guide the student through the process of handling a failed experiment, a null hypothesis, inconclusive results, or any other obstacle related to the research or creative activity. "Unsuccessful" research can still be developed into a capstone project, as the student still learned something, and the "unsuccessful" research still contributes to the student's knowledge of the particular topic.

Each University Honors student will participate in one of three general types of University Honors capstone projects. A student may:

- 1.) Conduct **research** under the direction of the faculty-mentor, for example, a scientific experiment.
- 2.) Engage in **creative activity**, in which they create an original work, for example, a collection of poetry.
- 3.) Conduct an analysis of a meaningful **experiential activity**, for example, a study-abroad experience. For this third type of capstone project, a student must evaluate their experience as part of a larger concept. The experience should become an example, not the focus, of the project, a lens into wider issues, not simply an exploration of personal growth. This type of project should involve research beyond the experience itself, for example, archival information, observational

data, literature reviews, and/or interviews. A student choosing this pathway should outline a project with their faculty-mentor prior to the start of the experiential activity.

Regardless of the type of capstone project a student may pursue, the student should discuss with their faculty-mentor if their project requires Institutional Review Board (IRB) approval. One of the many functions of the IRB is to work within federal regulations to protect the rights and welfare of human subjects involved in research conducted under the auspices of the University of California, Riverside. If IRB approval is applicable to a student's capstone project, the student and faculty-mentor should work collaboratively to seek IRB approval, however it is the mentor's responsibility to submit the IRB application on behalf of the student. Please note that students who pursue projects involving IRB approval should anticipate that the IRB approval process can take several weeks to complete. For more information about the IRB process, please view the document appended to the end of this handbook.

COVID-19 Note: Considering the current campus closure and the uncertainty regarding when in-person instruction will resume, pursuing a project that requires IRB approval (e.g., working with human subjects) or on-campus research will likely be challenging. As a result, students are encouraged to pursue projects that:

- (1) Do not require IRB approval.*
- (2) Can be completed based on data collected by the faculty-mentor, a post-doc, or a graduate student that the student would then analyze.*
- (3) Can be completed based on the analysis of pre-existing data sets.*

Support provided by University Honors

University Honors will support the development of each student, in the following ways, to prepare them to conduct research, engage in a creative activity, or participate in an experiential activity at a level worthy of University Honors distinction. The outcome of this distinctive work will be the completion of a capstone project.

1. Provide assistance to each student during the development of the capstone project, including:
 - a. Providing each student, through Honors coursework, Honors counseling, and Honors events, with resources and opportunities for interacting with faculty members, in an effort to select a faculty-mentor.
 - b. Assigning each student to submit an abstract (Capstone Project Proposal Form), prospectus, and timeline related to their proposed capstone project in the HNPG 150 course required winter quarter of the third year.
 - c. Exposing each student to the process of discovery in HNPG 150 and how to respond to difficulties during the discovery process.
 - d. Requiring each student to enroll in one unit of HNPG 199H during spring quarter of the third year and each successive quarter until completion of the capstone project.
2. Train each student, in HNPG 150, to optimize appropriate research materials and resources, including, but not limited to:
 - a. Navigating databases.
 - b. Accessing Intercampus Library Loans.
 - c. Reviewing special collections.
 - d. Developing bibliographic management tools.
 - e. Utilizing proper source citations based on their discipline-specific style-guide.
 - f. Distinguishing reputable and current academic sources.
 - g. Contacting appropriate scholars as primary resources.
 - h. Identifying, and applying for, research grants, scholarships, and other funding sources.
3. Refer each student to the Writing Support Program, in the Academic Resource Center, as needed, to write and review the capstone project.
4. Communicate with the faculty-mentor to foster a team effort in assisting the student with the capstone project.

Timeline for the Capstone Project

The capstone project typically takes place during the student's final two years at UCR. While some students may initiate their projects earlier, the steps required to initiate a capstone project begin with the development of an original, creative idea (or a hypothesis) and a framework to conduct the project.

Each University Honors student is encouraged to begin thinking about their capstone project as early as their first year. University Honors Counselors encourage each student to consider their general areas of interest and then to think of a specific issue, topic, question, problem, or hypothesis related to that general area of interest. As each student progresses through HNPG 16/17/18 and HNPG 2W during their first two years in University Honors, they are exposed to interdisciplinary thinking and civic engagement, in an effort to help the student develop and/or refine their idea for an eventual capstone project.

The timing of when the capstone project begins varies across the disciplines. In the natural and social sciences, it is not unusual for a student to initiate a research experience early on, resulting in a full two (or three) years of research in a laboratory or field environment. In contrast, a student in the arts or humanities may require less formal preparation, and the majority of the creative output can be completed in the final year.

Regardless of when students begin their research, in the winter quarter, all third-year students will take HNPG150, which will introduce how research is conducted in various disciplines and the elements that will constitute a student's capstone project. The course will also provide resources for identifying and securing an appropriate faculty-mentor.

A student's fourth year in University Honors is designated for the student to conduct their research or creative activity and to complete their capstone project. Involvement of the faculty-mentor is crucial during this period, in order to ensure successful and timely completion of the project. Throughout a student's fourth year, the faculty-mentor should be available to meet regularly with the student, preferably bi-weekly; to offer information, support, and guidance throughout the research process and the writing process; to assist the student with overcoming obstacles and challenges; to proactively communicate with the student and their University Honors Counselor regarding any concerns; to offer suggestions pertaining to the format of the content; to review drafts of the project and offer constructive feedback; to generally encourage the student throughout the entire process; and to provide quarterly progress reports to the Faculty Director of University Honors. **A student's capstone project is due no later than 12:00 p.m., on the Thursday of Week 6, of their quarter of graduation (usually spring quarter).**

Capstone Project Submission Process and Formatting

The capstone project must be a minimum of 15 pages in length, excluding the title page, abstract, acknowledgments, and references pages. Given the variety of research, creative activities, and experiential activities that exist, the student, together with their faculty-mentor, will determine the appropriate content and format of the final project. In general, the format should be consistent with the discipline-specific style guide. The student will be required to submit their capstone project electronically during their final quarter in HNPG 199H. University Honors will obtain the Faculty Director's signature on behalf of the student. With the faculty-mentor's approval, a student's capstone project will be archived in eScholarship, the University of California's open-access institutional repository. If copyright, publishing, or any other issues arise that prevent the student's work from being archived in eScholarship, the faculty-mentor must request an embargo in writing to the University Honors Faculty Director, Dr. Richard Cardullo, at honorsdirector@ucr.edu.

In addition to the electronic submission of the capstone project, the student will also be required to make an oral presentation or poster presentation of their project, no later than the capstone project submission

deadline. The oral or poster presentation must be at least 15 minutes long and presented in an appropriate venue, such as: a discipline-specific conference; the Undergraduate Research Symposium, which is the preferred venue for the oral or poster presentation; a classroom setting; a lab meeting; a research-group meeting; a performance; an exhibition; or an appropriate community setting. The oral or poster presentation must be attended by the student's faculty-mentor or another UCR faculty member, regardless of where it is presented. The student will be required to obtain from their faculty-mentor an e-mail verifying the faculty-mentor's review and approval of the student's capstone project and oral/poster presentation. The student will then submit their capstone project, a copy of their oral/poster presentation, and their faculty-mentor's approval in HNPG 199H, via iLearn.

***COVID-19 Note:** In lieu of an in-person oral or poster presentation during the campus closure, students will be allowed to present virtually at an online venue, such as the Undergraduate Research Symposium, or informally to their faculty-mentor via Zoom. In either case, students will be required to upload their PowerPoint presentation, with notes, when submitting the capstone project.*

Capstone Projects with Shared Authorship and/or Collaboration with Others

In rare cases, University Honors students may work on a capstone project that involves shared authorship and/or collaboration with others, including other University Honors students. In these circumstances, which must be approved in advance by the Faculty Director, University Honors students will be required to indicate in the "Acknowledgements" section of the capstone project that the project was completed as a group-project, identify their group members, and explain their individual contribution to the project. If a capstone project results in a paper that is authored by multiple parties for submission to a publication, the University Honors student will be required to complete the items indicated above and submit a project separate from the paper submitted for publication, which highlights their contribution. If the University Honors student is the first-author of a paper submitted for publication, the paper can also be submitted as the capstone project. Students who have questions or concerns about this matter should contact their designated Honors Counselor.

The University of California and Capstone Project Copyrights

Per the University of California policy, the copyrights to student works are generally retained by students, and not the university, as outlined at <http://copyright.universityofcalifornia.edu/ownership/works-created-at-uc.html>. University Honors does not own any copyrights to any capstone projects, under any circumstance. Questions about copyrights should be directed to the Office of Scholarly Communications, at <https://osc.universityofcalifornia.edu/>.

University of California's Open Access Policy and eScholarship:

The University of California has an Open Access Policy for Senate and non-Senate members, which can be found at <https://escholarship.org/ucopolicies>. When a student's capstone project is made accessible through eScholarship, it is not being "published". It is, however, being deposited into a digital library, making it accessible to the general public. If a student's capstone project has any prior, pending, or potential publication elsewhere, the faculty-mentor and student should contact the publisher and check if there are any rules/conflicts pertaining to submitting the work to an open access platform.

If the student and/or faculty-mentor and/or any other relevant parties do not wish for the student's capstone project to be uploaded to eScholarship upon submission of the capstone project, the faculty-mentor must request an embargo by writing to the University Honors Faculty Director, Dr. Richard Cardullo, at honorsdirector@ucr.edu. An embargo of the capstone project is permitted for up to three years. During the embargo period, a citation of the student's work may appear on eScholarship, but the work will not be accessible until the embargo ends.