

Stanford University
Interdepartmental Program in
Human Biology

Capstone Handbook





Table of Contents

Introduction to the Capstone

Capstone Instructional and Administrative Staff	3
Overview of the Capstone Requirement.....	4
Options outside of Human Biology.....	5
Required Capstone Submissions.....	5

HumBio Practicum

Overview.....	6
Learning Goals.....	6
Course Policies.....	6-8
Requirements.....	7
Extensions and Late Submissions.....	8
Final Grade Rubric.....	8
Assignments.....	9-18
Workshops.....	9
Portfolio Artifacts.....	11
Outline & Peer Review.....	13
Consolidating Expert Lecture Presentation	14
Consolidating Reflective Essay	17
Faculty Feedback.....	19
FAQ.....	20

HumBio Synthesis

Overview.....	21
Requirements.....	21-22
Course Policies.....	23
FAQ.....	24

HumBio Honors

Overview.....	25
Requirements.....	25
Application Guidelines.....	26
Declaring Honors in Axess.....	26
Registering for Honors Units.....	27

<u>Choosing your Capstone.....</u>	28
------------------------------------	----



Introduction to the Capstone

Instructional and Administrative Staff

Name	Email	Office Hours
Dr. Lianne Kurina, <i>Director</i>	lkurina@stanford.edu	by appointment only
Dr. Katherine Preston, <i>Associate Director</i>	kpreston@stanford.edu	http://meetme.so/KatherineAPreston
Samantha Cooper, M.Ed., <i>Capstone Coordinator</i>	scooper6@stanford.edu	https://go.oncehub.com/scooper
<i>HumBio SAs</i>	humbiosas@gmail.com	https://humanbiology.stanford.edu/academics/student-advising-declaring

Overview of the Capstone Requirement

The Capstone is a summative part of the Human Biology major. The Capstone is a flexible opportunity, which aims to meet the individual needs of our students and provide a space for both reflecting on the undergraduate journey and preparing for the future.

There are a variety of ways to complete the Capstone requirement for the major, both within and outside of Human Biology. Below find an overview of those options with a brief description of each one. For full details, click the link to jump to that section.

Options within Human Biology:

- [Practicum](#) – equal to **1 unit** of academic work, the Practicum is a reflection-oriented Capstone option that allows students to make connections between academic, extra-curricular and pre-professional experiences. It is done throughout the Senior year and involves attending workshops, reflecting on your undergraduate experiences through a portfolio, and consolidating assignments including a presentation to your HumBio peers about your academic journey and a final Capstone essay. Students should begin their Practicum experience early and work on it each quarter of their Senior year. ***Students enroll only once, typically their final undergraduate quarter.***
- [Synthesis](#) – equal to **~6 units** of academic work, the Synthesis is an opportunity to craft a culminating, creative work of scholarship based on a synthesis of your personal and academic interests. You design and propose your own Synthesis project, working with a faculty mentor who provide guidance and support. A few examples of past Synthesis projects include a photojournalism series, scholarly informational websites, long-form journalism, works of fiction, documentary-style short film, and health education curriculums. Progress is tracked through the [Capstone Canvas site](#). ***Applications are due by week 2 of Autumn quarter Senior year.***
- [Honors](#) – a **maximum of 15 units** taken under HumBio 193: Research or HumBio 199: Directed Reading and HumBio 194: Honors. HumBio honors theses have ranged from studies of gene expression in stem cells to the social interactions of preschoolers to the regulation of hormones in the brain. Choosing a focused area of interest for your thesis can be challenging, but by working with the right faculty member you can transform a collection of exciting ideas into a well-defined research question. Human Biology encourages all HumBio students with an excellent academic record and a strong desire to conduct research to write an honors thesis. Progress is tracked through the [Honors Canvas site](#). ***Applications are due early February of Junior year.***

Options outside of Human Biology

The Senior Reflection in Biology (TSR) – a 3-quarter course series where seniors undertake an in-depth creative project that joins a compelling scientific subject with a passion for the arts. BIO 196 meets in a small workshop format for 2 hours each week. During the fall quarter (196A), you brainstorm, explore various media, and develop a proposal for a specific project. You also identify appropriate mentors, from Stanford faculty and the immediate community, to support your projects' scientific and creative components. In winter quarter (196B), the focus is on the execution of your creative projects. In the spring quarter (196C), projects are completed, polished and prepared for public exhibition. Learn more at: <https://web.stanford.edu/~suemcc/TSR2021/styled-10/>

Notation in Science Communication – offered through PWR, an application is required with deadlines in October and April. The Notation will enhance your ability to communicate within your academic discipline, develop your ability to communicate science to prospective employers, journalists, and wider public, and demonstrate to employers or graduate programs your expertise in science communication. Learn more at: <https://undergrad.stanford.edu/programs/pwr/notation-science-communication/about/notation-science-communication-curriculum>

Interdisciplinary Honors – Several interdisciplinary programs allow students from any major to do an honors thesis or capstone project that connects thematically to the program. Interdisciplinary honors programs generally require an application, a minimum GPA, and some selected classes, as well as the thesis or capstone project. Learn more at: <https://undergrad.stanford.edu/advising/student-guides/what-are-interdisciplinary-honors>

Required Capstone Submissions

For students participating in a Capstone program outside of the HumBio offerings (i.e. Interdisciplinary Honors, Notation in Science Communication and Biology Senior Reflection) two uploads are required to the HumBio Capstone Canvas site to fulfill your Capstone requirement.

- [Alternate Capstone: Acceptance Confirmation](#) due upon acceptance and no later than your Senior Degree Progress Check, typically Winter quarter Senior year. Submit confirmation that you have been accepted into the program you have chosen for your Capstone (an e-mail is sufficient). Students should also ensure SFACT is updated.
- [Alternate Capstone: Final Product](#) due upon thesis/portfolio/project completion or the first week of June for Seniors graduating in Spring quarter.

Important HumBio Capstone Policy: HumBio students participating in an alternate Capstone program for their Capstone can NOT use any of their Capstone coursework towards their other HumBio degree requirements or another major or minor's requirements.

Practicum Overview

The Practicum is an essential component of your Senior year, representing 1 unit of academic work. This capstone option facilitates reflection and fosters connections between your academic pursuits, extra-curricular activities, and pre-professional experiences. By attending workshops, engaging in course artifact reflections, delivering a presentation on your area of concentration, and crafting a final reflective essay, you will be able to gain a deeper understanding of your undergraduate journey and its relevance to your future goals.

The structure of the Practicum is flexible and there is not a scheduled classroom meeting time. It is designed to be completed over a typical Senior year (Autumn - Spring). Students on alternate timelines for graduation should consider enrolling in section 02, see enrollment policies for more details. Students in need of alternate individualized plans should contact the Capstone Coordinator.

Learning Goals

The Capstone Practicum experience should enable students to:

- engage with and reflect upon meaningful learning experiences by relating their area of concentration to meaningful experiences outside of academia.
- link their knowledge and abilities to future employment or further education by exploring career and higher education paths for Human Biology majors.
- develop and practice professional communication skills by showcasing understanding of their area of expertise.
- narrate their HumBio story with connections between academic, extra-curricular and pre-professional experiences through written work and oral presentation.

HumBio 191: Course Policies

Grading Basis Policy: The Practicum is graded on a letter grade basis only. To satisfy the Human Biology major Capstone requirement for graduation, you must have earned a 'C-' grade or higher in the Practicum.

Enrollment Policy: Students should enroll in HumBio 191 during their final undergraduate academic quarter. Most students should enroll in Section 01, however there is an alternative enrollment for students with specific scheduling needs. See below for details.

The Practicum is not offered in Summer. Summer quarter graduates should plan to enroll and complete their Capstone in the Spring quarter prior to graduation.

Section 01: Students should begin their Practicum experience early, within the first two weeks of Senior year and work on it each quarter. Students should enroll in HumBio 191 the quarter they plan to complete the Practicum requirements, typically Senior spring. Students

will sign up for workshops and presentation times that best suit their interest and schedules.

Section 02: Students who need to complete all of the Practicum requirements in one quarter (i.e. often students on alternate academic timelines) should enroll in Section 02, offered only in the Winter quarter and Spring quarter. Enrollment is limited to 10 students. Attendance is required at the scheduled time each week through week 8. Section 02 will be canceled if fewer than 3 students enroll by the end of week 2 of the quarter. In that case, alternate arrangements will be made with individual students.

Requirements

The Practicum is done throughout the Senior year and involves attending workshops, reflecting on your undergraduate experiences through a portfolio, and consolidating assignments including a presentation to your HumBio peers about your academic journey and a final Capstone essay. Your final grade is based upon points accumulated from 3 categories (workshops, portfolio, and consolidation assignments). Each category is worth 15 points. A minimum of 12 points in each category is required to pass the Practicum.

Category	Requirement	Canvas Upload	Points	Due Date
Workshops	Orientation Quiz	answer 6 quiz questions	3	end of week 3 of Autumn Quarter
	Workshop 1	300-word reflection	4	within 7 days of workshop, Autumn
	Workshop 2	300-word reflection	4	within 7 days of workshop, Winter
	Workshop 3	300-word reflection	4	within 7 days of workshop, Spring
Demonstrating Mastery	Portfolio	artifact link, description & 300-word reflection	4	end of Autumn Quarter
		artifact link, description & 300-word reflection	4	end of Winter Quarter
		artifact link, description & 300-word reflection	4	end of week 3 Spring Quarter
	Presentation Outline	outline of presentation	3	Friday at Noon week 5 of Spring Quarter
	Peer Review	constructive feedback of assigned peer's outline		Monday at Noon week 6 of Spring Quarter
Consolidation Assignments	Expert Lecture Presentation	share Google slides	6	sign up week 3 for sessions in weeks 6 & 7 of Spring Quarter
	Final Reflective Essay	1200+ words, consolidation of the Capstone experience	6	end of week 8 of Spring Quarter
	Faculty Review & Feedback	form submission	3	end of week 8 of Spring Quarter
	Total		45	

Assignment Rubrics

The breakdown of points for each assignment is indicated on its associated rubric. Read both the assignment details and the rubric to understand the point breakdown for each assignment. All assignments incorporate timeliness, effort, and engagement into the rubrics.

Requesting Extensions: The due dates are meant to provide students with a structure that will keep them on track to finish the Practicum successfully. If alternate timelines (extensions or consolidations) are needed, students should reach out to the Capstone Coordinator prior to the due date to create an individualized plan. Academic Accommodations should also be sent to the Capstone Coordinator in advance of assignment due dates.

Late Submissions: Points will be deducted from assignments that are submitted late as indicated by the rubric found on the Canvas assignment. Passing the Practicum is required for graduation, and it is our foremost goal is to ensure your success, if you are unable to meet a deadline or emergencies come up, please reach out ASAP so that we can create an individualized plan.

Final Grade Rubric

Your final grade is based upon points accumulated from 3 categories (workshops, demonstrating mastery, and consolidation assignments). Each category is worth 15 points. A minimum of 12 points in each category is required to pass the Practicum.

Final Letter Grade Breakdown		
Grade	Points	Note
A	45-44	
A-	43	
B+	42	
B	41	A minimum of 12 points in each category is required to earn a passing grade. Less than 12 points in any category could result in an NP.
B-	40-39	
C+	38	
C	37	
C-	36	
NP	35 or less	Warning an NP would prevent you from graduating!

Temporary Grades

Temporary grades are given for students who need to enroll in a quarter prior to completion of the Practicum requirements; if you are one of those students, please contact humbioadvising@lists.stanford.edu with regard to your academic plans. There is no lasting impact on your transcript from having temporary grades.

- N : for students who need to enroll in HUMBIO 191 before their final undergraduate academic quarter and who have not yet completed all of the Practicum requirements
- N- : for students who enroll in HumBio 191 but did not communicate with student services their academic plans and did not make progress towards a passing grade

Students who received a temporary grade in a prior academic year (i.e. Spring 2023) may follow the Capstone requirements from the [2022-23 HumBio 191 Syllabus](#).

Orientation Quiz

Designed to orient you to the Practicum requirements, this Canvas quiz has six questions, it is worth 3 points and is due by the end of Week 3 of Fall Quarter. Students have 2 attempts, and the highest score is kept. Late submissions will receive half credit.

Workshops

Three workshops are required for a total of 12 points, 4 points each. Workshops are 90-120 minutes and highly interactive. HumBio Capstone workshops allow you to reflect upon meaningful experiences and consider future aspirations. You have the freedom to select workshops that best align with your own schedule, needs and aspirations.

Workshop Sign Ups & Attendance: The Practicum does not have a scheduled classroom meeting time, unless enrolled in Section 02. Students are responsible for choosing the workshops based on individual interests and schedules. By week 1 of the quarter, the workshop schedule is posted on Canvas. The sign-ups for individual workshops are posted as announcements approximately 2 weeks prior to the workshop through the Human Biology Capstone Canvas site. Workshops are listed on the Capstone Canvas page.

- Announcements contain a sign-up form which opens approximately 2 weeks prior to the workshop. Some campus partners require an additional sign-up form which is indicated on the workshop announcement.
- It is recommended that once you have signed up, by submitting the form, you immediately add the workshop to your calendar.
- Students who do not sign up for a workshop prior to attending are welcome but may be turned away if the workshop is full.

To earn credit for the workshop, you must arrive **on time** and then **upload** a short, written reflection within a week of the workshop's date. Workshops are often offered through our campus partners so if not specified otherwise, upload a written reflection following the [instructions on Canvas](#). **Be sure to include the workshop title and date attended!**

Workshop Rubric		
Criteria	Full Marks	Points
Attendance & Participation	Timeliness, effort, and engagement in the workshop. 0.5 point deduction for students who arrive more than 10 minutes late.	2
Post-workshop Write-up	At least 300 words explaining the role of this workshop within your Capstone experience (what you learned, what you now understand in a new light, how this workshop might fit into your own professional and personal goals, etc.). 0.5 point deduction for students who submit reflection more than 7 days late without requesting an extension before the due date.	1
Depth of analysis & reflection in work	Reflections should show critical thinking about what was learned and how it relates to previous experiences or future goals, not merely recapping what took place.	1
Total		4

Choosing Workshops: There are a variety of workshop options in the Practicum; your choices will reflect your own needs and aspirations. The workshops complement and draw upon meaningful experiences that you are probably already pursuing, such as community-engaged service, organizational leadership, research, and pre-professional experiences. To get the most out of your Capstone, we encourage you to choose workshops that fit these out-of-classroom activities. To find workshops, consult the Announcements section or the upcoming Capstone workshops schedule in Canvas.

Campus Partner Workshops: Our partners, HUME, CIDR and BEAM, all offer workshops that meet Capstone workshop requirements. Refer to their website for the most up to date workshop information and registration. Complete [this form](#) to use these workshops as part of your Capstone.

- BEAM: Meaningful Work Insight (*offered monthly, not repeatable*)
- Hume Writing Center: Writer's Studio Workshops
- Center for Digital Research: Digital Tools & Methods

Alternate Individual Workshops: You may propose a campus event to count towards a workshop by submitting the event information via this [form](#) (note: panel events will not be approved). Workshop proposals must be submitted at least 3 business days prior to the event and be pre-approved by the Associate Director and Capstone Coordinator

Tardiness: Failure to provide advanced notice for missing a workshop or arriving late to any Practicum requirement can result in point deductions.

- **10 minutes late:** 0.5 point (aka one letter grade) is deducted if you arrive more than 10 minutes late to a workshop.
- **20 minutes late:** if you arrive more than 20 minutes late to a workshop it will not be counted, and you will need to make it up.
- **Food policy:** If a workshop provides food, “No Shows” will be deducted 0.5 point from their next workshops, even if food is not provided. Meaning at the make-up workshop, you could earn a max of 3.5 of 4 points.

Demonstrating Mastery

You will demonstrate mastery through a portfolio that illustrates the expertise you've gained in your chosen Area of Concentration and showcases the competence you've gained in the key Human Biology capacities of scientific communication and scientific literacy. The portfolio consists of 3 artifacts which are assignments from your Human Biology coursework.

All artifacts and reflections must be submitted via Canvas by the specified deadlines:

- [1st artifact submission](#) end of Autumn quarter, 4 points
- [2nd artifact submission](#) end of Winter quarter, 4 points
- [3rd artifact submission](#) end of Week 3 of Spring quarter, 4 points

Students do not need to wait until the specified deadlines to submit. Early submissions will be accepted and graded within 10 days of submission.

You will also demonstrate your expertise by giving a short lecture on a topic relevant to your area of concentration in week 6 or 7 of your graduation quarter (see below). To prepare, you will develop an outline of your lecture, due in week 5, which will be reviewed by a peer. At the same time, you will review another student's lecture outline.

- [Peer Review of Presentation Outline](#) due Week 5 of Spring, 3 points

Portfolio Artifacts

You will demonstrate mastery through a portfolio that highlights your success in understanding your chosen Area of Concentration and achieving the Human Biology capacities of Scientific Communication and Scientific Literacy. The portfolio consists of 3 artifacts which are assignments from your Human Biology coursework. One such artifact will be submitted each quarter, accompanied by a reflection on the intellectual growth prompted by and illustrated by this particular artifact; you might also note remaining opportunities for growth that the artifact illuminates. The purpose of this assignment is to provide you with an opportunity to reflect on key moments of intellectual growth and to critically assess your progress as you prepare for the consolidating Expert Lecture presentation.

Selecting Artifacts: Artifacts can come from any course on your approved course of study or any other HumBio course, except the HumBio Core courses. These artifacts could be, for example, academic papers, research projects, creative works, or presentations that you have produced during your studies. All artifacts and reflections must be submitted via Canvas. using Google to share artifacts and reflections, be sure to share links with Samantha Cooper (scooper6@stanford.edu).

Artifact Description: You have the freedom to choose the order in which you submit each artifact. Be sure to describe which artifact you are submitting using the criteria below:

- **Area of Concentration (AC) Artifact:** Describe the artifact you have chosen, including the course name/number and brief assignment description. Explain why you believe this

artifact represents a significant achievement in your understanding of your Area of Concentration.

- **Scientific Literacy Artifact:** Describe the artifact you have chosen, including the course name/number and brief assignment description. Explain in detail, using specific examples, how the chosen artifact illustrates aspects of the Scientific Literacy capacity.
- **Scientific Communication Artifact:** Describe the artifact you have chosen, including the course name/number and brief assignment description. Explain in detail, using specific examples, how the chosen artifact illustrates aspects of the Scientific Communication capacity.

Reflection: Write a 300+ word reflective analysis discussing why this assignment was so important to your intellectual growth or development of capacities. Reflect on any challenges you faced while working on the assignment and on the stylistic or strategic choices you made. For the capacities artifacts, discuss the ways that the assignments challenged you to improve your ability to understand or communicate scientific information. For the AC artifact, explain what you learned by completing the assignment and how it shifted your perspective or deepened your understanding of your Area of Concentration. Describe the influence the assignment had towards your Expert Lecture presentation, if relevant.

Portfolio Artifact Rubric				
Criteria	Ratings			Points
	Meets requirement	Partially meets requirement	Does not meet requirement	
Artifact Description	Description includes all of the criteria listed in the assignment details including the course name/number and assignment description.	Artifact description is missing 1 or 2 criteria required in the assignment details.	Artifact description is not included. Or, the artifact is either from the HumBio Core or a course outside of HumBio that is not part of the course of study.	1
Reflection	The student clearly articulates how they demonstrated intellectual growth or development of capacities with thoughtful reflection on their own learning. Reflection draws connections between artifact(s) and your overall learning journey.	Reflection does not address several components of the prompts provided in the criteria. The reflection is short of the 300 words by less than 10 words.	There is limited reflection on the student's learning of the HumBio capacities. Does not meet 300 word minimum.	2
Timeliness	Upload is submitted on time or an extension was asked for in advance of the due date.	Upload is submitted late within 1 day or an extension was not asked for in advance of the due date.	Upload is submitted late by more than 1 day. An extension was not asked for.	0.5
Organization & Accessibility	All necessary elements represented and easily identifiable. All links are accessible. Formatting is clear.	All necessary elements represented and easily identifiable. Links are not accessible or formatting is unclear.	The student does not include elements critical for evaluation of the artifact. Links are not accessible. Formatting is unclear.	0.5
Total				2

Outline & Peer Review

Create and upload an outline for your Expert Lecture presentation and complete the assigned review of a peer's Expert Lecture presentation outline via Canvas. Your presentation should be directly related to your area of concentration and reflect your passion for and unique training in the subject. See the presentation assignment for more details.

The outline submission is due Spring quarter by Friday of Week 5 at 12:00pm (noon), *Canvas will automatically assign your peer review after this deadline.*

The Peer Review submission is due Spring quarter by Monday of Week 6 at 12:00pm (noon).

Timeliness (1 point): Given the timing of this assignment and the upcoming presentations, it is critical that students submit their outlines and reviews on time. Each late submissions (outline and/or review) will be deducted 0.5 point. Refer to rubric for grading criteria and additional points breakdown.

Presentation Outline (1 point): Develop a clear and well-structured outline for your presentation, highlighting key areas of focus and supporting evidence. This assignment will lay the foundation for your subsequent presentation.

Identify Your Focus/Purpose: From your chosen area of concentration, identify the key information and concepts you will share with your audience. You might choose to focus on something that captured your interest in a particular course, a topic that you have been thinking about but haven't had the chance to explore yet or you might explore the insight you gained from the synergy among your concentration courses.

Organize Your Content: Organize your content logically to create a clear and coherent outline that will allow your reviewer to see the overall structure of your presentation. That likely means using full sentences rather than short phrases. Include the title of your area of concentration at the top of your outline. Use headings and subheadings to create a coherent flow of information.

Peer Review (1 point): After the submission deadline, you will be assigned a peer's presentation outline to review and provide constructive feedback. Your review should address the three specified categories 1. Choice of Topic 2. Convergence & Integration 3. Organization and Flow. More feedback prompts are listed on the Canvas assignment details.

Outline & Peer Review Rubric		
Criteria	Full Marks	Points
Timeliness of Submissions	0.5 point deductions for each late submission.	1
Presentation Outline	Develop a clear and well-structured outline for your presentation, highlighting key areas of focus and supporting evidence that is organized and has logical flow.	1
Peer Review	Provide constructive feedback that addresses the three specific categories 1. Choice of Topic 2. Convergence & Integration 3. Organization and Flow	1
Total		3

Consolidating Assignments

All Human Biology Capstones, including the Practicum, require a consolidation of the Capstone experience through an oral presentation and written essay. The consolidating assignments are worth 12 points, 6 points for each, towards the final grade. Both Consolidating Assignments will be submitted to your Faculty Advisor for final review and approval (3 points). A minimum of 12 points in the consolidating assignments category is required to earn a passing grade.

Expert Lecture Presentation

All Human Biology Capstones, including the Practicum, require a presentation. HumBio 191 Practicum presentations are fulfilled by participation in live, small-group sessions. We encourage students to personally invite guests, faculty advisors, mentors, or supporters to the presentation sessions. The Presentation is worth 6 points towards the final grade.

Assignment Overview: Congratulations! You have reached an advanced stage in your Human Biology studies. As a culmination of your undergraduate Human Biology experience, this assignment requires you to draw from the knowledge and insights you gained during your HumBio training to deliver a brief but engaging, well-structured, and well-researched presentation. Unlike your final essay, where you will reflect on your own intellectual journey, here you will have the opportunity to take on the role of an instructor and to present a scholarly lecture on your area of concentration – a lecture that only you, with your unique path through Human Biology – could give. Let's celebrate the diverse expertise within human biology and foster meaningful knowledge exchange!

Lecture Content: The content of your lecture should be directly related to your individual area of concentration and reflect your passion for the subject. Think of this lecture as the opportunity to share with your peers and advisors something you have learned - and now think everyone should know - from your unique Human Biology education. Organize your content in a clear and engaging manner, keeping in mind the time limit of 8-10 minutes for your presentation.

Your Expert Lecture content should be specific but could be approached in several ways, for example:

- focus on a single problem/phenomenon/behavior/practice and look at it from multiple angles/disciplines
- focus on a single idea/insight/concept and show how it illuminates various problems/phenomena/behaviors/practices

Seek guidance from your faculty advisor or instructors if you have any uncertainties about the content of your lecture.

Note: The portfolio artifacts do not have to be explicitly referenced in this final presentation, even if you draw upon them for inspiration or background.

Communication and Presentation: Keep in mind that your audience comprises your fellow human biology students, your faculty advisor and human biology staff. While your peers have a solid foundation in the overall subject, they will not be as well-versed in your area of concentration. Therefore, strive for clarity, coherence, and conciseness in your lecture. Use appropriate scientific terminology but also explain technical terms to ensure your presentation is accessible. You may use notes while you speak but we expect you to rehearse your presentation and deliver it in a professional manner (professional meaning prepared and deliberate, not stuffy or impersonal). We hope that you will take this opportunity to present an engaging presentation about something you have enjoyed learning about in human biology. Nerd out with your peers!

Visual Aids and Examples: Presentation slides should be made using Google Slides. Utilize visual aids effectively to support your lecture. Include relevant images, diagrams, charts, and graphs to clarify complex concepts and engage your audience. You should create your own images when possible and otherwise use images in the public domain. Images and others' ideas should be cited appropriately on the slides.

References: Include a comprehensive list of references at the end of your lecture to acknowledge the sources you used during your research.

Recording and Evaluation: All presentations will be recorded and shared with Faculty Advisors for final review and approval.

Presentation Session Structure

Presentation sessions occur in 90 minute blocks, accommodating up to 6 students. You will present an 8-10 minute lecture to a live audience, comprising your peers and HumBio staff, and faculty advisor (if available), followed by a Q&A. Students are expected to be present for their entire session, arriving on time and refraining from leaving early.

Q&A: After each presentation, there will be up to 5 minutes of Q&A and further discussion with your peers. Speakers should encourage active participation and engagement by inviting questions and being receptive to feedback. As an audience member, actively participate by asking at least one thoughtful question about each peer's presentation (as time allows).

Submission Guidelines

Presentation slides should be shared with Samantha Cooper via Google Slides (Refer to Announcements in Week 5 for the Google Slides Folder)

File name should include your first and last name example:
Samantha_Cooper_CapstonePresentation_Spring2023.

Other media files should be shared with Samantha Cooper prior to the presentation. Sharing Permissions are often needed for embedded videos and pictures in Google Slides.

Resources

Oral Communication Tutors (OCTs) are available at the [Hume Center](#) to support you at any stage of development of your lecture.

Additionally, there will be opportunities (in the weeks before the presentations sessions) to sign up to rehearse in small groups to receive feedback from peers and [HumBio's writing specialist](#).

Presentation Schedule

Autumn or Winter quarter presentations are scheduled based on student need and cohort availability, contact humbioadvising@lists.stanford.edu. Spring quarter presentations are scheduled during Week 6 & 7, sign-ups begin week 3. Summer quarter graduates should plan to present and complete their Capstone in the Spring quarter prior to graduation.

Any questions about the HumBio Capstone presentation should be directed to the Capstone Coordinator.

Spring Quarter Presentation Schedule will be available no later than Week 5.

Consolidating Presentation Rubric		
Criteria	Full Marks	Points
Lecture Content and Scholarship	The content of your lecture is directly related to your individual area of concentration and reflect your passion for the subject. Content is organized in a clear and engaging manner. Independence of thought, suitable scope and depth of content, interdisciplinary understanding, and a framework that demonstrates your interests and engages the audience	2
Communication and Presentation	Student is prepared for the presentation. Slides or other materials were submitted in advance. Language and tone should be professional and appropriate to the topic. Presentation is within the time limit of 8-10 minutes.	2
Active Audience Participant	Active involvement in the Q&A and discussion sessions with thoughtful questions and contributions.	0.5
Visual Aids and References	Effective use of visuals to enhance understanding and engagement. Use of your own images when possible and otherwise use images in the public domain. Images and others' ideas are cited appropriately on the slides. A comprehensive list of references is included at the end of your lecture.	0.5
Presentation Schedule	Student has signed up for a presentation slot and attended the full session. Up to 1 point (aka one letter grade) may be deducted for students who arrive more than 10 minutes late.	1
Total		6

Consolidating Reflective Essay

The primary objective of this final essay is to provide a comprehensive overview of your academic and personal growth throughout your time as a Human Biology major. It goes beyond a simple journal entry about your experiences and encourages you to delve deeper into the connections between various aspects of your HumBio journey. By analyzing your learning, skills, and interests, you will gain a better understanding of how your education has shaped your perspective and prepared you for future endeavors. It is due end of week 8 of your final undergraduate term (i.e., Senior Spring). The essay is worth 6 points towards the final grade.

Essay Components: The final consolidating essay should share your unique undergraduate journey and it must connect your Human Biology area of concentration, extracurriculars and the Capstone workshops.

Professional Organization:

- The essay should be professionally formatted and must be at least 1200 words in length.
- Use a coherent and thoughtful structure that effectively communicates your ideas and experiences.
- Ensure a professional language and tone appropriate to the topic, with no typographical or grammatical errors.

Additional Guidance: Effective essays are more than a journal entry about what happened as a HumBio major and could also include the following:

- examples of experiences and key learning from Capstone workshops that influenced you.
- connections from learning, knowledge and skills developed in the classroom to new situations (service, research, pre-professional experiences at Stanford).
- analysis of academic or personal interests over time, recognizing complex contextual factors that might influence the learning process (e.g., ambiguity, risk, frustrations, ethical considerations).
- discussion of future personal and professional goals.

To get an idea of successful approaches, you are encouraged to explore examples available on the [HumBio Capstone website](#).

Submission Details: By the end of week 8 of your final undergraduate term, upload your essay to Canvas and to the Faculty Feedback Form.

Consolidating Essay Rubric					
Criteria					Points
Consolidation of HumBio Capstone Experience	4 pts Full Marks Essay addresses the required components AND goes beyond a "journal entry" of their academic experiences.	3 pts Partial Marks Essay addresses the required components BUT DOES NOT go beyond a "journal entry" of their academic	2 pts Partial Marks Student does not address one of the required components.	1 pt Partial Marks Student does not address any of the required components.	4
Professional Organization	1 pts Full Marks Be organized as a coherent, thoughtful essay. Language and tone should be professional and appropriate to the topic. Professionally formatted with no typographical or grammatical errors. Be 1200+ words.	0.5 pts Partial Marks Language/tone is not professional OR minor typographical or grammatical errors OR essay does not meet minimum word requirement by less than 10 words.	0 pts No Marks Many typographical or grammatical errors. And/Or essay does not meet minimum word requirement by more than 10 words.		1
Timeliness	1 pts Full Marks Upload is submitted on time or an extension was asked for in advance of the due date.	0.5 pts Partial Marks Upload is submitted late within 1 day or an extension was not asked for in advance of the due date.	0 pts No Marks Upload is submitted late by more than 1 day. An extension was not asked for.		1
Total					6

Sharing Permissions

Future HumBio majors may benefit from the example and inspiration your essay provides. HumBio would like to select a set of essays to share publicly or with others at Stanford. Please use the quiz below to grant or withhold permission.

[Permission to share final essay](#)

Faculty Feedback

Final review of your Consolidation Assignments is done by your faculty advisor. Students are encouraged to reach out to their faculty advisor to let them know that they have submitted this form and use this opportunity to connect before you graduate.

Submission Guidelines: Upload your final Practicum Consolidating Reflective Essay and Expert Lecture Presentation Slides to the Faculty Feedback Form by Week 8 of Spring quarter (or your final quarter for students on alternate timelines). This form will route to student services to upload the recording of your Practicum Consolidating Expert Lecture Presentation and notify your faculty advisor, who will provide you with feedback on your presentation and essay.

Once we've received your faculty advisor's response regarding the essay and presentation, your final grade will be entered. Faculty have Weeks 9 and 10 of Spring Quarter to respond and provide feedback. If your faculty advisor is unavailable, we will find another advisor to review your Capstone during Finals Week.

Grading: The faculty review is worth 3 points total toward the final grade. Faculty are responsible for 2 points. Refer to rubric for grading criteria and point breakdown.

Faculty Feedback Rubric		
Criteria	Full Marks	Points
Timeliness	Assignments are submitted on time through the form. Up to 0.5 point (aka half letter grade) will be deducted for late submissions without extensions requested prior to the due date.	0.5
Organization	Links are publicly accessible or shared with faculty and Capstone Coordinator.	0.5
Faculty Approval	Feedback received and approved by Faculty Advisor. Any feedback can be found in the comments of the assignment once grading has been completed.	2
Total		3

FAQ

Q: How do I sign up for a workshop?

A: Workshops are posted as Announcements on the [HumBio Capstone Canvas site](#), and the announcements will include instructions for how to sign-up. Usually, sign up is through a form and upon submission you are officially signed up.

Q: How long do I have to upload a post-workshop write up?

A: The post-workshop write-ups must be uploaded within 7 days of attending the workshop.

Q: Can I attend extra workshops if I'm interested?

A: Definitely, although if a workshop is overbooked, priority will be given to students who haven't completed the Practicum requirement yet.

Q: Can I attend workshops if I'm interested but not doing the Practicum?

A: Definitely, although if a workshop is overbooked, priority will be given to students who haven't completed the Practicum requirement yet.

Q: What is the timeline for completing the Practicum?

A: Portfolio artifact submissions are due each quarter of your Senior year. We recommend that you take at least one workshop every quarter of your Senior year. Consolidation of your capstone experiences (presentation and Capstone essay) typically happens in your final quarter. If an alternate timeline is needed, contact the Capstone Coordinator.

Q: Do I have to complete the whole thing in one quarter?

A: NO, in fact there are requirements due each quarter of your Senior year. Refer to the requirements on page 8.

Q: What happens if I don't finish the entire Practicum during the quarter I enrolled in the unit?

A: You will receive an 'N', which is a **temporary** grade that means "satisfactory progress in an ongoing course." After you have completed the Practicum, the 'N' grade will be updated to reflect the letter grade you have earned. There is no noticeable or lasting impact on your transcript from having received an 'N' grade.

Q: Are there examples of the final essay?

A: Yes. You can view them on the [HumBio website](#). Your own essay might be a helpful example if you [grant us permission](#) and it is selected.

Q: Does HB-REx count towards my Practicum?

A: No, the Capstone requirement is fulfilled during your Senior year. You should plan to complete the requirements as described.

Q: How do I get the most out of the Practicum?

A: By choosing workshops deliberately; engaging in workshops and making connections with the workshop host, particularly alumni; spacing workshops out to be helpful in your development; and not waiting until the last minute to start the Capstone!

Synthesis Overview

The synthesis is a platform that allows you to bring together personal and academic interests into a culminating intellectual, creative project. It is an opportunity for you to explore topics in or out of your Area of Concentration through a creative project, to include mediums such as creative writing (non-fiction or fiction), alternative media (visual arts) and service projects. You present your work during senior year at the spring quarter Human Biology Honors & Synthesis Symposium. The synthesis is broadly defined to foster creativity and intellectual latitude in your project.

To propose a Synthesis project, complete the application form found on the [HumBio Capstone Synthesis webpage](#). Note: funding for your synthesis project may be available through the [Bingham Fund for Student Innovation in Human Biology](#). Funding requests are due no later than the end of Winter quarter.

Requirements

The Synthesis is offered on a letter grade basis which is given for all quarters upon completion of the student's project. The letter grade is based on a total of points earned.

Synthesis Proposal: The [application](#) is due by week 2 of Autumn quarter senior year. Before you apply, have a short discussion of your project with your faculty mentor and either the Assistant Director or Capstone Coordinator. Juniors interested in starting the Synthesis before Senior year should discuss their options with the Capstone Coordinator.

Faculty Mentor: A faculty mentor is required, and you should schedule time to meet regularly. Faculty mentors play different roles in different projects. Sometimes you need a subject expert, sometimes you need someone with connections, sometimes you need moral support.

Autumn & Winter Quarter: Synthesis Development (6 points per quarter): During the first two quarters, students must attend the Synthesis workshop and submit three assignments in Canvas to earn credit towards their Capstone Synthesis project. Attending Synthesis specific workshops provides you with guidance toward completing your Synthesis project, as well as a small cohort of students to share the experience. **These elements are required regardless of your enrollment status in HumBio 192 series.**

- [Quarterly Synthesis Checklist](#) (1 point) due: Monday of Week 3, each quarter.
- Attend & participate in quarterly Synthesis workshop scheduled based on cohort's availability by the Capstone Coordinator, (1 point).
- Quarterly Synthesis Reflection & Supporting Materials due Monday of Week 8, (3 points).
- Faculty Mentor Meeting, upload a summary of your meeting by the end of the quarter, (1 point).

Spring Quarter: Synthesis Consolidation (15 points)

Synthesis students present at the Senior Symposium in the Spring quarter which happens at the end of Week 7. Therefore, the Spring quarter timeline and check-ins are shortened. To provide the most support and ensure the most successful, timely completion of Synthesis projects, the following are required:

- **Rough Drafts:** Two drafts will be submitted via Canvas before the final product is submitted. If unsure what to upload, please consult Dr. Katherine Preston and/or Samantha Cooper.
 - [Rough Draft #1 & Quarterly Synthesis Checklist](#) is due Thursday of Week 2 (2 points). This draft can be raw materials, an outline, a sample of a series, or other critical pieces to your project. Your checklist should address the remaining steps (minimum 3) required to complete your synthesis project this quarter.
 - [Rough Draft #2 & Presentation Abstract](#) is due Monday of Week 7, (2 points). This draft should be a nearly completed version of your Synthesis project. Your abstract should be approximately 250 words or less and include a title and your mentors' names; it is submitted via Smartsheet.
- **Workshop:** The Synthesis Presentation Workshop is scheduled based on cohort's availability in Week 6, (1 point).
- **Presentation:** Showcase your Synthesis project at the HumBio Senior Symposium on Friday of Week 7, (3 points). Presentation slides should be prepared using Google slides and uploaded to the Google Drive folder by Thursday of Week 7, please follow specified file naming conventions.
- **Reflective Essay:** A consolidating Synthesis paper is due at the end of your Synthesis project. It should complement but should not be your Synthesis project. It is a holistic summary of your HumBio experience due end of Week 8(3 points).
- **Capstone Final Product:** upload your completed Synthesis project or link by the end of Week 10 of Spring quarter (4 points).

Timeliness, effort, and engagement is part of the grading criteria, and your overall grade may be adjusted to reflect this.

HumBio 192 Series: Course Policies

Enrollment Policies

The Synthesis is a three-course series, totaling 6 units, listed under Explore Courses as **HumBio 192A, 192W and 192S**. The six units can be split to fit your schedule, by taking 2 units for 3 quarters or 3 units for 2 quarters. Consider the workload and time commitment of the project.

A permission number is needed to enroll each quarter. You must submit a new Synthesis Checklist for that quarter to receive a permission number for enrollment.

Students who do not make satisfactory progress towards completing their synthesis project may be asked to withdrawal from units for the quarter or the Synthesis program entirely. See also incomplete grade policies below.

Grading Policies

The Synthesis is offered on a letter grade basis with the following breakdown.

Autumn & Winter Quarter – 6 points total possible

A : 5.5+ points

A- : 5 points

B+ : 4.5 points

B : 4 points

I (less than 4 points): for students who have a plan to make up elements in future quarters. *Students who do not make significant progress towards completing their synthesis project may be asked to withdrawal from the units for the quarter or the Synthesis program entirely.*

Spring Quarter – 15 points total possible

A : 14-15 points and completion of a successful Synthesis project, presentation, essay and reflective essay.

A- : 12-13.5 points

B+ : 10-11.5 points

NP: (9.5 points or less). Any of the following will result in an NP:

- missing completion of Synthesis project **or**
- missing completion of Senior Symposium presentation **or**
- missing completion of Reflective Essay **or**

WARNING, this would prevent you from graduating!

I : for students who have a plan to make up required elements in future quarters. *Incomplete grades cannot be arranged for graduating Seniors.*

FAQ

Q: What does the application include?

A: Project title – this can be provisional.

Abstract – a 150- 250 word overview describing your project.

Faculty mentor – name & role in relation to your project; confirmed via Smartsheet.

Final Output – describe the medium/form of your project.

Expenses - a brief explanation of expenses and how they relate to your final product.

Apply by week 2 of autumn quarter senior year on the [HumBio Synthesis webpage](#).

Q: Can my Synthesis project change after I apply?

A: Yes. The final output can change but the intended goal should remain the same. We often work with students to ensure their project is manageable in scope and meeting the intended audience or goal of project.

Q: What is the timeline of a Synthesis project?

A: Synthesis projects typically occur over the course of your Senior year. 6 units of work is approximately 6 hours of work per week throughout the academic year. You will create a timeline for each quarter to ensure progress as some parts of the year will be heavier than others. The senior symposium presentation occurs Friday, week 7 of Spring quarter where all or most of the synthesis project should be ready to present.

Q: Is there a scheduled weekly class for the Synthesis classes?

A: No. There is one required workshop each quarter. Some students meet regularly with their faculty mentor.

Q: Are there example synthesis projects?

A: Yes. Examples of past Synthesis projects include producing a documentary-style short film, designing and executing health education curriculum, organizing a conference and writing an analytical paper. To see examples, visit the [Synthesis Archive](#).

Q: Do I still need to do the Practicum?

A: No, as of academic year 2020-21. But, if a student is not making adequate progress on their synthesis project, they will still be required to complete a Capstone, the default option being HumBio 191: Practicum.

Q: Can I work with another student on one Synthesis project?

A: Yes, group-based projects are acceptable. Individual grades will be given. Each member of the group must play an active role in the conceptualization, planning and execution of the project. In other words, simply being a “performer” in the final project would not be sufficient, although this may represent one aspect of your involvement.

Q: What are the differences between Synthesis and Honors?

A: Besides the obvious unit difference (6 vs. 15), Honors is limited to empirical academic research. By contrast, Synthesis is broadly defined as a self-directed project and can be a creative and/or intellectual endeavor.

Q: What are the differences between Synthesis and The Senior Reflection in Biology (TSR)?

A: TSR focuses specifically on the intersection of arts and science. Synthesis projects are defined broadly and do not need to have an artistic aspect. Synthesis is a generally self-directed project. [TSR](#) is taken as a workshop series overseen by the Biology department.

Honors Overview

The honors program in Human Biology provides qualified majors the opportunity to work closely with faculty on an individual research project, culminating in an honors thesis. Students may begin honors research from several starting points including topics introduced in the core or upper-division courses; independent interests stemming from an internship experience; or collaborating with faculty from the natural, social, or behavioral sciences.

Interested students should consult the [Human Biology Honors Handbook](#) and meet with the Human Biology Associate Director.

Requirements

The basic requirements that must be met before you can officially enter the honors program include:

1. Be a declared HumBio major.
2. Successful completion of the core sequence (HUMBIO 2A/2B, 3A/3B, 4A/4B) with a 3.0 minimum GPA.
3. Acquire competence in the methodology to be used in your research via either lab experience or a methodology course. See a list of approved methodology courses in [Appendix 3 of the Honors Handbook](#).
4. Have a 3.2 minimum GPA at the time of entering the honors program, which must be maintained thereafter. Students must have a minimum 3.2 GPA to graduate with honors. Please note that letter grades received for independent research courses in other departments are not included in the required 3.2 GPA for the Human Biology Honors Program.
5. Complete one quarter of research (or directed reading) with the faculty member who will be your honors adviser.
 - a. Typically, HumBio 193 is taken during Autumn quarter of graduation year.
6. Complete the three-part application to enter the Honors program, referring to the [online calendar](#) for specific Honors deadlines.
 - a. Part A: Intention to Undertake Honors Research due early February of Junior year
 - b. Part B: Application to Undertake Honors Research due March 1 of Junior year
 - c. Part C: Literature Review due early December of graduation year.
7. Approval from the Human Subjects Committee (IRB) if you plan to do research involving human subjects (interviewing people and using their responses, opinions, or any data from individuals).
8. Evaluate your own pre-field readiness, if you plan to work off campus or overseas, by meeting the guidelines laid out by the UAR. UAR requires some coursework and other preparation before a student may be funded for some kinds of research.

All other requirements of the Honors program in Human Biology can be found in the [Human Biology Honors Handbook](#)

Honors Application Guidelines

The application for Part A and Part B is available for students online:
<https://humanbiology.stanford.edu/research/honors/application-guidelines>

Part A of the Hum Bio Honors Application is the "Intention to Undertake Honors," due the first week of February. The declaration of intention includes the names and contact information of two thesis readers and an abstract of the proposed project. One of the thesis readers (but not necessarily the primary reader) must be affiliated with Human Biology. Hum Bio faculty are listed in the [Stanford Bulletin](#).

Part B of the Hum Bio Honors Application is the "Application to Undertake Honors Research," due March 1st. At the heart of the Application (Part B) lies the research description. For a detailed description of the required sections and content, see [Appendix 1 of the Honors Handbook](#). The research adviser (First Reader) will need to submit a letter of support about the proposed honors project. Students accepted to pursue honors will be selected from the applicants based on the quality of the research proposal.

- If you are also applying for a Major Grant, a second copy of the Hum Bio proposal should be submitted separately to the **UAR** by their deadline.

If Part B is approved, students are considered preliminarily in the Honors program. **Students officially add Honors to their degree in Axxess once Part C has been approved.**

Part C, the final step in the application process, consists of the Literature Review of primary sources, in which you show your familiarity with the research literature relating to your thesis topic. For a detailed description of the Literature Review requirements, see [page 15 of the Honors Handbook](#). The literature review is evaluated by your first reader and provided to your second reader. You will also submit an electronic copy to the Honors Chair, Associate Director Katherine Preston, through Canvas. Samples of good Literature Reviews are available in the HumBio SA office, as the first chapter of completed theses.

Declaring Honors in Axxess

To earn an honors degree, students must officially "Add Honors" to their major in Axxess. Student Services will review this request during the Winter quarter degree progress checks. It will only be approved once Application Part C: Literature Review has been approved by your PI and Dr. Katherine Preston. Before students [apply to graduate](#), they must have BAH or BSH officially on their transcript.

Registering for Honors Units

The maximum number of honors units that you may register for including “Research”—HUMBIO 193 (or “Special Projects”—HUMBIO 199) and “Honors”—HUMBIO 194, is fifteen. You should register for one unit for every three hours you intend to spend working on your research or writing your thesis.

HumBio 193 Enrollment: Honors students should plan to enroll in HumBio 193 during the Autumn and Winter quarter of Senior year in your PI's section. If your PI does not have a section, contact Dr. Katherine Preston and Samantha Cooper.

- You may not enroll in another department's independent study section and HumBio 193 for the same research. If this causes any issues, contact Dr. Katherine Preston right away.
- Winter quarter, the literature review must be turned in to enroll in HumBio 193.
- For every 3 hours per week that you work towards the thesis, you should enroll in a unit. If you are putting in 9-10 hours, 3 units would be appropriate.
 - Your PI should enter a Cr/NC grade for HumBio 193 in Fall and Winter quarter.

HumBio 194 Enrollment: Honors students should plan to enroll in HumBio 194 during the Spring quarter of Senior year in your PI's section. If your PI does not have a section, contact Dr. Katherine Preston and Samantha Cooper.

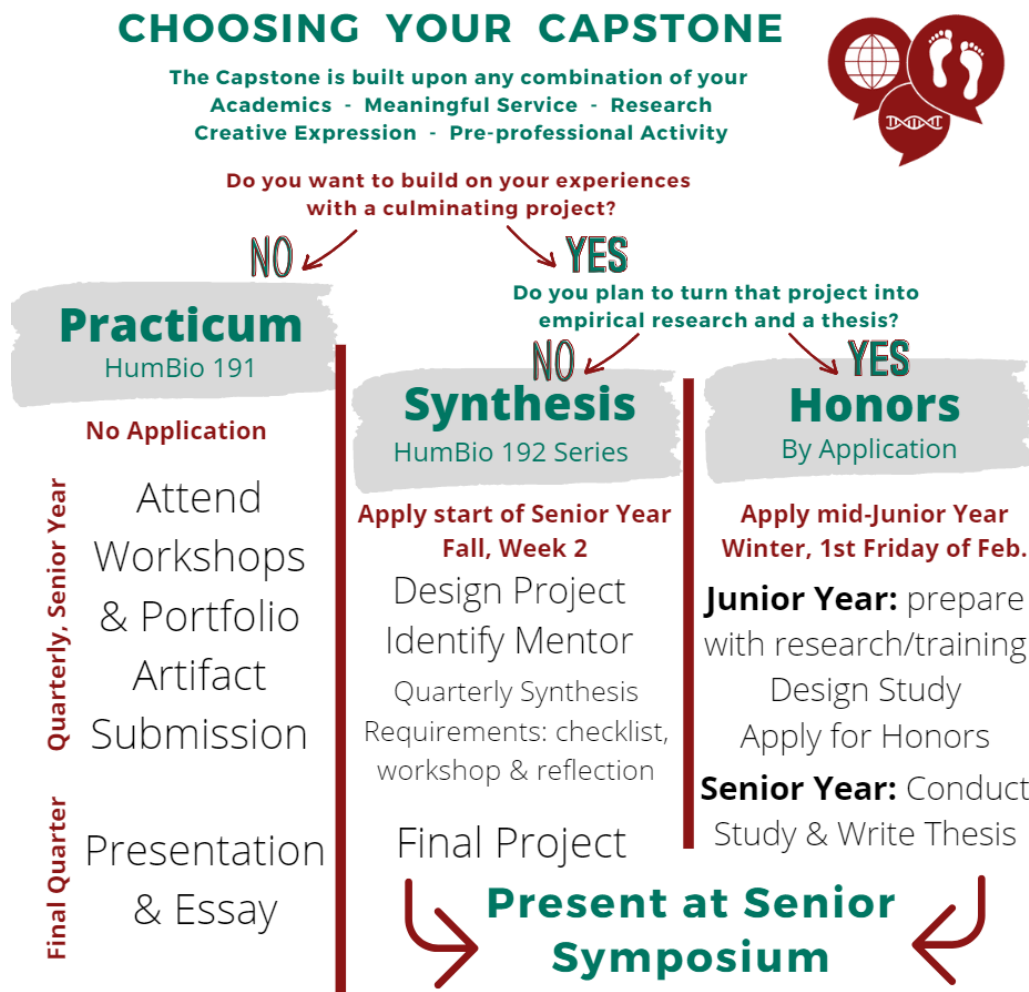
- HumBio 193 is a prerequisite for HumBio 194.
- For every 3 hours per week that you work towards the thesis, you should enroll in a unit. If you are putting in 9-10 hours, 3 units would be appropriate.
- Total units towards your Honors degree should be no more than 15 units.
- Your First and Second Readers must confer and decide on a Letter grade to submit for your thesis before you receive credit for your work through HumBio 194.

A reader-signed copy of the final draft of your thesis must be uploaded to the Canvas site to earn Honors in Human Biology.

These policies are for Honors students on a standard academic plan for Senior year (Autumn - Spring quarter). In some cases, [Special Registration Statuses](#) may be appropriate and can impact your academic plan. Alternate plans should be discussed with the Human Biology Program no later than the add/drop deadline of Winter quarter Senior year.

Choosing your Capstone

Note: this flowchart does not include the options outside of Human Biology.



Additional questions?

Samantha Cooper, Capstone Coordinator
Bldg. 20, Rm. 22-TBD | scooper6@stanford.edu

Katherine Preston, Associate Director of the Program in Human Biology
Bldg. 20, Rm. 22-D | kpreston@stanford.edu

Lianne Kurina, Director of the Program in Human Biology
Bldg. 20, Rm. 22-P | lkurina@stanford.edu

The Human Biology Student Advisors (SA's) can be found at the *HumBio Hub* in the Human Biology Building (Main Quad Building 20, Room 21A). Schedule available here: <https://humanbiology.stanford.edu/academics/student-advising-declaring>

