

University of Connecticut

Department of

Allied Health Sciences

AH 3289: Research in Allied Health Sciences

AH 4289: Honors Research in Allied Health Sciences

Undergraduate Research Guidebook

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1 Overview of undergraduate research

1.1 Undergraduate research

Undergraduate students enrolled in the Department of Allied Health Sciences and others (with consent) at the University of Connecticut may enroll in research credits within the department. Involvement in research is a cooperative venture between an AHS faculty instructor (Faculty Research Instructor), a student, and in some cases, a researcher outside the department (Principle Investigator (PI)), and is not to be engaged in lightly. Students engaging in research are expected to have an independent, self-motivated, and autonomous approach to learning within the guidance of the research laboratory and in compliance with University research assurances.

1.2 Honors research

Students may also elect to engage in honors-level research. Honors research provides a more challenging approach to research, requiring strong academic motivation and increased investment as well as diverse problem-solving expertise. AH 4289 delves more deeply into the method or theory, addresses more sophisticated questions, and/or includes more intense or demanding readings, problems, or questions. For students in the Honors program, the understood purpose of the student's involvement in Honors research (AH 4289) is to build toward the completion of an Honors Scholar thesis project.

1.3 Objectives

The student is expected to take the lead and work closely in identifying a topic/project of interest and coordinate with an AHS faculty instructor. The student may either develop an independent project linked to faculty's current research or get involved with the faculty's existing projects. The project selected is that which will encourage inquiry and expand the student's intellectual capabilities. Through completion of this experience-based research course, the student will be able to:

- Synthesize, apply, and expand academic learning to creating new knowledge;
- Adhere to ethical guidelines of conducting research
- Complete independent learning in an area of study;
- Develop independent thought, critical thinking, professionalism, and communication skills; and
- Promote self-assessment and reflection.

Beyond those listed above, additional objectives as they relate directly to the research goals will be indicated on the Learning Agreement.

2 Credits, Hours and Grading

2.1 Credits and Hours

Students may participate in research with a full- or part-time credit load. The fee associated with earning credit for research is included in the student's regular semester tuition. Fees for research credit taken during the summer will follow the summer tuition structure. Course grade and credit

will be awarded by the AHS faculty instructor as outlined in a Learning Agreement and the learning product(s) submitted by the student. The scale for hours to credits is below. Credits may vary if the research agreement specifies participation outside the standard 14 week duration.

Time	Hours	Credits
45-60 hours	3-4 hr/wk X 14 wks	1 credit
61-120 hours	6-9 hr/wk X 14 wks	2 credits
120+ hours	>9 hr/wk X 14 wks	3 credits

Students who register for AH 3289/4289 will, unless for valid medical or personal reasons, NOT drop this course because the faculty member has invested time to develop the agreement, committed both space and financial resources, and may also be reliant on the student’s contribution to the research project proposed.

2.2 Grading

AH 3289 and AH 4289 are graded courses. Criteria used for the evaluation of student performance in the research course will vary by Learning Agreement, however all learning agreements will use the grading scale below.

**A grade of C or better is required to count either research course toward the Allied Health Sciences major Group B requirements.

** A grade of B- or better is required to receive Honors credit in AH 4289.

90.0-92.9 = A-	93.0-100 = A	
80.0-82.9 = B-	83.0-86.4 = B	86.5-89.9 = B+
70.0-72.9 = C-	73.0-76.4 = C**	76.5-79.9 = C+
60.0-62.9 = D-	63.0-66.4 = D	66.5-69.9 = D+
< 59.9 = F	Incomplete = I	

3 **Guidelines and Procedures**

Note: Signed documents and enrollment must occur by the 10th day of the semester (preferably earlier), retroactive research will not be approved.

3.1 Being Accepted for Research

- An AHS faculty instructor or PI may interview or select students according to prior training and course work and it is at the discretion of the instructor/PI whether to engage with a student in an undergraduate research project.

- AHS faculty instructor/PI may require specific pre-requisite courses as defined in a Learning Agreement.
- Students must complete or have completed University training requirements for research compliance (e.g., biosafety, RCR training, human subjects training).

3.2 Research Credits

- Research credits may be repeated provided that the sum total does not exceed three credits per semester.
- A maximum of 3-credits of AH 3289/4289 may count toward the Group B major requirement of the Allied Health Sciences major. Any additional credits of 3289/4289 may be counted toward the major with advisor approval.

3.3 Learning Agreement

- A learning agreement must be designed and signed by the faculty instructor/PI, student, honors advisor (as appropriate), and Department Head *prior to* course registration and before the initiation of the research. An example Learning Agreement is provided on the AHS website.
- The Learning Agreement is the course syllabus and must outline the goal and measurable learning objectives of the research project.
- The Learning Agreement must also include specifics regarding logistics of the student's responsibilities, hours, and anticipated research outcomes.
- Research outcomes should be clearly defined with expectations for the product, submission dates, and deadlines.
- Learning Agreement must include criteria for grading/evaluation of projects and the student. The Learning Agreement may require an affective evaluation of student performance (available upon request) in the grading rubric.
- The learning Agreement should also include the role of the faculty instructor/PI with respect to frequency, timing and level of evaluation for the student.
- A Learning Agreement form is available online or from the Department. A self-designed typed document may be submitted if it provides readily identifiable, **all** of the following information:
 - Student Demographic Data : Name and Student ID, Address , Contact Phone *and* Email , Program Major *and* Concentration , Credit Standing
 - Student Signature : I, [Please type your full given name] understand that typing in my full name in this signature box constitutes a legal signature confirming that I acknowledge and agree to the conditions set forth in the Learning Agreement.
 - Faculty Research Instructor Data including Faculty Name, Phone and Email.
 - Faculty Research Instructor Signature with the text "I verify that the Undergraduate Research described above is consistent with program objectives and, pending successful completion, can be included in the student's plan of study"

- Principle Investigator (if different than Faculty Instructor) Demographic Data including Name, Institution, Institution Address, Title, Phone, Email.
- Principle Investigator Signature with the text “ My signature verifies that I am an authorized staff person at the named institution and that the institution has the personnel and resources to offer the research opportunity. The institution has reviewed and deemed appropriate the qualifications for the student’s participation in the research. The liability policy is defaulted to the location of the research facility. The research site/facility releases the University of Connecticut, College of Agriculture, Health and Natural Resources, and the Department of Allied Health Sciences from liability with respect to this student’s participation in this research “
- Course Information including Course Catalog Number, Section Number, Class Number, Credit hours, Semester and Year, Title as it should appear on Transcript
- Time including student dates of participation; estimated hours per week, total hours for semester
- Learning Objectives written with measurable verbs including the activities or tasks to accomplish the learning objective
- Learning Outcomes What products are expected with specific details regarding the product, submission dates, and deadlines.
- Grading Rubric: What will be evaluated/how will it be evaluated and what percentage will the outcome grade contribute toward the total grade. It is highly recommended that the grading rubric include an affective evaluation.
- Department Head Signature with the text “My signature verifies that this undergraduate research course meets the guidelines of this department as it relates to academic integrity and student participation in Undergraduate Research and that this Undergraduate Research course is appropriate for this student to be included in the plan of study pending successful completion.”

3.4 Documents and Course Registration

The following documents must be reviewed and signed by the student and provided to the faculty instructor (electronically or as paper format).

3.4.1 *Learning Agreement*

This document is previously defined and described. Form available online.

3.4.2 *Rights and Responsibilities Form*

The *Rights and Responsibilities Form* acknowledges that the student received a copy of the Undergraduate Research Guidebook, understands responsibilities as related to information in the guidebook, has had an opportunity to review and ask questions regarding the contents of the guidebook and the requirements of undergraduate research, and that the student accepts participation in the research project and will abide by the policies and requirements as outlined in the Guidebook and the Learning Agreement. Available online.

3.4.3 *Personal Property Waiver Form*

The Personal Property Waiver Form indicates that the research lab/facility, the Department of Allied Health Sciences, College of Agriculture, Health and Natural Resources, and the University of Connecticut are not responsible for loss, damage, and /or theft to a student's personal property while engaging in a research experience. Available online.

3.4.4 *Confidentiality Form*

By signing this form, students agree to adhere to all forms of confidentiality consistent with university, department and research facility policy both during and after the completion of the research. Students also acknowledge that they may be required to sign and adhere to research-specific confidentiality documents as a condition of participation. Available online.

3.4.5 *Independent Study Authorization Form*

A paper copy of the completed and signed Independent Study Authorization Form (available online) will be used for registration and is the only mechanism by which the research title is put on a student transcript. Available Online. Students will enroll *in person* at the registrar's office using the Independent Study Authorization Form (**not via StudentAdmin**). All University policy, procedures and deadlines apply for registration.

SIGNATURES:

All electronic and printed documents listed in Section 3.4 must be submitted to the designated Department Head signatory for approval prior to course registration

3.5 End of Semester Paperwork and Grade Submission

- The student will submit learning product(s) in accordance with all the timelines established in the Learning Agreement.
- The faculty instructor/PI will complete/submit the grading rubric as outlined in the Learning Agreement
- The faculty instructor/PI will complete the affective evaluation form and review the results with the student (if a component of the Learning Agreement)
- PIs will submit the signed affective evaluation form and a student review form to the faculty instructor (if a component of the Learning Agreement)
- The student will submit a research evaluation form for off-campus research sites (non-AHS faculty led research) to the faculty instructor
- The faculty instructor has final decision for grade assignment and the responsibility for timely entry of assigned grades into the Student Admin system.

4 Roles and Responsibilities

4.1 Faculty Instructor Definition

The faculty instructor is a member of the Department of Allied Health Sciences at the University of Connecticut and is responsible for advising the student regarding (but not restricted to) applicable University, State, and Federal regulations, identifying and confirming timely completion of required

safety training(s), ensuring student understanding and adhere to research policies, assurances and/or protocols, coordinating research in collaboration with the student, and completing the final evaluation and grading.

4.2 The responsibility of the Faculty Instructor

- Take the lead in the development of a Learning Agreement
- Assure student, PI and Honors advisor (as appropriate) are accepting of the guidelines outlined in the Learning Agreement prior to student registration
- Assure the student has submitted necessary signed documents
- Maintains records of the documents
- Oversees student progress on the research project consistent with the Learning Agreement timeline.
- Evaluates and/or confirms completion of educational objectives and outcomes per Learning Agreement
- Assigns and submits a final grade per Learning Agreement

4.3 Principle Investigator Definition

The Principle Investigator is a researcher not affiliated with the Department of Allied Health Sciences who has the responsibility of mentoring the student for a research project, assuring the student meets applicable University, State, and Federal regulations related to research participation, coordinates research duties with the student, and submits evaluations of the student for final grade calculations.

4.4 The responsibility of the Principle Investigator

- Coordinate with the faculty Instructor in the development of a Learning Agreement
- Assure student has met applicable University, State and Federal regulations related to research participation and work in the facility
- Oversee and monitor student progress on the research project consistent with the Learning Agreement timeline.
- Provide feedback to the student in a timely fashion
- Evaluate completion of educational objectives and research outcomes
- Evaluate student affective behavior
- Provides faculty instructor in accordance with University deadlines with the student evaluations as measured by the grading rubrics established in the Learning Agreement.

4.5 Student Responsibilities

Students will acquire the skills to apply classroom content, engaging in independent thought and inquiry to acquire new learning in the student's area of interest. Students will demonstrate time and focus commitment as an investment to education and an appreciation of space and financial resources. As appropriate, students will conduct their research when the faculty member or the research team is in the laboratory. Students will adhere to all requirements and research assurances and be mindful that others may be reliant on the student's contribution to the research project proposed.

4.5.1 *Professionalism*

Students will strive to establish a good working relationship with all personnel and students encountered while conducting ethical research. Students may be asked to complete menial tasks and/or encounter personality conflicts. Occurrences like these happen in all aspects of life. While engaging in research, however, it is expected students will put aside personal differences and work collegially with the instructor, other personnel, and students. Depending on the situation, consultation with the faculty instructor or others may be appropriate any time a question about proper protocol or procedure arises. If unsure of the correct course of action, it is the student's responsibility to consult with the faculty instructor/ PI prior to proceeding. Conflicts not able to be resolved with the faculty instructor/PI should be reported to the Department Head. The student researcher takes full responsibility for their actions unless specifically directed by the faculty instructor/PI.

4.5.2 *Dependability, Initiative, Accountability and Communication*

Students are expected to take the initiative to have a thorough understanding of the objectives to engage in activities to optimize the learning experience. Students are expected to complete assigned tasks to the best of their ability in accordance with the Learning Agreement by the assigned deadline dates. Communication about progress should be on the time schedule arranged in the Learning Agreement. Request for feedback on performance should be scheduled in advance with the faculty instructor/PI, whereas issues of concern or safety should immediately be brought to the attention of the faculty instructor. Communication should be open, professional, and honest at all times.

4.5.3 *Confidentiality*

Students engaged in research may be exposed to and work with confidential or proprietary information. Therefore, students have a moral, ethical, and legal responsibility to maintain the confidential nature of this information and work within the guidelines of ethical research practice. All information is the property of the university, and/or department, faculty instructor/ PI. Students will be required to sign documents regarding confidentiality and proprietary information. *Any unauthorized release of confidential information by any student to unauthorized personnel will be grounds for immediate failure of undergraduate research. Additional disciplinary action may apply depending on the nature of the violation (i.e. University or other disciplinary action).*

4.5.4 *Attendance*

Students are expected to be in attendance at times agreed upon by the faculty instructor/PI. Students are also expected to be ON TIME and ready for the activity. Students are expected to inform the faculty instructor/PI in the event of an absence prior to the designated time. Because undergraduate research is designed to simulate a work experience under professional guidance, the student must demonstrate professional behavior by notifying the appropriate person(s) as early in the day as possible. Excessive tardiness or absences may be factored into the course evaluation and may result in an "F" for the course if applicable to the completion of the research project.

4.5.5 *Length of the Research*

The total length of the undergraduate research project and hours required are outlined in the Learning Agreement. It is expected that students will spend a dedicated amount of time each week working on their research. Credit Hours are outlined in Section 02 of this document.

4.5.6 *Dress*

Appropriate dress and/or personal protective equipment (PPE) may be required to maintain personal safety and conduct assigned tasks professionally. Students will follow the dress code as established by the PI.

4.5.7 *Harassment*

It is expected that all students be treated equitably while performing undergraduate research. The University of Connecticut does not condone harassment by or directed toward any person or group within its community – students, employees, and visitors. Furthermore, the student enrolled in AH 3289/4289 must treat everyone politely and professionally during the research experience. Students must alert the faculty instructor/PI if he/she is subjected to or observes harassment behavior.

4.5.8 *Fees and Expenses*

The student is responsible for payment to the University of the usual tuition and fees as paid by all University students when taking research credits. Students assume all responsibility with respect to fees associated with engaging in undergraduate research.