

Honors Forum – Applied Sciences

Spring 2020

HONORS 3A

Section #54624



Instructor: Dr. John Heathcote **Class Times:** TTh 2:00-2:50pm, PHY-75
Office: FEM-1B (in the math study center)
Phone: (559) 638-0300 ext. 3215
e-mail: john.heathcote@reedleycollege.edu

Office Hours: MWF 10:00-10:50 am
Th 12:00-1:50 pm

These are my official office hours, but I am available at many other times as well. If you see me in there, feel free to come by with any question or concern that you have!

Welcome to the Applied Sciences Honors Forum!

I want to welcome you to Honors 3A! This is a fun and interesting course. You will each choose a topic in which you are interested and develop a research question. We will help each other as you each work on pursuing the research to answer that question. We have some challenging work ahead of us, but we will do it together!

Students in this course have the opportunity to present research at the 2020 Bay Area Honors Research Colloquium at UC, Berkeley on May 2nd and at the next State Center Community College District Honors Research Symposium.

Catalog Description:

An interdisciplinary investigation of a contemporary issue through the perspective of a computational discipline (e.g., mathematics, statistics, accounting, etc.). Content will vary each semester as determined by student research interests. Enrolled students will be required to present their research to an Honors committee as the culminating portion of the course.

What does it mean to be a student in an Honors class?

Honors students have the following attributes:

1. a higher degree of participation and involvement in the class
2. a higher standard of performance than regular students
3. an ability to comprehend more advanced supplemental reading, especially of primary sources
4. a demonstration of stronger enhancement of skills in critical thinking, analysis, and interpretation
5. an ability to comprehend a greater depth and breadth of subject matter, especially requiring synthesis of different perspectives or points of view

No Required Textbook

Extra Faculty Reviewer:

Extra faculty advising will be very helpful as you progress with this project. I will provide you with as much guidance as I can, but you will need to ask another faculty member to provide additional insight on your work. You may choose an instructor who is knowledgeable on your research topic, or you may choose one that can just provide general guidance.

Grading:

20%	Weekly Participation and Assignment Grade
15%	Research Proposal
	<i>First Draft (3%)</i>
	<i>Second Draft (4%)</i>
	<i>Final Draft (8%)</i>
15%	Individual Progress Meetings
20%	Presentations
	<i>Initial Idea presentation (2%)</i>
	<i>Proposal presentation (4%)</i>
	<i>Research Update presentation (5%)</i>
	<i>Final Presentation (9%)</i>
20%	Research Poster
	<i>Draft Poster (4%)</i>
	<i>Final Poster (6%)</i>
	<i>Poster Session (10%)</i>
10%	Quality of Research

Weekly Participation:

The major thrust of this course is the development of a research report that combines computational analysis with academic research. During our class meetings, we will help each other as we work on our projects. During certain meetings, you will be asked to provide an update on your progress. During other meetings, you will be expected to help provide guidance to other students with their projects. Each week, you will be earning a grade based upon your progress on the project. Additional assignments that arise will be incorporated in this grade.

Research Proposal:

The first step in academic research is to clearly define what you are researching. Our first goal will be for each of you to create your research proposal. We will be submitting these for acceptance into the **Bay Area Honors Research Symposium** which will be held on the campus of **UC, Berkeley** on **Saturday, May 2, 2020**. In order to create the very best possible proposals, we will have at least three rounds of drafts to create our final draft. It is a great honor to be accepted for this opportunity! It would be a wonderful experience for you and one that you can brag about for a long time!

Individual Progress Meetings:

I want to help each of you as much as I possibly can on this project. Since there will not be adequate class time for me to meet with each of you, we will have several required individual meetings between each of you and myself, during which we can discuss your progress and decide on the direction of your research. Your grade for this section will be based upon your attendance at and your appropriate preparation for these meetings

Presentations:

During academic research, you are expected to be able to present information about your research in various settings. During the semester, you will have at least four opportunities to present aspects of your research. First, you will give a short presentation on the initial idea of your research topic. Following that, you will present your research proposal to the class. During the time that you are performing your research, you will provide a formal update to the class. Finally, you will give a final presentation during a time organized for the class.

Research Poster:

A common method for sharing academic research is through a research poster presentation. So, each student will create a poster to share their research results. The poster will include the following sections: Abstract, introduction, methodology, results, and conclusions. Both a draft and final poster will be graded. In addition, a poster session will be held on campus during exam week. Participation in this session is required. (If a student's schedule does not allow for participation in the event, the student may present their research at another makeup activity.)

Quality of Research:

A portion of your grade is based upon the level of quality of your research project. This grade will take into account your full work of the semester. The grade is based upon the following:

- Developing a clear research question
- Having well-defined goals for your research
- Meeting goals of research proposal
- Following proper research methodology
- Showing depth and rigor in research
- Displaying an understanding of the context of your research
- Dealing with questions that arise from your research
- Sharing an enthusiasm on your research topic
- Clearly communicating your research results

Grading Scale:

90-100%	A
80-89.9%	B
70-79.9%	C
60-69.9%	D
<60%	F

Academic Dishonesty

Students at Reedley College are entitled to the best education that the college can make available to them, and they, their instructors, and their fellow students share the responsibility to ensure that this education is honestly attained. Because cheating, plagiarism, and collusion in dishonest activities erode the integrity of the college, each student is expected to exert an entirely honest effort in all academic endeavors. Academic dishonesty in any form is a very serious offense and will incur serious consequences.

Cheating is the act or attempted act of taking an examination or performing an assigned, evaluated task in a fraudulent or deceptive manner, such as having improper access to answers, in an attempt to gain an unearned academic advantage. Cheating may include, but is not limited to, copying from another's work, supplying one's work to another, giving or receiving copies of examinations without an instructor's permission, using or displaying notes or devices inappropriate to the conditions of the examination, allowing someone other than the officially enrolled student to represent the student, or failing to disclose research results completely.

Plagiarism is a specific form of cheating: the use of another's words or ideas without identifying them as such or giving credit to the source. Plagiarism may include, but is not limited to, failing to provide complete citations and references for all work that draws on the ideas, words, or work of others, failing to identify the contributors to work done in collaboration, submitting duplicate work to be evaluated in different courses without the knowledge and consent of the instructors involved, or failing to observe computer security systems and software copyrights. Incidents of cheating and plagiarism may result in any of a variety of sanctions and penalties, which may range from a failing grade on a particular examination, paper, project, or assignment in question to a failing grade in the course, at the discretion of the instructor and depending on the severity and frequency of the incidents.

Attendance: Class attendance will be recorded. If you miss more than four class sessions, you may be dropped. Course withdrawals, however, are ultimately the responsibility of the student.

Accommodations for Students with Disabilities:

If you have a verified need for an academic accommodation or materials in alternate media (i.e., Braille, large print, electronic text, etc.) per the Americans with Disabilities Act (ADA) or Section 504 of the Rehabilitation Act, please contact me as soon as possible.

Add Date:	Friday, January 31	Last day to add a course
Drop Date:	Friday, March 13	Last day to drop this course
Holidays:	Monday, January 20	Martin Luther King Jr. Day
	Friday, February 14-Monday, February 17	Presidents' Day Holidays
	Monday-Friday, April 6-10	Spring Break
Final:	Tuesday, May 19, 2:00-3:50 pm	

Tentative Course Schedule:

Date:	Activity:
Week 1	Introductions, Interests, and Research Topics
Week 2	Developing Topics and Proposals
Week 3	Initial Presentations; Draft Proposals are Due
Week 4	Peer Evaluations; 2 nd Drafts of Proposals are Due; Proposal Presentations (Individual Meetings)
Week 5	Proposal Presentations; Final Project Proposals are Due
Friday, 2/14	Proposals are due for the Bay Area Research Symposium
Week 6	Research Progress Updates
Week 7	Survey Questionnaires are Due (if applicable); Research Progress Updates
Week 8	Research Progress Updates
Week 9	Research Progress Updates
Week 10	Research Update Presentations
Week 11	Research Update Presentations
Week 12	Research Update Presentations; Start Posters
	Spring Break Holiday
Week 13	Work on Research Posters and Presentations
Week 14	Draft Posters/Presentation Slides are due
Week 15	Final Presentations
Saturday, 5/2	Trip to Bay Area Consortium Honors Research Symposium
Week 16	Final Presentations / Final Poster Files are due
Week 17	Final Presentations / Class Poster Session
Week 18	Final Poster Session

COURSE OUTCOMES:

1. place a designated topic within a computationally-based academic context.
2. understand how different disciplines can contribute information to a common research question.

COURSE OBJECTIVES:

In the process of completing this course, students will:

1. experience an integrated academic atmosphere in an effort to stimulate intellectual curiosity and university-level discussion on a particular topic or theme.
2. build a background in an applied science that is broad enough to contribute to a multi-discipline research project.
3. develop interdisciplinary hypotheses and questions about a topic with guidance from the instructor.
4. synthesize information and knowledge using skills obtained from a computational discipline.
5. practice critical thinking skills in evaluating and presenting research.
6. revise "first thoughts" or original hypotheses in light of deeper research and in collaboration with the instructor, classmates and experts in the field.
7. lead/participate in discussions to investigate questions and concerns regarding the identified research topic.
8. write appropriately documented essays which define, evaluate, interpret, and argue interdisciplinary topics.

Join the Honors Program!

Benefits:

- \$1,200 scholarship given upon successful completion of the honors program
- Membership in [UCLA TAP](#), which gives students priority admission status
- Membership in [Honors Transfer Council of California](#), which provides students opportunities for transfer at third-five universities, scholarships, and conference presentation at their annual research symposium
- Priority registration
- Small classes taught by dedicated, research-minded instructors
- Choice of honors classes each semester
- Special transfer counseling
- Interdisciplinary research forum
- Ability to present research at the [Central Valley Honors Symposium](#)

Eligibility:

Applications are accepted from all students with:

- A cumulative grade point average of 3.0 or better (usually over 3.5)
- An intent to transfer to a four-year university