

# Honors Forum – Applied Sciences

Spring 2018

HONORS 3A

Section #52060



**Instructor:** Dr. John Heathcote      **Class Times:** MW 8:00-8:50am, CTL-1  
**Office:** FEM-1B (in the math study center)  
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**Office Hours:** TTh 1:00-1:50 pm  
F 10:00-10:50 am

These are my official office hours, but I am available at many other times as well. You can also find me in my office most days between 10 and noon. If you see me in there, feel free to come by with any question or concern that you have!

**Prerequisite:** Acceptance into the Honors Program or Instructor Nomination

## 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 2018 Bay Area Honors Research Colloquium at UC Berkeley in May and at the Community College Undergraduate Research Initiative (CCURI) Colloquium in Fall 2018 (Location TBA).

## 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.

## 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
  - First Draft (5%)*
  - Second Draft (5%)*
  - Final Draft (5%)*
- 10% Individual Progress Meetings
- 30% Presentations
  - Background presentation (5%)*
  - Proposal presentation (5%)*
  - Research Update presentation (5%)*
  - Initial Research Presentation (to outside group) (5%)*
  - Final Presentation (10%)*
- 15% Research Poster
- 10% Final Exam

### 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 5, 2018**. 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! *[Acceptance of your proposal for the research symposium will give you an automatic 100% score on your overall research proposal grade.]*

### 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 at least two required individual meetings between each of you and myself, during which we can discuss your progress and decide on the direction of your research.

### **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 five opportunities to present aspects of your research. First, you will give a short presentation on the background 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. You will give at least one presentation to an outside group (to another class, at the STEM Conference, at another RC event...). Finally, you will give a final presentation during a time organized for the class.

### **Final Exam:**

The final exam for this class will involve all of the topics that students have researched through the semester. You are expected to have learned from your classmates regarding their research and will be tested on these areas. You will also be expected to reflect on your own research during this exam.

### **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.

<b>Add Date:</b>	Friday, January 26	Last day to add a course
<b>Drop Date:</b>	Friday, March 9	Last day to drop this course
<b>Holidays:</b>	Monday, January 15	Martin Luther King Jr. Day
	Friday-Monday, Feb. 16-19	Presidents' Day Holidays
	Monday-Friday, March 26-30	Spring Recess Holidays
<b>Final:</b>	Monday, May 14, 8:00-9:50 am	

**Tentative Course Schedule:**

<b>Date:</b>	<b>Activity:</b>
Week 1	Introductions, Interests, and Research Topics
Week 2	Research Methods
Week 3	Background Presentations
Week 4	Draft Proposals are Due; Peer Evaluations (Individual Meetings)
Week 5	2 <sup>nd</sup> Drafts of Proposals are Due; Proposal Presentations (Individual Meetings)
Week 6	Final Project Proposals are Due; Students create Project Timetables
<i>Wednesday, 2/14</i>	<i>Proposals are due for the Bay Area Research Symposium</i>
Week 7	Research Progress Updates
Week 8	Research Progress Updates; Survey Questionnaires are Due (if applicable)
Week 9	Interim Report Presentations (+ Individual Meetings)
Week 10	Interim Report Presentations (+ Individual Meetings)
Week 11	Interim Report Presentations (+ Individual Meetings)
Week 12	Interim Report Presentations (+ Individual Meetings)
Week 13	Research Posters
	Spring Break Holiday
Week 14	<b>Presentations to Outside Groups</b>
Week 15	<b>Presentations to Outside Groups</b>
Week 16	Final Presentations
<i>Saturday, 5/5</i>	<i>Trip to Bay Area Consortium Honors Research Symposium</i>
Week 17	Finalize Posters
Week 18	Final Exam

**COURSE OUTCOMES:**

Upon completion of this course, students will be able to:

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.