1. COURSE ID: IDST 102      TITLE: Sciences Honors Seminar I
   Semester Units/Hours: 2.0 units; a minimum of 32.0 lecture hours/semester
   Method of Grading: Letter Grade Only
   Prerequisite: Completion of or concurrent enrollment in ENGL 100

2. COURSE DESIGNATION:
   Degree Credit
   Transfer credit: CSU

3. COURSE DESCRIPTIONS:
   Catalog Description:
   Introductory interdisciplinary research seminar for students admitted into the Honors Project program. Students are instructed and guided in various scientific investigative approaches and their applications in the natural science, mathematical and engineering disciplines. Working through an interdisciplinary seminar theme, students expand upon and deepen the content of a linked transfer course from the Sciences Cluster (Sciences, Technology, Engineering and Math). Students apprehend fundamental interdisciplinary theory, and complete a distinct scholarly project that extends a content area of the chosen transfer course. Emphasis on peer collaboration, the fundamentals of scientific research and its application, and effective written and oral presentation.

4. STUDENT LEARNING OUTCOME(S) (SLO'S):
   Upon successful completion of this course, a student will meet the following outcomes:
   1. Demonstrate and apply an understanding of interdisciplinary studies and research skills.
   2. Complete the distinct stages of a research project, including review and critical analysis of prior work, hypothesis formulation, experimentation, evaluation of results, and the final presentation.
   3. Collaborate with students from different disciplines.

5. SPECIFIC INSTRUCTIONAL OBJECTIVES:
   Upon successful completion of this course, a student will be able to:
   1. Demonstrate an ability to understand and apply interdisciplinary studies and research skills.
   2. Complete the distinct stages of a research project, including review and critical analysis of prior work, hypothesis formulation, experimentation, evaluation of results, and the final presentation.
   3. Collaborate with students from different disciplines.

6. COURSE CONTENT:
   Lecture Content:
   This course is a two-unit, interdisciplinary honors seminar encompassing the sciences, math and engineering, emphasizing exchange of ideas and constructive feedback. The interdisciplinary content of the course derives from two sources: 1) students are introduced to interdisciplinary theory and research methods; 2) each student completes a research project from different disciplines.

   The seminar is guided by a broad, inclusive, interdisciplinary theme or concept (i.e., “Bioinformatics,” “Metaphor and Measurement”). In the first part of the course, therefore, students study examples of interdisciplinary research and theory, reading at least one book-length scholarly work that elaborates the seminar theme and demonstrates interdisciplinary methods of critical inquiry. Students are shown how an interdisciplinary approach to a topic can bring rich critical insight. Students are instructed in how they might apply an interdisciplinary approach to their individual honors projects.

   Such formation in interdisciplinary study leads into the second part of the course (and the second way in which the course is “interdisciplinary”). Honors students enrolled in the course develop and complete an advanced scholarly project for an appropriate transfer course they are co-enrolled in. (If approved by the transfer course instructor, this project earns the student honors credit for that chosen transfer course.) Course work and assignments include developing a project proposal and an annotated bibliography, as well as workshops in outlining, draft revisions, and presentation of the final project. Students work collaboratively on their respective scholarly projects, which reflect a range of disciplines. For example, one student might be working on an analysis of the Europa space expedition in terms of the Copernican...
revolution for an Astronomy course, while another student might be working on an investigation of the relationship between metabolism and diseases for a Biology course. Students learn to listen critically and give constructive feedback in a cross-disciplinary context. Therefore, by being exposed to different disciplinary work in an intensive, seminar setting, students learn to incorporate interdisciplinary components into their own work.

The interdisciplinary theme thus helps cohere the class, stimulate intellectual growth, and furnish a bridge between each student's research project and his or her respective transfer course. The interdisciplinary focus also elevates the research project beyond the original transfer course discipline: students are guided to bring at least one other discipline to bear on their topic, so as to enhance their critical methodology. In an intensive “laboratory” setting, the second half of the course prioritizes expanding and refining each student’s honors project.

Lab Content:
None

TBA Hours Content:
None

Honors Content:
- Research methodologies
- Scholarly seminar theme
- Advanced project development and topics
- Advanced analytical writing
- Responsible seminar participation
- Preparation for poster and conference presentation

7. REPRESENTATIVE METHODS OF INSTRUCTION:
Typical methods of instruction may include:
A. Lecture
B. Activity
C. Directed Study
D. Discussion
E. Experiments
F. Field Trips
G. Guest Speakers

8. REPRESENTATIVE ASSIGNMENTS
Representative assignments in this course may include, but are not limited to the following:

Writing Assignments:
- Interdisciplinary theory summaries and commentaries
- Project proposal
- Annotated bibliography
- Project outline
- Drafts of final project
- Feedback/workshop exercises

Reading Assignments:
- Interdisciplinary seminar theme readings
- Project development readings
- Outside research for project topic

Other Outside Assignments:
- Library research assignments
- Web research assignments
- Scientific experiments
- Field trips

9. REPRESENTATIVE METHODS OF EVALUATION
Representative methods of evaluation may include:
A. Class Participation
B. Class Work
C. Field Trips
D. Group Projects
E. Homework
F. Oral Presentation
G. Papers
H. Portfolios
I. Projects
J. Research Projects

10. REPRESENTATIVE TEXT(S):
   Possible textbooks include:

   **Origination Date:** October 2013
   **Curriculum Committee Approval Date:** March 2014
   **Effective Term:** Fall 2014
   **Course Originator:** David Laderman