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1. **Course number and name:** 396- 1, 2- Senior Project in Materials Science and Engineering

2. **Credits:** 1
   **Contact hours:** 3 hrs./week

3. **Instructor:** Kathleen Stair

4. **Text and other supplemental materials:**
   On-line materials at: http://www.onlineethics.org/ and https://www.nature.com/scitable/

5a. **Catalog Description:**
   To be taken in two consecutive quarters. Independent basic or applied research project, conceived and performed under the direction of a department faculty member.

5b. **Prerequisites**
   Senior standing in materials science program

5c. **Course type (required, elective, or selected elective):** required

6a. **Course outcomes:**
   A student completing this course should be able to:
   1. Understand the basis for making ethical decisions in the practice of science and engineering.
   2. Write a research report consistent with standard practices.
   3. Give effective oral and written reports of ongoing and completed work.

6b. **Supported Program Outcomes** (B=beginner, I=intermediate, A=Advanced):

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7. **List of topics to be covered**
   1. Engineering ethics
   2. Lab safety
   3. Lab record-keeping
   4. Use of the literature,
   5. Correct citation of sources
   6. Writing organization and grammar
   7. Effective use of figures and graphs
   8. Oral presentation skills.