1. Course number and name
   **EML 4930 Materials II**

2. Credits and contact hours
   3 cr, 2.5 contact hours (2 hrs. 30 min. lecture)

3. Instructor’s or course coordinator’s name
   Instructor: Dr. Simone Peterson Hruda, Coordinator: Dr. William Oates

4. Text book, title, author, and year

5. Specific course information
   a. *brief description of the content of the course (catalog description)*
      This course is the first part of a two-part sequence integrating concepts of mechanics and principles of materials. It will provide the student with a broad based introduction to, and understanding of, the application of materials in structural design, the processing of mechanical components and the manufacture of high technology products.
   b. *prerequisites or corequisites*
      Prerequisites: EML 3012C and senior standing
   c. *indicate whether a required, elective, or selected elective course in the program*
      Selected Technical Elective course

5. Specific goals for the course
   a. *Course Outcomes*

6. Brief list of topics to be covered
   - Ceramics (structure, properties, processing, applications)
   - Polymers (str., prop., proc., & appl.)
   - Composites (str., prop., proc., & appl.)
   - Electronic Materials (str., prop., proc., & appl.)
   - Mechanical Properties
   - Electrical Properties
   - Thermal Properties
   - Magnetic Properties
   - Optical Properties
   - Corrosion
   - Environmental Issues
   - New and Novel Materials