

**Department of Materials Science and Engineering
University of Maryland, College Park, Maryland**

1. **ENMA 180 – Materials Science and Engineering: The Field and the Future**
2. **Credits and contact hours – 1 credits.** The University of Maryland follows the Maryland Higher Education Commission's policies on "contact hours;" specifically, one semester hour of credit will be awarded for a minimum of 15 hours, of 50 minutes each of actual class time, exclusive of registration, study days, and holidays.

Schedule: meets one 50 minute period per week
3. **Instructor's or course coordinator's name:** **Dr. Kathleen Hart**
4. **Text book, title, author and year:** no text required
5. **Specific course information**
 - a. **Brief description of the content of the course (catalog description):** Overview of the profession and the components of the Materials Science and Engineering program. Students will become familiar with the departmental faculty, areas of specialization within MSE, professional society student chapter, research opportunities and other resources available to students.
 - b. **Pre-requisites or co-requisites:** Enrollment in the Clark School of Engineering.
 - c. **Indicate whether a required, elective, or selected elective (as per Table 5-1) course in the program:** ENMA 180 is a required course for Materials Science and Engineering majors.
6. **Specific goals for the course:**
 - a. **Specific outcomes of instruction:** The objective of this class is to provide students new to the major with information about the field of materials science and engineering and the administrative requirements of the major. They will be able to:
 1. Identify the specialization areas in the MSE major
 2. Identify academic benchmarks which must be met.
 3. Identify Department and University resources available to MSE students.
 4. Discuss the importance of ethical and professional ethics in engineering.
 5. Communicate individually and as a member of team.
 - b. **Explicitly indicate which of the student outcomes listed in Criterion 3 or any other outcomes are addressed in this course.**

ABET D: Ability to function on multidisciplinary teams.

ABET F: Understanding of professional and ethical responsibility

ABET G: Ability to communicate effectively;

7. Brief list of topics to be covered.

1. Resources in the Department and in the College and University/Academic Integrity
2. Engineering Library/Learning Assistance Center/Time Management
3. MatES and Materials Advantage
4. How to Prepare for Midterms
5. Engineering Career Center
6. Departmental Advising and Mentoring Process
7. Specialization area: Soft Materials and Biomaterials
8. Specialization area: Materials for Applications
9. Specialization area: Materials for Energy
10. Ethics in the Engineering Profession
11. Research or internships/ /National Scholarships Office
12. Mentoring Program with Upperclassmen