Materials Science & Engineering is an integrated discipline of chemistry, physics, and engineering. Materials Scientist and Engineers are continually engaged in developing new materials or upgrading the use of basic materials for our advancing world. Many courses and all MSE courses are only offered one semester per academic year. Students will be required to take a total of 53.5 credit hours in core MSE courses. Visit mse.utah.edu for more information and course descriptions.

Total Degree Credit Hours: 125.5 | Required: 2.3 GPA | All courses must be passed with a “C” grade or better

**Major Status**

**Fall**
- MSE 3011: Structural Analysis of Materials (4 credits)
  - Pre-req: MSE 2010, MATH 3140, CHEM 2310, PHYS 2220, CS 1001, ME EN 2010
  - Sequence: MSE 5098, MSE 5099

**Spring**
- MSE 3310: Intro to Ceramics (3 credits)
  - Pre-req: MSE 2010, MATH 3140, CHEM 2310, ME EN 2010, ECE 2200

**Fall**
- MSE 3032: Thermodynamics (4 credits)
  - Sequence: MSE 5034

**Spring**
- MSE 3010: Materials Processing (3 credits)
  - Pre-req: MSE 2010, MATH 1320, CHEM 2310, PHYS 2220
  - Co-req: MSE 3061, ME EN 2010

**Fall**
- MSE 3210: Electronic Properties of Solids (3 credits)
  - Pre-req: MSE 2010, MATH 2250, CHEM 1220/1225, PHYS 2220, CS 1001
  - Co-req: MATH 3140, CHEM 2310, MSE 3061, ME EN 2010, ECE 2200

**Spring**
- MSE 3034: Kinetics of Solid-State Processes (3 credits)
  - Pre-req: MSE 2010, MATH 1320, CHEM 2310, ME EN 2010, MSE 3032

- MSE 3310: Electronic Properties of Solids (3 credits)
  - Pre-req: MSE 2010, MATH 2250, CHEM 1220/1225, PHYS 2220
  - Co-req: MATH 3140, CHEM 2310, MSE 3061, ME EN 2010, ECE 2200

**Fall**
- MSE 3090: Case Studies in MSE (4 credits)
  - Pre-req: WRTG 2010
  - Sequence: MSE 5098, MSE 5099

**Spring**
- MSE 3099: Senior Thesis (2.5 credits)
  - Pre-req: MSE 5098

**Technical Electives**

Students are required to complete four 5000-level or above courses from the approved list below:

**Section 1**
- Materials Science & Eng.
  - Choose 1 course from:
    - MSE 5055, 5072, 5073, 5074, 5353, 5354, 5475, 5050

**Section 2**
- Metallurgical Eng.
  - Choose 1 course from:
    - MET E 5210, 5260, 5280, 5290, 5670, 5680, 5760, 5780, 5790

**Section 3**
- Engineering & Science
  - Many 5000 level engineering & science course can be used for this requirement with prior approval from advisor, or choose 1 course from:
    - NUCL 5030, ME EN 5520, MET E 5320, 5450, 5610, 5690, 5739, 5760