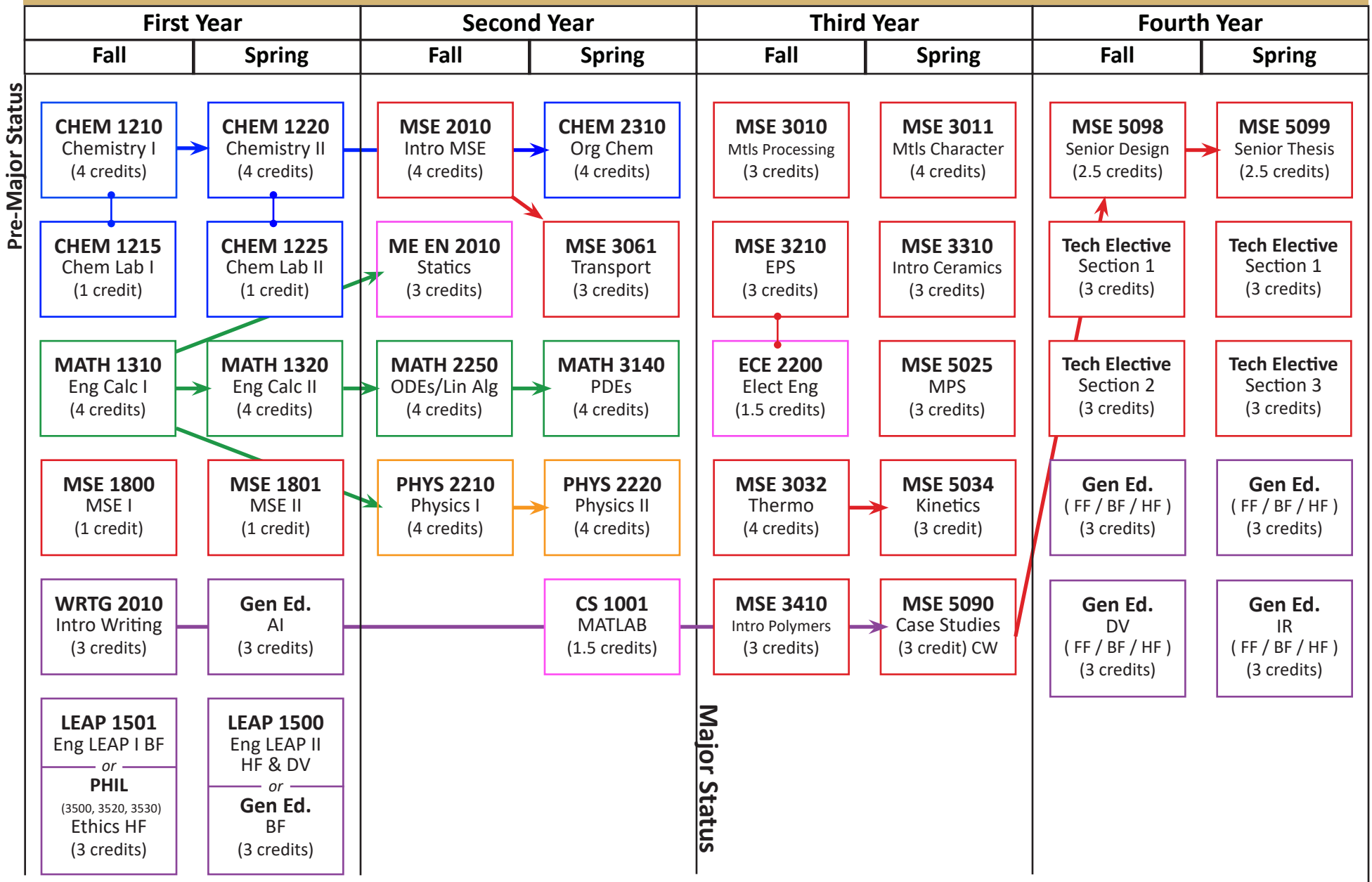


Materials Science & Engineering B.S. Major (Engineering Calculus)



Department of Materials Science & Engineering
 College of Engineering | University of Utah
 Academic Advisor: Marcie Leek | marcie.leek@utah.edu
 For further information visit: www.mse.utah.edu

Key

- Prerequisites Enforced →
- Recommended co-requisites ↕

Major Requirements

- No grade below C allowed
- 2.3 GPA is required

Major Status



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

Fall	Spring	Fall	Spring
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Pre-req: MSE 2010, MATH 1320, CHEM 2310, PHYS 2220

Co-req: MSE 3061, ME EN 2010

MSE 3010
Materials Processing
(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

MSE 3210
Electronic Properties of Solids
(3 credits)

ECE 2200
Electrical & Computer Eng.
(1.5 credits)

Pre-req: MSE 2010, MSE 3061, MATH 2250, CHEM 1220/1225, PHYS 2220

MSE 3032
Thermodynamics
(4 credits)

Sequence: MSE 5034

Pre-req: MSE 2010, CHEM 2310, MATH 1320

MSE 3410
Intro to Polymers
(3 credits)

Pre-req: MSE 2010, MSE 3061, MATH 3140, CHEM 2310, PHYS 2220, CS 1001, ME EN 2010

MSE 3011
Structural Analysis of Materials
(4 credits)

Pre-req: MSE 2010, MATH 1310, CHEM 1210, CHEM 1215

MSE 3310
Intro to Ceramics
(3 credits)

Pre-req: MSE 2010, MSE 3061, MATH 3140, CHEM 2310, PHYS 2220, CS 1001, ME EN 2010

MSE 5025
Mechanical Properties of Solids
(3 credits)

Pre-req: MSE 2010, MSE 3061, MATH 3140, CHEM 2310, PHYS 2220, CS 1001, ME EN 2010, MSE 3032

MSE 5034
Kinetics of Solid-State Processes
(3 credits)

Pre-req: WRTG 2010

MSE 5090
Case Studies in MSE
(4 credits)

Sequence: MSE 5098, MSE 5099

Pre-req: MSE 5090

MSE 5098
Senior Design
(2.5 credits)

Sequence: MSE 5099

Pre-req: MSE 5098

MSE 5099
Senior Thesis
(2.5 credits)

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 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