Chemistry Major, Materials Science and Engineering Emphasis
See [www.chem.utah.edu](http://www.chem.utah.edu) for details or contact the chemistry advisor (advisor@chem.utah.edu)

Chemistry Core Courses (required of all majors):
CHEM 1210, 1220 General Chemistry I, II (4, 4) both SF (or 1211/1221 honors versions)
CHEM 1215, 1225 General Chemistry Lab I, II (1, 1) (or 1240/1241 honors versions)
CHEM 2310, 2320 Organic Chemistry I, II (4, 4) (or 2311/2321 honors versions)
CHEM 2315, 2325 Organic Chemistry Lab I, II (2, 2)
CHEM 3000 Quantitative Analysis (4) QI CW
CHEM 3060 Quantum Chemistry and Spectroscopy (4) QI
CHEM 3100 Inorganic Chemistry (5)

Math and Physics Core (required of all majors):
MATH 1210, 1220 Calculus I, II (4, 4) or MATH 1250 AP Calculus I (4) all QR
MATH 2210 Calculus III (3) or MATH 1260 AP Calculus II (4) both QR
PHYS 2210, 2220 Physics for Scientists and Engineers I, II (4, 4) (or 3210/3220 honors versions)
PHYS 2215, 2225 Physics Laboratory for Scientists and Engineers I, II (1, 1)

F. Chemistry, Materials Science and Engineering Emphasis
Core courses, plus:
MATH 2250 Differential Equations and Linear Algebra (4) (or 2270 and 2280)
CHEM 3070 Thermodynamics and Chemical Kinetics (4) QI

Complete two of the following lab courses:
CHEM 3200 Advanced Radiochemistry with Lab I (3)
CHEM 5700 Advanced Analytical Chemistry Lab (2) CW
CHEM 5710 Advanced Organic Chemistry Lab (2)
CHEM 5720 Advanced Physical Chemistry Lab (2)
CHEM 5730 Advanced Inorganic Chemistry Lab (2)
CHEM 5750 Advanced Chemical Biology Lab (2)

Fifteen or more units selected from the following:
MSE 3010 Materials Processing Lab (3)          MSE 5032 Advanced Thermodynamics (3)
MSE 3011 Struct. Anal. of Matls. (4)          MSE 5034 Kinetics of Solid-state Processes (3)
MSE 3210 Electronic Properties of Solids (3)    MSE 5040 Intro. to Modern Biomaterials (4)
MSE 3310 Intro. to Ceramics (3)                MSE 5071 Intro. to NanoBio. Tech. & Matls. (3)
MSE 3410 Intro. to Polymers (3)                MSE 5470 Polymer & Org. Mats. Ener. Appl. I (3)
CHEM 3130 Solid State Chemistry (2)
CHM 4800 or 4999 Undergraduate Research or Honors Thesis (max. 2 units counted total)

University Requirements: 122 Hours (at least 40 upper division), DV, IR, WRTG, GEN ED

Sample Course Sequence

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