ENVIRONMENTAL ENGINEERING  
TECHNICAL ELECTIVES  
Revised February 2012

5 total, at least 1 from the MAE Department. Generally all upper division MAE classes count as TEs:

CENG 120 Chemical Process Dynamics and Control  
CENG 122 Separation Process  
CENG 124A/B Chemical Plant and Process Design I/II  
CENG 176A/B Chemical Engineering Process Lab I/II  
MAE 118 Introduction to Energy Systems  
MAE 120 Introduction to Nuclear Energy  
MAE 130A/B/C: Statics, Dynamics, and Vibrations  
MAE 131A/B/C: Solid Mechanics, I, II & III  
MAE 133: Finite Element Methods  
MAE 135 Computational Mechanics  
MAE 140 Linear Circuits  
MAE 143A/B/C Signals and Systems, Linear Control, Digital Control Systems  
MAE 142 Dynamics & Control of Aerospace Vehicles  
MAE 149 Sensor Networks  
MAE 150 Computer-Aided Analysis and Design  
MAE 160 Mechanical Behavior of Materials  
MAE 161 Electronic, Magnetic, Photonic Materials  
MAE 166 Nanomaterials  
MAE 171B Senior Research Project  
MAE 199 Independent Study for Undergraduates (2 quarter sequence counts as 1 TE)  
MAE210A/B/C Fluid Mechanics  
MAE 224 A/B Environmental Fluid Mechanics  
MAE 254 Energy Materials and Applications  
MAE 255 Renewable Energy Meteorology

Non-Departmental Technical Electives

Chemistry
Chem 100A Analytical Chemistry Laboratory  
Chem 100B Fundamentals of Instrumental Analysis  
Chem 131/132 Physical Chemistry  
Chem 140B/C Organic Chemistry II/III  
Chem 143A Organic Chemistry Laboratory  
Chem 149A Environmental Chemistry  
Chem 149B Environmental Chemistry  
Chem 173 Atmospheric Chemistry

Chemistry
ESYS 150 Environmental Perils

Environmental Systems
SE 183 Engineering Geology

Structural Engineering
Econ 131 Economics of the Environment  
Econ 132 Energy Economics  
Econ 135 Urban Economics  
MGT110/111/112: Business  
MGT121A/B: Innovation to Market  
MGT 172 Business Project Management

Economics (at most 1, Econ 1A and Econ 1B required)
USP 124 Land Use Planning  
USP 144 Environmental and Preventive Health Issues  
USP 170 Sustainable Planning  
USP 171 Sustainable Development

Urban Studies and Planning (at most 1)
ESYS 150 Environmental Perils

Teams In Engineering Services -TIES
ENG100/ENG100L (1 TE together)

Recommended Tracks

Following a track is not required, but will add depth and coherence to your knowledge in your field of interest.

Renewable Energy:  
MAE 118, 120, ECON 132, MAE 254, MAE 255  
Environmental Sensing and Control:  
MAE 140, 143A/B/C, 149, 150, 199  
Environmental Chemistry:  
Earth Science: Atmospheric Science / Ocean Science / Geophysics:  
ERTH/SIO 102, 103, 110, 111, 112, 113, 117, 135, 142, 182A/B, ESYS 150

Questions? Please contact an MAE Undergraduate Adviser, Gerri Johnson, at gjohnson@ucsd.edu or Christina Sandoval-Paquette, at cgsandoval@ucsd.edu.