

ENVIRONMENTAL ENGINEERING TECHNICAL ELECTIVES

Revised Apr 2014

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	MAE 142 Dynamics & Control of Aerospace Vehicles
CENG 122 Separation Process	MAE 149 Sensor Networks
CENG 124A/B Chemical Plant and Process Design I/II	MAE 150 Computer-Aided Analysis and Design
CENG 176A/B Chemical Engineering Process Lab I/II	MAE 154 Product Design and Entrepreneurship
MAE 118 Introduction to Energy Systems	MAE 160 Mechanical Behavior of Materials
MAE 120 Introduction to Nuclear Energy	MAE 166 Nanomaterials
MAE 130A/B/C: Statics, Dynamics, and Vibrations	MAE 199 Independent Research (2-quarter sequence counts as 1 TE)
MAE 131A/B/C: Solid Mechanics, I, II & III	MAE210A/B/C Fluid Mechanics
MAE 133 Finite Element Methods	MAE 224A/B Environmental Fluid Mechanics
MAE 140 Linear Circuits	MAE 254 Energy Materials and Applications
MAE 143A/B/C Signals & Systems, Linear Control, Digital Control Systems	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 171 Environmental Chemistry
Chem 172 Environmental Chemistry
Chem 173 Atmospheric Chemistry

Scripps Institute of Oceanography. All upper division

SIO lecture classes count as TEs, e.g.:

SIO 101 California's Coastal Oceanography
SIO 102 Intro to Geochemistry (requires SIO 50)
SIO 103 Intro to Geophysics (requires SIO 101)
SIO 106 Intro to Hydrogeology (requires SIO 50)
SIO 110 Intro to GIS / GPS
SIO 111 Ocean Waves and Tides
SIO 112 Urban Landscapes
SIO 113 Computations in Earth Sciences.
SIO 115 Ice and the Climate System
SIO 117 The Physical Basis of Global Warming
SIO 135 Satellite Remote Sensing

Economics (at most 1, Econ 1A and Econ 1B required)

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

Urban Studies and Planning (at most 1)

USP 124 Land Use Planning
USP 144 Environmental and Preventive Health Issues
USP 170 Sustainable Planning
USP 171 Sustainable Development

Teams In Engineering Services -TIES

ENG100A/ENG100L (must take 2 consecutive quarters of ENG100L for 1 TE)

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:

Chem 149A, 173 and choice of 3 out of (CENG 120, 122, 124A/B, 176A/B, SIO 263, Chem 172, 140B, 100A/B, 143A)

Earth Science: Atmospheric Science / Ocean Science / Geophysics:

ERTH/SIO 102, 103, 110, 111, 112, 113, 117, 135, 142, 182A/B

Questions? Please contact an MAE Undergraduate Adviser, Chelsea Rankin, at crankin@ucsd.edu or Christina Sandoval-Paquette, at cgsandoval@ucsd.edu.