

ENVIRONMENTAL ENGINEERING TECHNICAL ELECTIVES

All prerequisites are enforced

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

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| CENG 120 Chemical Process Dynamics and Control | MAE 145 Intro to Robotic Planning and Estimation |
| CENG 122 Separation Process | MAE 142 Dynamics & Control of Aerospace Vehicles |
| CENG 124A/B Chemical Plant and Process Design I/II | MAE 149 Sensor Networks |
| CENG 176A/B Chemical Engineering Process Lab I/II | MAE 150 Computer-Aided Analysis and Design |
| MAE 118 Introduction to Energy Systems | MAE 154 Product Design and Entrepreneurship |
| MAE 120 Introduction to Nuclear Energy | MAE 160 Mechanical Behavior of Materials |
| MAE 130A/B/C: Statics, Dynamics, and Vibrations | MAE 166 Nanomaterials |
| MAE 131A/B/C: Solid Mechanics, I, II & III | MAE 199 Independent Research (2-quarter sequence counts as 1 TE) |
| MAE 133 Finite Element Methods | MAE 210A/B/C Fluid Mechanics |
| MAE 140 Linear Circuits | MAE 255 Renewable Energy Meteorology |
| MAE 143A/B Signals & Systems, Linear Control | |
| MAE 144 Embedded Control & Robotics | |

Non-Departmental Technical Electives

Chemistry

Chem 100A Analytical Chemistry Laboratory
Chem 100B Fundamentals of Instrumental Analysis
Chem 131/132 Physical Chemistry
Chem 140 A/B/C Organic Chemistry I/II/III
Chem 143A Organic Chemistry Laboratory
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 131 Economics of the Environment
Econ 132 Energy Economics
Econ 135 Urban Economics
MGT110/112 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
USP 177 Urban Design Practicum

Teams In Engineering Services -TIES

ENG100A/ENG100L (must take ENG 100A and 2 quarters of ENG100L for 1 TE)

Structural Engineering

SE 181 Geotechnical Engineering (requires MAE 131A)
SE 182 Foundation Engineering (requires SE 181)
SE 184 Ground Improvement (requires SE 181)

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, 256, BIBC140, SIO 135, SIO 172, ECON 132

Environmental Sensing and Control:

MAE 140, 143A/B, 144, 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