Master’s of Science in Environmental Engineering

Program Requirements for Students Who Started Prior to Fall 2019

The Master's of Science in Environmental Engineering (MSENE) Program requires students complete 27 units (9 courses). These must include the 3 CORE courses, 4 courses from either the Air or Water concentration (below), and 2 electives.

For detailed course information, please see the Course Catalogue. For a course schedule, please see the Schedule of Classes.

CORE (3 courses)

ENE 512: Environmental Fluid Mechanics (Fall only)
ENE 505: Energy and the Environment (Fall only)
CE 505: Data Management (Fall only)

Choose either Air or Water concentration (4 courses)

Air

ENE 426: Particulate Air Pollutants: Properties/Behavior/ Measurement (Spring only)
Taught by Prof. Sioutas
ENE 527: Climate Change and Atmospheric Aerosols (Fall only)
Taught by Prof. Ban-Weiss
ENE 535: Air Pollution Management: Exposure, Health Effects and Risk (Spring only)
Taught by Prof. Sioutas

Pick one: CE 523* (Fall only), CE 553*, CE 516
*Note: CE 453: Water Quality Control (Fall only), or equivalent, is a prerequisite for CE 463L, CE 523 and CE 553.

Note: Air Concentration students must take ENE 428: Air Pollution Fundamentals in lieu of one of the electives if they have not already taken the course, or its equivalent, as an undergraduate.

Water

ENE 599 (ENE 562): Aquatic Chemistry (Every Other Fall ie fall 2020, fall 2022)
Taught by Prof. McCurry
CE 523: Physicochemical Processes in Environmental Engineering (Fall only)
Taught by Prof. Childress
CE 553: Biological Processes in Environmental Engineering
Taught by Prof. Smith

Pick one: ENE 426 (Spring only), ENE 527 (Fall only), or ENE 535 (Spring only)
Note: **CE 453**: Water Quality Control is considered a pre-requisite for the Water Concentration; if not taken prior to coming to USC, it must be taken in the first year and is not counted toward the degree.

**Suggested Electives**  
(2 courses)

**CE 451**: Water Resources Engineering (Spring only)  
**CE 484**: Water Treatment Design (Fall only)  
**CE 485**: Wastewater Treatment Design (Spring only)  
**CE 503**: Microbiology for Environmental Engineers (Spring only)  
**CE 516**: Geohydrology (Fall only)  
**CE 599**: Complex Systems Safety and Resiliency  
**ENE 502**: Environmental and Regulatory Compliance (Spring only)  
**ENE 510**: Water Quality Management and Practice (Spring only)  
Other electives approved by advisor

NOTE: At least 2/3 of the units applied to the degree must be at the 500-level or above.