UC Irvine
Department of Civil and Environmental Engineering

AY 2025- 26 MASTER'S DEGREE PLAN OF STUDY
ENVIRONMENTAL & ENERGY SYSTEMS

Name:	Student ID Number:
Qrt/Year Expected to Adv. Candidacy:	Email Address:
Qrt/Year Expected to Graduate:	GPA:
Thesis or Non-Thesis Option:	Thesis Advisor:

Course Area	Course Number	Units	Grade	Qtr/Yr
ADVANCED MATH		4		
WATER		4		
ENERGY, AIR QUALITY & CLIMATE		4		
Total Units for **THIS SECTION:**				

Course Title	Course Number	Units	Grade	Qtr/Yr
Total Units for **THIS SECTION:**				

Course Title	Course Number	Units	Grade	Qtr/Yr
Total Units for **THIS SECTION:**				
Total Units for **ALL SECTIONS:**				

Non-thesis (48 units)	**Thesis (48 units total)**
Core Courses **12 out of 48 units**	**Core Courses** **12 out of 48 units**
One course required. *see pg 2*	One course required. *see pg 2*
One course required. *see pg 2*	One course required. *see pg 2*
One course required. *see pg 2*	One course required. *see pg 2*
Electives **28 out of 48 units** Students must fulfill a minimum of **28** elective units from graduate courses listed on attached list. *see page 2*	**Electives** **16 out of 48 units** Students must fulfill a minimum of **16** elective units from graduate courses listed on attached list. *see page 2* **MS Thesis Research** **10 out of 48 units** Students can fulfill a maximum of **10** units of CEE 296 MS Thesis Research.
Seminars/Other **8 out of 48 units** **Required: 3** units of CEE 295: Seminars in CEE. **Max. of 3 units** apply to degree requirements. Options for the remaining **5** units: • Approved graduate-level courses • CEE 299 Individual Research • Approved upper-division undergraduate units. **10 units max**	**Seminars/Other** **10 out of 48 units** **Required: 3** units of CEE 295: Seminars in CEE. **Max. of 3 units** apply to degree requirements. Options for the remaining **7** units: • Approved graduate-level courses • CEE 299 Individual Research • Approved upper-division undergraduate units. **10 units max**

SIGNATURES: **MS THESIS COMMITTEE MEMBERS:**

STUDENT: **DATE:** **CHAIR:**

ENVIRONMENT & ENERGY FOCUS AREA ADVISOR: **DATE:** **MEMBER:**

CEE GRADUATE ADVISOR: **DATE:** **MEMBER:**

This form must be submitted to the Grad. Coordinator by the end of the **FIRST** quarter of enrollment. Changes to this form **MUST** be approved by the Environment & Energy Focus Area Advisor, Professor Russell Detwiler: detwiler@uci.edu

Core Requirements (12 Units):
Students entering the program without a M.S. degree must complete the following core requirements before petitioning to Advance to Candidacy for the M.S. Degree:

Area:	Requirements:	Courses:
Advanced Mathematics	One of the five options (4 units):	ENGRCEE 283 Math. Methods in Eng. Analysis (F) ENGRMAE 200A Engineering Analysis I (F) ENGRMAE 200B Engineering Analysis II (W) CBE 200 Applied Engineering Mathematics I (F) PHYSICS 229A Computational Methods (F)
Areas of Emphasis	One course from **each** of the two primary Areas of Emphasis: • Water (4 units) • Energy, Air Quality & Climate (4 units)	*See below under:* **'Core Courses by Areas of Emphasis'**

Elective Courses: Additional course requirements can be fulfilled by using any of the courses below. Other courses can be included with the prior approval of the Environment & Energy Focus Area Advisor, Professor Russell Detwiler: detwiler@uci.edu
For non-CEE courses, please check individual Department schedules to confirm course offerings.

Core Courses by Areas of Emphasis ***(the following courses can all be used as electives as well)***

Water:	**Energy, Air Quality & Climate:** Please check individual Department schedules to confirm course offerings.
ENGRCEE 260 Desalination (*) ENGRCEE 262 Environmental Chemistry (*) ENGRCEE 263 Adv. Biological Treatment Processes (*) ENGRCEE 265 Physical-Chemical Treatment Processes (W) ENGRCEE 267 Sci & Eng of Wildfires (S) ENGRCEE 268 Intro Env. Fluid Mechanics & Turbulence (W) ENGRCEE 269 Beach Dynamics (*) ENGRCEE 270 Flood Risk & Modeling (*) ENGRCEE 271 Flow in Unsaturated Porous Media (*) ENGRCEE 272 Groundwater Hydrology (F) ENGRCEE 273 Watershed Modeling (W) ENGRCEE 275 Stochastic Methods in Hydrology (W) ENGRCEE 276 Hydrology (F) ENGRCEE 279 Environmental Transport Modeling (S) ENGRCEE 289 Analysis of Hydrologic Systems (S) ENGRCEE 290A Machine, Model, and Statistical Learning I (*) ENGRCEE 290B Machine, Model, and Statistical Learning II(F) ENGRCEE 291 Hydrologic Remote Sensing (*) ENGRCEE 292 Wavelets in Hydrology, Eng, & Geoscience (F) ENGRCEE 298 Spec Topics: Riv Net & Erth Srf Proc (S)	ENGRCEE 264 Carbon & Energy Footprint Analysis (S) ENGRCEE 274 Climate Data Analysis (*) ENGRCEE 298 Env Impacts of Built Env (F) ENGRCEE 298 Environmental Biotechnology (F) EARTHSS 240 Atmospheric Chemistry and Physics EARTHSS 242 Advanced Atmospheric Chemistry ENGRMAE 210 Combustion ENGRMAE 214A Fuel Cell Fundamentals & Tech. ENGRMAE 215 Advanced Combustion Technology ENGRMAE 218 Sustainable Energy Systems ENGRMAE 260 Current Issues Related to Tropospheric and Stratospheric Processes Key: (F) Fall Quarter; (W): Winter Quarter; (S): Spring Quarter; (*): Not offered in 2025/2026. Other Approved Elective Courses: ENGRCEE 214 GIS for CEE (F)

The following can **ONLY** be included with the **prior** approval of the Environment & Energy Focus Area Advisor, Professor Russell Detwiler: detwiler@uci.edu

- Upper-division undergraduate courses and/or non-CEE graduate courses (outside of those listed above). Include a description of the course in your email request to Professor Russell Detwiler.
- MS Thesis Research units can be extended to 16 units. Email your request to Professor Russell Detwiler.