DEGREE PROGRAMS
The Department of Civil and Materials Engineering has programs of study in environmental engineering leading to the Master of Science and Doctor of Philosophy in Engineering degrees. The curriculum includes four core courses required of every student and a variety of fundamental and applied design electives in the fields of water and wastewater treatment, waste management, air quality, and water resources.

Masters degrees require 36 credit hours. For thesis option, this typically comprises 6 courses (three at 500-level) plus 12 thesis credits. Ph.D. students are required to take 5 additional courses and thesis credits. Courses are offered in the late afternoon/evening to accommodate working professionals in the Chicago area.

CURRICULUM
Environmental Engineering core courses:
1. CEMM 420 Environmental Analysis Laboratory
2. CEMM 506 Physical Chemical Principles
3. CEMM 521 Environmental Microbiology
4. Either CEMM 421 Water Treatment Design, CEMM 422 Wastewater Treatment Design or CEMM 428 Groundwater Hydrology and Contaminant Transport Modeling
5. CEMM 5XX Lake and Watershed Management

The following electives are offered (all are 4 credits unless otherwise noted):

FUNDAMENTAL PRINCIPLES
- CEMM 415 Environmental Geotechnology
- CEMM 506 Physical Chemical Principles
- CEMM 521 Environmental Microbiology
- CEMM 523 Environmental Organic Chemistry (3 credits)
- CEMM 524 Water Chemistry (3 credits)
- CEMM 594 Biogeochemistry Seminar (1 credit)

WATER AND WASTEWATER TREATMENT
- CEMM 420 Environmental Analysis Laboratory
- CEMM 421 Water Treatment Design
- CEMM 422 Wastewater Treatment Design
- CEMM 525 Bioremediation Design

WATER AND WASTE MANAGEMENT
- CEMM 425 Environmental Remediation Engineering
- CEMM 516 Design of Landfills and Impoundments
- CEMM 518 Pollution Prevention Engineering
- CEMM 5XX Lake and Watershed Management

AIR QUALITY
- CEMM 419 Air Quality Management I (3 credits)
- CEMM 526 Air Quality Management II (3 credits)

WATER RESOURCES
- CEMM 427 Engineering Hydrology
- CEMM 428 Groundwater Hydrology and Contaminant Transport Modeling
- CEMM 5XX Vadose Zone Hydrology
### Tentative Course Offerings 2003-2005

<table>
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<th>Fall 2005</th>
<th>Spring 2006</th>
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<tbody>
<tr>
<td>CEMM 415 Environmental Geotechnology</td>
<td>CEMM 516 Landfills and Impoundments</td>
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<tr>
<td>CEMM 422 Wastewater Treatment Design</td>
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<tr>
<td>CEMM 428 GW Contaminant Transport</td>
<td>CEMM 421 Water Treatment Design</td>
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<td>CEMM 420 Env Analysis Lab</td>
<td>CEMM 518 Pollution Prevention</td>
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<tr>
<td>CEMM 422 Wastewater Treatment Design</td>
<td>CEMM 524 Water Chemistry</td>
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In addition, the following courses are offered frequently:
- EOHS 5XX Risk Assessment
- CEMM 419 Air Quality Management I
- CEMM 526 Air Quality Management II

### RESEARCH

The University of Illinois-Chicago is a Research I University with over **$250 million in annual research expenditures**. The research facilities in Environmental Engineering at UIC are state of the art. We have recently finished a $1 million remodeling of the laboratories and they are outfitted with the latest research instrumentation. All students doing a thesis option are required to perform research in their chosen area under the supervision of their faculty advisor. Research programs of the faculty are outlined in their respective webpages.

### FINANCIAL ASSISTANCE

Financial support from traineeships and research assistantships are available. Full time graduate students are typically supported by external grants by environmental engineering faculty.

### FACULTY

Christophe Darnault, Ph.D. Assistant professor: Hydrology and Water Resources Engineering, Watershed Management, Agriculture and Biotechnology

Amid Khodadoust, Ph.D. Assistant professor: Water treatment, physical/chemical processes for hazardous waste treatment and remediation

Krishna Reddy, Ph.D., P.E. Associate Professor: Geoenvironmental engineering, remediation and landfill design

Karl Rockne, Ph.D., P.E. Assistant professor: Applied microbiology, wastewater treatment, pollutant fate in air, sediment, and water

Thomas Theis, Ph.D., P.E. Professor and Director, Institute for Environmental Science and Policy: Aquatic chemistry, environmental systems analysis, life cycle analysis

For further information, please see:
- [www.uic.edu/depts/cme/people/faculty/cdarnault](http://www.uic.edu/depts/cme/people/faculty/cdarnault)
- [www.uic.edu/depts/cme/people/faculty/akhodado](http://www.uic.edu/depts/cme/people/faculty/akhodado)
- [www.uic.edu/depts/cme/people/faculty/kreddy](http://www.uic.edu/depts/cme/people/faculty/kreddy)
- [www.uic.edu/depts/cme/people/faculty/krockne](http://www.uic.edu/depts/cme/people/faculty/krockne)
- [www.uic.edu/depts/cme/people/faculty/theist](http://www.uic.edu/depts/cme/people/faculty/theist)