Master of Science in Environmental & Water Resources Engineering

Civil, Environmental, and Architectural Engineering

Civil engineering is the oldest engineering program at KU. The first graduating class in 1873 included a civil engineer. Civil engineers design roads, water systems, bridges, dams, and other structures, providing nearly all the infrastructure needed by modern society. Civil engineers were the first engineers to address environmental issues and are the lead engineering discipline in treating water supplies to protect public health. In recognition of the significant issues concerning the environment, the department name was changed in 1992 to civil and environmental engineering.

The environmental and water resources engineering (EWRE) and environmental and water resources science (EWRS) graduate programs were created in 2019 by combining existing programs in environmental engineering and science and water resources engineering. These programs dated back to the founding of the Environmental Health Sciences program in 1961. Environmental and water resources engineers and scientists address the safety and supply of water, the interactions of water and the hydrological cycle with the environment, and the use of physical, chemical, and biological processes to solve environmental and water problems.

Architectural engineering combines study in architecture with engineering science and design courses in electrical, mechanical, construction, and structures to prepare students for building design projects of all kinds. Architectural engineering dates to 1913 at KU, and the first female graduate of the School of Engineering was an architectural engineering major. Architectural engineering merged with civil and environmental engineering in 2001 to form the the Department of Civil, Environmental, and Architectural Engineering (CEAE).

Mission

CEAE's mission is to provide students with an outstanding engineering education and be a leader in research and service. This mission is supported by the following 3 goals:

1. Prepare students for productive engineering careers.
2. Maintain and grow strong research programs.
3. Serve the profession.

Standard Admission Requirements for all Graduate Programs

- All applicants must meet the requirements outlined in the Admission to Graduate Study (https://policy.ku.edu/graduate-studies/admission-to-graduate-study/) policy.
- Bachelor's degree: A copy of official transcripts showing proof of a bachelor's degree (and any post-bachelor's coursework or degrees) from a regionally accredited institution, or a foreign university with equivalent bachelor's degree requirements is required.
- English proficiency: Proof of English proficiency (https://gradapply.ku.edu/english-requirements/) for non-native or non-native-like English speakers is required. There are two bands of English proficiency, including Admission and Full proficiency. For applicants to online programs, Full proficiency is required.

Additional Graduate Program Admission Requirements

The department admits for all semesters. Students may pursue degrees full-time or part-time. Students with an accredited undergraduate degree in engineering are eligible for admission to the M.S. degree program in environmental & water resources engineering. Students with degrees in chemistry, biological sciences, geology or other related natural or life sciences are also eligible for admission but may be required to complete pre-requisite courses in addition to those that count for graduate credit. Applicants are expected to have undergraduate grade-point average of 3.0 or higher on a 4.0 scale for admission to a master's program.

Graduate Record Examination (GRE) scores are not required for admission. The Test of English as a Foreign Language is required for international applicants. Applicants should take the English Proficiency Tests as early as possible to expedite the admission process.

Graduate applications should be submitted online (http://graduate.ku.edu/).

APPLICATION DEADLINES

Fall Admission: December 2 (priority deadline). August 1 (final deadline).

Spring Admission: October 1 (priority deadline). December 16 (final deadline).

Summer Admission: December 2 (priority deadline). May 19 (final deadline).

The priority deadlines are for full consideration for fellowships, scholarships and research/teaching assistantships. Applications submitted after these deadlines will be considered for funding on a case-by-case basis.

MINIMUM ENGLISH PROFICIENCY REQUIREMENTS

Visit the full English Proficiency Requirements for Admission to Graduate study at: http://policy.ku.edu/graduate-studies/english-proficiency-international-students (http://policy.ku.edu/graduate-studies/english-proficiency-international-students/).

International students and students who indicated English as a second language are required to show proof of English proficiency for admission purposes and must check-in at the Applied English Center (https://aec.ku.edu/) (AEC) upon arrival on campus for orientation. This process serves to confirm each student's level of English proficiency and determine whether English courses will be included as a requirement of the student's academic program. Note: Students who demonstrate English proficiency ***at the waiver level*** are not required to check in at the AEC (see eligibility requirements on the Graduate Studies website (https://graduate.ku.edu/english-proficiency-requirements/)).

APPLICATION FEES

Domestic: $65

International: $85

VISITING US

The graduate program staff is happy to work with all prospective students in determining the fit between the student and the program. We feel that visiting our campus in Lawrence is a very important step. In order to facilitate your visit to KU, there are two main options:

The first, and most preferred, option entails simply applying for admission to the program. All prospective students are welcome to attend our Graduate Open House in mid-October or mid-March. Eligible admitted students may be invited to participate in Campus Visit Days in February (prior to the fall semester of your intended matriculation). These organized visitation opportunities will allow you to gather a great deal of first-hand information which we hope will help you in making a final decision about whether to attend KU.

The second option is making arrangements to visit us on your own, outside of organized events. With early notification, we will do our best to work with you to provide information and schedule appointments with faculty when possible. Please contact us if you feel that this is the best option for you.

CONTACT INFORMATION

Please contact the CEAE Graduate Program Coordinator at gradceae@ku.edu or (785) 864-3826, to schedule a visit or with questions about the application process.

The University of Kansas
Department of Civil, Environmental, and Architectural Engineering
Graduate Administrative Assistant
Learned Hall
1530 W. 15th St., Room 2150
Lawrence, KS 66045

Master of Science in Environmental & Water Resources Engineering Degree Requirements

Code	Title	Hours
Coursework Requirements		
The M.S. degree requires a minimum of 24 credit hours of approved graduate-level coursework.		24
M.S. students complete a graduate Plan of Study with their faculty advisor tailored to the student's interests. Graduate courses offered by the CEAE department are identified by the prefixes CE, ARCE, and CMGT and are numbered 700 and above.		
No more than 9 hours of courses from other engineering departments may be applied toward the M.S. degree without approval of the CEAE Graduate Studies Committee. No more than 6 hours of courses numbered between 500 and 699 (of which only 3 hours may be within the CEAE department) may be applied toward the M.S. degree without approval of the CEAE Graduate Studies Committee.		
Completion Option		
M.S. candidates select one of the following completion options.		6
Thesis: CE 899 (6 hours)		
OR		
Special Problems Investigation: CE 890 (3 hours). Students select additional graduate engineering elective courses with their faculty advisor to fulfill the 30 credit hour requirement.		
OR		
Coursework Only: Students select graduate engineering elective courses with their faculty advisor to fulfill the 30 credit hour requirement.		
Total Hours		**30**

Plan of Study

All graduate students must have an approved Plan of Study (https://engrgradplan.ku.edu/) on file by the beginning of their second semester of study that indicates the degree program track they intend to complete. At the end of the second semester, students will submit a Plan of Study that needs to be approved by the CEAE Graduate Committee. Any exemptions or substitutions to the student's Plan of Study must be approved by the faculty advisor and the CEAE Graduate Director.

No more than 4 hours of special-problem credit may be applied toward the degree without approval of the department director of graduate studies. Students may not take individual courses for credit if they have completed an equivalent course previously at the undergraduate level.

Completion Options

Candidates for the Master of Science degrees have 3 options. **Option A** requires 30 credit hours including a thesis of 6 to 10 hours and a final oral examination including defense of the thesis. **Option B** requires 30 hours including a 3- or 4-hour special problem investigation in the specialization and a final oral examination. Option B does not require a thesis. **Option C** requires 30 hours of coursework. It does not require a thesis, special problem investigation, or final oral examination.

Sample Degree Plan

Below are sample completion plans for students in the M.S. program based on the completion option. The sample semester enrollments below are not reflective of all possible paths to the M.S. degree.

M.S. in Environmental & Water Resources Engineering - Option A, Thesis

Year 1

Fall	Hours	Spring	Hours
CEAE Graduate Course #1	3	CEAE Graduate Course #4	3
CEAE Graduate Course #2	3	CEAE Graduate Course #5	3
CEAE Graduate Course #3	3	CEAE Graduate Course #6	3
	9		**9**

Year 2

Fall	Hours	Spring	Hours
CEAE Graduate Course #7	3	CE 899 (Thesis)	6
CEAE Graduate Course #8	3		
	6		**6**

Total Hours 30

M.S. in Environmental & Water Resources Engineering - Option B, Project

Year 1

Fall	Hours	Spring	Hours
CEAE Graduate Course #1	3	CEAE Graduate Course #4	3
CEAE Graduate Course #2	3	CEAE Graduate Course #5	3

CEAE Graduate Course #3	3	CEAE Graduate Course #6	3
	9		**9**

Year 2

Fall	Hours	Spring	Hours
CEAE Graduate Course #7	3	CE 890 (Project)	3
CEAE Graduate Course #8	3	CEAE Graduate Course #9	3
	6		**6**

Total Hours 30

M.S. in Environmental & Water Resources Engineering - Option C, Coursework Only

Year 1

Fall	Hours	Spring	Hours
CEAE Graduate Course #1	3	CEAE Graduate Course #4	3
CEAE Graduate Course #2	3	CEAE Graduate Course #5	3
CEAE Graduate Course #3	3	CEAE Graduate Course #6	3
	9		**9**

Year 2

Fall	Hours	Spring	Hours
CEAE Graduate Course #7	3	CEAE Graduate Course #9	3
CEAE Graduate Course #8	3	CEAE Graduate Course #10	3
	6		**6**

Total Hours 30

At the completion of this program, students will be able to:

- Acquire and integrate new knowledge as needed, using appropriate learning strategies.
- Solve engineering problems by applying fundamental principles of mathematics, science, and engineering and relevant technologies.
- Effectively communicate advanced environmental & water resources engineering concepts.