Master of Science in Architectural, Civil, and Environmental Engineering and Environmental Science

Civil, Environmental, and Architectural Engineering

Civil Engineering (CE) 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.

Architectural Engineering (ARCE) combines study in architecture with engineering science and design courses in structures, illumination, power, mechanical energy, and construction to prepare students for building design projects of all kinds. KU's B.S. degree program in architectural engineering was established in 1912. 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.

Graduate Admission

The department admits for all semesters. Students may pursue degrees full-time or part-time. An ABET-accredited baccalaureate degree in engineering is required for admission to the M.S. degree programs in civil engineering, environmental engineering, and architectural engineering. Applicants with baccalaureate degrees in engineering are expected to have undergraduate grade-point average of 3.0 or higher on a 4.0 scale for regular admission to a master’s program. Those with slightly lower grade-point average may be admitted on a provisional status. Graduate Record Examination (GRE) scores are required and are used in the evaluation process, but minimum scores for admission have not been established. The GRE engineering and other subject examinations are not required. The Test of English as a Foreign Language (TOEFL) is required for international applicants. Applicants should take the GRE and TOEFL examinations as early as possible to meet the application deadlines and expedite the admission process.

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

Application Deadlines - Domestic

Fall Admission: July 31
Spring Admission: December 30
Summer Admission: May 15

Application Deadlines - International

Fall Admission: May 15
Spring Admission: October 15

Priority Application Deadlines:

Fall Admission: December 15
Spring Admission: September 15

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

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 (http://www.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 or who have earned a degree from one of the specified English-speaking countries 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 October and some highly qualified 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 time 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 M.S. degree in civil engineering does not require a thesis. It requires 30 credit hours including a thesis of 6 hours (6 to 10 hours for the environmental degrees) and a final oral examination including defense of the thesis. Courses for any of the M.S. degrees must be listed on a Plan of Study approved by the student’s major professor, examining committee, and the departmental graduate advisor. All graduate students must have an approved Plan of Study by the beginning of their second semester of study. No more than 9 hours of courses from other departments or more than 6 hours of courses numbered below 700 (of which only 3 hours may be within the department) may be applied toward any of the M.S. degrees without approval of the departmental graduate studies committee. No more than 4 hours of special-problem credit may be applied toward any of the master’s degrees without approval of the department’s graduate advisor.

M.S. Degree Requirements

Civil Engineering

Candidates for the Master of Science degrees have 2 options. **Option A** requires 30 credit hours including a thesis of 6 hours (6 to 10 hours for the environmental degrees) 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. It does not require a thesis.

The M.S. degree in civil engineering requires a minimum of 9 hours of graduate-level courses in one of the following seven areas: structural engineering, environmental engineering, water resources engineering, geotechnical engineering, transportation engineering, construction engineering/management, and engineering mechanics.

In addition, a minimum of 6 hours of graduate-level work is required in any of the other above departmental areas.

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Environmental Engineering

Candidates for the Master of Science degrees have 2 options. **Option A** requires 30 credit hours including a thesis of 6 hours (6 to 10 hours for the environmental degrees) 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. It does not require a thesis.

The M.S. degree in environmental engineering requires an understanding of chemical, biological, and physical principles of environmental engineering processes, i.e., satisfactory completion of CE 770, CE 772, CE 773, and CE 774 or equivalents. Substitutions require the approval of both the student’s committee and the graduate advisor.

Courses for any of the M.S. degrees must be listed on a Plan of Study and approved by the student’s major professor, examining committee, and the departmental graduate advisor. All graduate students must have an approved Plan of Study by the beginning of their second semester of study. No more than 9 hours of courses from other departments or more than 6 hours of courses numbered below 700 (of which only 3 hours may be within the department) may be applied toward any of the M.S. degrees without approval of the departmental graduate studies committee. No more than 4 hours of special-problem credit may be applied toward any of the master’s degrees without approval of the department’s graduate advisor.

Architectural Engineering

Candidates for the Master of Science degrees have 2 options. **Option A** requires 30 credit hours including a thesis of 6 hours (6 to 10 hours for the environmental degrees) 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. It does not require a thesis.

The M.S. degree in architectural engineering is intentionally flexible in its course requirements because graduate study in architectural engineering requires specialization in one of many areas of professional practice. Each student works with his or her committee to select appropriate graduate courses that support the research project and the student’s career goals. Students can pursue specializations in, for example, building mechanical, energy, electrical, lighting, or structural systems, or construction engineering. Emerging or hybrid specializations such as sustainability, acoustics, or fire protection are also encouraged.

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the departmental graduate advisor. All graduate students must have an approved Plan of Study (https://gradplan.engr.ku.edu/accounts/login/?next=) by the beginning of their second semester of study. No more than 9 hours of courses from other departments or more than 6 hours of courses numbered below 700 (of which only 3 hours may be within the department) may be applied toward any of the M.S. degrees without approval of the departmental graduate studies committee. No more than 4 hours of special-problem credit may be applied toward any of the master’s degrees without approval of the department’s graduate advisor.