

ARCHITECTURE AND ENVIRONMENTAL DESIGN - M.S.

College of Architecture and Environmental Design
www.kent.edu/caed

About This Program

Seeking career expertise in the built environment? Our research degree (STEM accredited) can help you forge a powerful career in architecture and the environmental design fields by combining design and science. Working closely with national leading faculty, students immerse themselves in cutting-edge topics such as A.I., robotics, bioclimatics, living architecture, kinetics or other subjects. Join us in making new knowledge, discoveries and innovations. Read more...

Contact Information

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- Connect with an Admissions Counselor: U.S. Student | International Student

Program Delivery

- **Delivery:**
 - In person
- **Location:**
 - Kent Campus

Examples of Possible Careers and Salaries*

Architectural and engineering managers

- 2.6% slower than the average
- 198,100 number of jobs
- \$149,530 potential earnings

Architecture teachers, postsecondary

- 5.1% faster than the average
- 8,500 number of jobs
- \$90,880 potential earnings

Calibration technologists and technicians and engineering technologists and technicians, except drafters, all other

- 2.1% slower than the average
- 91,600 number of jobs
- \$64,190 potential earnings

* Source of occupation titles and labor data comes from the U.S. Bureau of Labor Statistics' Occupational Outlook Handbook. Data comprises projected percent change in employment over the next 10 years; nation-wide employment numbers; and the yearly median wage at

which half of the workers in the occupation earned more than that amount and half earned less.

For more information about graduate admissions, visit the graduate admission website. For more information on international admissions, visit the international admission website.

Admission Requirements

- Bachelor's degree in a professional or pre-professional environmental design program¹
- Minimum 3.000 undergraduate GPA on a 4.000-point scale
- Official transcript(s)
- Résumé
- Goal statement (two pages) that includes an outline of a proposed study program
- Portfolio for design and research work
- Three letters of recommendation
- English language proficiency - all international students must provide proof of English language proficiency (unless they meet specific exceptions to waive) by earning one of the following:²
 - Minimum 79 TOEFL iBT score
 - Minimum 6.5 IELTS score
 - Minimum 58 PTE score
 - Minimum 110 DET score

¹ Conditional admission may be offered to applicants with undergraduate and graduate degrees in related disciplines.

² International applicants who do not meet the above test scores will not be considered for admission.

Application Deadlines

- **Fall Semester**
 - Application deadline: February 1

All application materials (including applicable fee, transcripts, recommendation letters, etc.) submitted after this deadline will be considered on a space-available basis.

Program Requirements

Major Requirements

Code	Title	Credit Hours
Major Requirements		
AED 60922	METHODS OF INQUIRY IN ARCHITECTURAL STUDIES	2
AED 60923	EMPIRICAL RESEARCH IN ENVIRONMENTAL DESIGN	1
AED 60930	APPLIED RESEARCH METHODS IN ARCHITECTURE AND ENVIRONMENTAL DESIGN	3
AED 66098	TOPICAL IMMERSION	3
AED 66198	ADVANCED PROPOSAL WRITING	2
ARCH 60301	THEORIES OF ARCHITECTURE	3
Advisor-Approved Electives (50000 or 60000 level) ¹		15

Culminating Requirement

AED 66199	THESIS I	6
Minimum Total Credit Hours:		35

¹ Students either having earned or pursuing concurrently another master's degree with related program content may have maximum 5 credit hours of electives waived provided the related credit content is determined to be relevant to the thesis topic and is approved by the student's thesis advisor and program committee. **Upon approval, these students may graduate with fewer than 35 credit hours but no fewer than 30 credit hours.**

Graduation Requirements

Minimum Major GPA	Minimum Overall GPA
-	3.000

- No more than one-half of a graduate student's coursework may be taken in 50000-level courses.
- Grades below C are not counted toward completion of requirements for the degree.

Program Learning Outcomes

Graduates of this program will be able to:

1. Investigate new relationships within the built environment.
2. Gather, collect and analyze data.
3. Co-author technical and scientific reports, summaries, papers, abstracts, briefs and/or the development of products and technologies that may lead to patents and intellectual property.

Roadmap

This roadmap is a recommended semester-by-semester plan of study for this major. However, courses designated as critical (!) must be completed in the semester listed to ensure a timely graduation.

Semester One		Credits
AED 60922	METHODS OF INQUIRY IN ARCHITECTURAL STUDIES	2
AED 60923	EMPIRICAL RESEARCH IN ENVIRONMENTAL DESIGN	1
AED 66098	TOPICAL IMMERSION	3
ARCH 60301	THEORIES OF ARCHITECTURE	3
Credit Hours		9
Semester Two		
AED 60930	APPLIED RESEARCH METHODS IN ARCHITECTURE AND ENVIRONMENTAL DESIGN	3
AED 66198	ADVANCED PROPOSAL WRITING	2
Elective (50000 or 60000 level)		3
Credit Hours		8
Semester Three		
AED 66199	THESIS I	3
Electives (50000 or 60000 level)		6
Credit Hours		9
Semester Four		
AED 66199	THESIS I	3
Electives (50000 or 60000 level)		6
Credit Hours		9
Minimum Total Credit Hours:		35

Full Description

The Master of Science degree in Architecture and Environmental Design is a research-intensive program with one-year full residency requirement. The program is best suited for individuals interested in pursuing a specialization in the built environment. The program covers cross-cutting themes in sustainable buildings, smart systems and healthy settings.

Students in the M.S. degree have the opportunity to pursue research in the following areas:

- Living architecture: Investigates vegetative integration upon and within buildings and structures in order to make cities more ecologically productive. Students master the conceptualization, assessment and examination of vegetative roofs, walls and related phytostructures for ecological service delivery through modeling and in-lab or field testing settings.
- Bioclimatic architecture: Explores thermal comfort, energy conservation and building systems integration for sustainable design and human experience. Research in this area emphasizes computational simulation, physical modeling of natural phenomena, field/lab experiments and building information management.
- Structural resilience: Investigates metaheuristic design principles for naturally efficient, durable, aesthetic and adaptable structural systems; performances of sustainable construction materials; and resilience of synergistically responding infrastructures.
- Creative robotics: Revisits and explores the potential of cutting-edge technologies such as robotics, physical and digital computation; interaction and game design; X-R (augmented, virtual and mixed realities); app development; and UI-UX design as possible design mediums. Students work at the intersection of architecture, industrial design, robotics, computer science and media arts, developing applied design-research skills in response to contemporary design issues and through the lens of technology.
- Kinetic systems: Investigates temporary (interactive) structures, specifically their typological, programmatic and material effects. Research includes the study of dynamic structural patterns and the role they play in the configuration of variable and/or flexible surfaces and enclosures.

The program may be taken as a dual degree with the Master of Architecture degree.