



school of sustainable engineering and the built environment

m.s., m.s.e., ph.d. programs

degree programs

The School of Sustainable Engineering and the Built Environment has more than 80 Ph.D. students and more than 140 M.S./M.S.E students in its programs. Over 75 percent of these students are in the civil engineering program.

civil, environmental and sustainable engineering

designing solutions in natural and urban environments

Our civil engineering program emphasizes sustainability as an integrated approach to engineering that focuses on the long-lasting improvement of the human condition.

Our faculty are actively engaged in many local, national and international research efforts that have powerful impacts in economic and environmental development. As a graduate student, you will choose a specialty in one of our areas of focus: environmental engineering, geotechnical engineering, hydrosystems engineering, structural engineering, sustainability engineering or transportation engineering.

If you would like to pursue a practice-oriented career, we offer a non-thesis master's (M.S.E.) degree program. If you are interested in a career with an advanced technology firm in research and development or in teaching, we offer master's and doctoral degree programs.

construction management

we build builders

The construction management program at ASU began over 50 years ago to serve the construction industry of Arizona and the Southwest. In addition to being part of a well-regarded degree program, you will benefit from our established ties to industry and a strong alumni network.

We are working in alternative project delivery methods, front-end planning, asset management, cleanroom construction, computer applications in construction, concrete construction, trenchless construction methods, performance information procurement systems, productivity, safety and risk and sustainable development.

Students in the master's (M.S.) and doctoral (Ph.D.) degree programs choose a concentration in either construction management or facility management.

construction engineering

integrating design and construction practice

Our multidisciplinary program in construction engineering—only the third such program in the Southwest and one of about 20 worldwide—combines the design principles of civil engineering with the business knowledge of construction management, preparing you for a career working at the interface of design and construction. ASU is an urban-serving institution in a major metropolitan area, providing you with access to ongoing construction projects in the city.

Your master of science in engineering graduate studies will encompass geotechnical engineering, structural engineering, transportation engineering and construction engineering and management-related topics. It is a degree program that truly combines theory and practice to solve real-world infrastructure problems.

The degree program will also help you meet new licensure and professional practice requirements, such as those recommended by the American Society of Civil Engineers.



why asu?

research

Research opportunities are available in a broad spectrum of subjects encompassing traditional as well as new specialties. Our faculty are engaged in interdisciplinary research both internally and through joint faculty appointments with ASU's Global Institute of Sustainability and the School of Earth and Space Exploration.

centers and consortia

Our research centers include the Water and Environmental Technologies (WET) Center; the Center for Earth Systems Engineering and Management (CESEM); the Center for Environmental Biotechnology (CEB); the Center for Sustainable Materials and Renewable Technology (SMART); the Performance Based Studies Research Group (PBSRG); and the Construction Research and Education for Advanced Technology (CREATE).

industry connections

Our metropolitan location and strong industrial and alumni support network offer our students many opportunities for both research and connections to industry. Students have the opportunity to participate in industry mixers, career fairs and student organizations to help build professional networks. Additionally, the Fulton Schools of Engineering has its own Career Center which connects employers with engineering students for full-time job opportunities and internships.



ssebe.engineering.asu.edu



student profile



Kirk Vance

Concrete is the most widely used material in building infrastructure and its use is expected to increase. Production of cement—the binding component in concrete—is one of the largest contributors to global greenhouse gas emissions, contributing nearly eight percent of global CO₂ emissions each year.

Kirk Vance, a doctoral student pursuing a degree in civil engineering with a focus on structural engineering, is researching cement replacement materials that are more sustainable and economical.

His work focuses on limestone, an abundant, naturally occurring material, along with fly ash and metakaolin.

Vance spent 10 years in industry before returning to pursue his Ph.D. at ASU.

He was attracted to the project, an NSF CAREER award led by Associate Professor Narayanan Neithalath, because, “it is valuable research and can have an impact in the near term.”





addressing critical infrastructure needs in an environmentally sound manner

We are rewriting the way educational programs incorporate sustainable engineering planning, design and construction processes.

Our unique blend of civil and environmental, construction engineering and construction management programs—coupled with a focus on sustainable engineering—enables us to train students who can impact the entire life cycle of the built environment from planning to design to construction.

Pursuing an advanced degree with us, you can:

- analyze complex urban systems that involve quantification of risk and uncertainty in engineering design and construction
- develop green technologies from novel materials, expand biotechnological approaches to carbon and nitrogen cycle management and redesign the disassembly of urban infrastructure
- apply sustainable practices in all areas of urban infrastructure through partnerships with industry and municipal governments—water resources and treatment, geotechnical management, transportation materials and analysis of transportation systems, novel composite materials, green building techniques, building information modeling and computational approaches to design



how to apply

For more information on important deadlines, the application process and other frequently asked questions, visit:

civil, environmental and sustainable engineering

<http://engineering.asu.edu/graduate/ces/admissions>

construction engineering and construction management

<http://engineering.asu.edu/graduate/con/admissions>

contact us

Graduate Degree Programs

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