GRADUATE CONSTRUCTION ENGINEERING PROGRAM

Master of Science (MSc) in Construction Engineering
Master of Engineering (MEng) in Construction Engineering
The American University in Cairo (AUC) was founded in 1919. It is an independent, nonprofit institution of higher education. AUC offers undergraduate and graduate programs in a wide range of disciplines and enrolls more than 5,000 degree-seeking students, with nearly 1,100 of them at the graduate level.

AUC is incorporated in Washington, D.C., and is fully accredited in the United States by the Commission on Higher Education of the Middle States Association of Colleges and Schools. In Egypt, AUC’s degrees are equivalent to those awarded by the Egyptian national universities.

MISSION
The mission of this graduate program is to provide a solid foundation and high quality educational opportunities that prepare students for advanced academic, research and professional careers in construction engineering. This enables graduates of this program to advance and broaden their technical knowledge and allows them to enhance their career opportunities in construction management, systems and structural engineering, construction materials and desert building technology.

REQUIREMENTS FOR ADMISSION
To receive full admission to the graduate program in construction engineering, a candidate must have a bachelor’s degree in civil or architectural engineering, with an overall GPA of 2.75, “good” and a major GPA of 3.0. Provisional admission may be granted to those not qualifying for full admission but have additional attributes that give them high potential for success.

ACADEMIC OFFERINGS
Master of Science (MSc) in Construction Engineering
Master of Engineering (MEng) in Construction Engineering

MASTER OF SCIENCE IN CONSTRUCTION ENGINEERING
The Master of Science program in construction engineering offers high quality education that prepares students for academic, research and professional careers.

PROGRAM REQUIREMENTS
Courses (24 credit hours)
A minimum of eight courses (24 credit hours) are required. The courses are selected from the following categories:
1. Core Courses (6 credit hours)
2. Concentration Courses (12 credit hours)
3. Elective Courses (6 credit hours)

Thesis (minimum 9 credit hours)
Each student must submit a thesis topic that has been approved by a faculty supervisor, normally after acquiring 12 credit hours of course work.
MASTER OF ENGINEERING IN CONSTRUCTION ENGINEERING
The Master of Engineering in construction engineering is a non-thesis option that prepares graduate students for higher-level professional practice in local and international markets, whether in consulting practice, industry or government. It is intended for construction engineers who wish to master the practice in their field of specialty. This degree requires the completion of 33 credit hours of courses.

Courses (33 credit hours)
Course work for the Master of Engineering degree requires the completion of a minimum of 33 credit hours as follows:
I- Construction Engineering Core (21 credit hours)
II- Elective Courses (12 credit hours)

RESEARCH IN CONSTRUCTION ENGINEERING AT AUC
Construction Management and Technology
Selection and adoption of appropriate construction technology, quality improvement of construction details and assembly, resource utilization in construction, financial management for construction firms and projects, project management and cost control

Structural Engineering and Construction Materials
Behavior and retrofitting of masonry structures, applications of ferrocement concrete, finite element analysis of concrete structures, composite steel-concrete structures. Use of innovative materials in construction applications, as well as strengthening and repair of structures. Behavior and mechanics of construction materials and use of waste materials and by-products in construction

Public Works Engineering
Silica fume concrete, pavement system and design, rubber expanded asphalt concrete, durability of air entrained concrete, soil plasticity. Use of innovative materials and industrial by-products in construction. Analysis and optimization of water distribution and wastewater collection sewerage

Integrated Desert Building Technology
Conduct developmental studies covering the main aspects of efficient desert building technology, including architectural, materials, structural and construction aspects. In addition, energy, water and wastewater management issues are taken into consideration.
Strengths of the Construction Engineering Program

Outstanding Faculty: If your professional goal is to work with nationally and internationally renowned faculty with PhDs from reputable universities in the United States, Canada, Europe and Egypt, then you should consider joining the construction engineering master’s program at AUC. Their first-rate track record in research and scholarship, as well as their extensive local and international experience, will provide you with the most up-to-date graduate engineering education in the region.

First-Rate Curriculum: The construction engineering graduate program offers up-to-date and coherent courses covering both core and specialization areas. These courses emphasize recent developments, project work and extensive use of the latest computing and experimental technologies. The construction engineering graduate curriculum is closely related to its ABET-accredited undergraduate degree.

Advanced Research Facilities: You will have access to well-equipped advanced experimental and computational laboratories. The construction and architectural engineering department is well-equipped with modern experimental and computational facilities and laboratories. There are laboratories in the areas of soil mechanics and concrete. The laboratories are continually being upgraded to include the most recent equipment and software in their fields.

A Well-Established Reputable University: AUC is one of the most prestigious universities in Egypt and the region at large. In addition to a solid record of academic achievements, AUC has produced an impressive list of graduates who became effective leaders in society. The university has one of the most comprehensive libraries in the Middle East with its state-of-the-art information-access technologies, up-to-date computing facilities and well-equipped experimental research laboratories. AUC provides quality education from an American-based system entirely in the English language, thus preparing students for PhD programs in North America and Europe and for global engineering job opportunities.
GRADUATE CONSTRUCTION ENGINEERING PROGRAM

Construction Engineering Program faculty members

Mohamed Abd el Mofty
Professor
(PhD, University of Waterloo)

Mohamed N. Abou Zeid
Professor and Chair Department of Construction and Architecture Engineering
(PhD, University of Kansas)

A. Samer Ezzeldin
Professor
(PhD, Rutgers University)

Sherine El Baradei
Assistant Professor
(PhD, Cairo University)

Ezzat H. Fahmy
Professor and Associate Dean for Undergraduate Studies, School of Sciences & Engineering
(PhD, McMaster University)

Medhat A. Haroun
Professor & Dean SSE
(PhD, California Institute of Technology)

Osama Hosny
Associate Professor
(PhD, University of Missouri-Rolla)

Khaled Nassar
Associate Professor
(PhD, Virginia Tech)

Amr Hassanein
Associate Professor
(PhD, University of Illinois)

Emad Imam
Professor
(PhD, University of Windsor)

Safwan A. Khedr
Professor
(PhD, Ohio State University)

Sherif Safar
Associate Professor
(PhD, Iowa State University)

Ahmed Sherif
Associate Professor
(D. Arch., University of Michigan, Ann Arbor)

Edward H. Smith
Professor
(PhD, University of Michigan, Ann Arbor)
Financial Opportunities

University Fellowships which provide a tuition waiver and stipend

Laboratory Instruction Graduate Fellowships which provide a full or partial tuition waiver and a stipend against laboratory instruction work

Graduate Merit Fellowships which provide a full tuition waiver and stipend

Teaching and Research assistantships do not include tuition waivers, but offer stipends

Work-Study Program involves a 15 percent reduction in tuition against work of 120 hours per semester

Financial Aid is available to students who demonstrate financial need

Fellowships Without Stipend are offered to visiting graduate or postdoctoral scholars who wish to do research in Egypt and have a source of funding, but need an affiliation with AUC

Other Awards students may be able to obtain funding from a variety of outside sources

For more information on tuition, please visit the following link:
www.aucegypt.edu/academic/gradstudies/regpay/Pages/default.aspx#payment

Why Join AUC’s Construction Engineering Graduate Program?

• Gives students a competitive edge in the job market in Egypt and abroad
• Allows students to pursue a doctorate at universities in the United States or any other country
• Satisfies our students’ desire to learn, think and exchange information and opinions with others in a free academic atmosphere
• AUC has one of the best English-language libraries in the Middle East, equipped with state-of-the-art information-access technologies
• AUC also provides advanced computational facilities and Internet access
• AUC offers financial opportunities in the form of teaching and research fellowships, in addition to other awards

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