

Digital Construction Engineering and Management

Because tomorrow matters



Are you interested in leading the next generation of construction professionals? This unique program prepares you to manage the design, construction and operation of sustainable buildings and infrastructure systems using the latest digital technology, smart systems and tools. Find out how you could forge an exciting future as a construction engineer with a **Bachelor of Science in Digital Construction Engineering and Management** from AUS.

What is Digital Construction Engineering and Management?

Unique program. The Bachelor of Science in Digital Construction Engineering and Management (BSDCEM) program is offered by the Department of Civil Engineering. It is a newly introduced degree that offers the rigor of civil engineering problem-solving and design with construction management courses, coupled with knowledge of digital technology and smart systems applications. Students receive an innovative interdisciplinary education that enables them to embark on exciting careers in the new construction industry that is embracing digital technology and smart systems and tools such as building information modeling (BIM), artificial intelligence (AI), data analytics, smart cities and digital twins.

Unparalleled opportunities. The program offers students the distinctive opportunity to obtain a front-line mix of technology-based engineering tools and digital skills in the field of construction engineering, complemented by a management component. In a fast-moving world, this degree program has been developed with an entirely new and practical approach. While still covering the time-tested construction engineering and management processes, the curriculum incorporates a digital component. The digital aspect includes concepts of information technology, data analytics and artificial intelligence, all of which are relevant to the construction sector. Furthermore, students in the program will be able to develop essential skills related to leadership, teamwork, project administration and resource management, both in the real and virtual world.

Why Digital Construction Engineering and Management at AUS?

From outstanding faculty to world-class facilities, here is a snapshot of why students choose to study digital construction engineering and management with us.

Renowned faculty. Our faculty come from some of the world's best civil engineering schools, including University of California at Berkeley, University of Texas, Louisiana State University, University of Illinois at Urbana-Champaign, University of Cincinnati, Jawaharlal Nehru Technological University, Ohio State University, University of Southern California, KSU Manhattan, Queens University, Texas A&M, University of Wisconsin, Dalhousie University, University of Michigan and University of Nebraska.

State-of-the-art facilities. Our students sharpen their new-found skills and knowledge in our diverse range of labs, including our Asphalt and Highway Lab, Environmental Engineering Lab, Fluid Mechanics Lab, Geology and Rock Mechanics Sub-Surface Lab, Exploration and Earthquake Observatory Lab, Geotechnical Lab, GIS Lab, Structures and Construction Materials Lab, and Transportation Lab.

Opportunities beyond the classroom. Our students enjoy an active and diverse extracurricular experience, with more than 100 student clubs and 26 sports teams. Construction engineering students can involve themselves with the American Society of Civil Engineers (ASCE) AUS Student Chapter, Civil Engineering Honor Society (CEHS), Institution of Civil Engineers (ICE) and American Concrete Institute Chapter (ACI) AUS Student Chapter, among others.

In addition, our students can challenge themselves in a number of competitions, including the ASCE- ISG Regional AutoCAD Competition, ASCE Concrete Crushing Competition, ASCE Water Rocket Launcher Competition, Best Sustainability Action Project, Annual Wooden Bridge Competition, and many more.

Accredited programs. Our degree programs are recognized both in the UAE and USA.

- AUS is licensed and its programs are accredited by the Commission for Academic Accreditation of the UAE Ministry of Education's Higher Education Affairs Division.
- AUS is accredited in the USA by the Middle States Commission on Higher Education.

Broad curriculum. Our students can choose from a wide and diverse selection of required courses and electives, including:

Digital Construction

Sustainable Construction and Automation

Building Information Modeling (BIM)

Digital Construction Management

Management Systems for Construction

Construction Law in the Digital Age

Additive Manufacturing in Construction

Smart Urban Mobility

Smart Civil Infrastructure

Construction Safety

Artificial Intelligence and Data Science

Variety of scholarships and grants. Eligible students have access to a wide range of scholarships and other financial support, with approximately two-thirds of all AUS students benefitting.

Potential job positions. A Bachelor of Science in Digital Construction Engineering and Management degree provides its holders with career opportunities that vary widely across a range of fields in the construction industry. Potential job positions include construction engineer, construction manager, project manager, planning engineer, cost engineer, scheduler, site engineer, BIM engineer, BIM manager and BIM consultant.

A top choice among employers. Recent developments in the Middle East North Africa (MENA) region have increased the need for experts in the construction industry, especially graduates with a background in digital construction engineering and management. The tremendous rate of population growth in the region is accompanied by a concurrent demand for buildings and infrastructure of all sorts.

Many opportunities await our students upon graduation. Our graduates are potentially employed by many organizations, including:

AECOM Middle East

Mace Group

Parsons International

Jacobs

Amana Group

Mackenzie and Brown

Blake Anderson

Hill International

Egis

The Morganti Group

ARUP Gulf Ltd.

DAMAC Properties

Turner

Fast Contracting

CCIC

Emaar Development

WSP

Khatib and Alami

RTA Dubai

McDermott

China State Construction Company

Sharjah RTA

WS Atkins

Preparation for top graduate programs. Graduates of our College of Engineering have gone onto pursue master's and doctoral degrees at universities including University of Illinois at Urbana-Champaign, Iowa State University, Georgia Institute of Technology, University of California-Berkeley, University of California- Los Angeles, Texas A&M University, University of Wisconsin-Milwaukee, Syracuse University, University of Chicago, Queen's University, Middlesex University, Kingston University London, Technical University of Munich, University of Western Australia, University of Melbourne and many others.

International recognition. AUS has an impressive list of rankings to its name:

- Ranked **number one (tied) in the UAE and among the top 200 universities globally** for civil and structural engineering (QS World University Subject Rankings 2023)
- Graduates who have studied civil and structural engineering at AUS are the **top choice for employers in the UAE** (QS World University Subject Rankings 2023)
- Among the **top 10 Arab universities** every year for the past nine consecutive years (QS Arab Region University Rankings 2024)
- Among the **top 50 universities** in the world under the age of 50 years (QS World University Rankings 2021)
- Among the **top five universities** in the UAE and among the **top 600 globally** for engineering studies (THE World University Subject Rankings 2024)
- Among the **top five universities** globally with the highest percentage of international students (THE World University Rankings 2023)

Contact

Professor and Head, Department of Civil Engineering
Dr. Sameh M. El-Sayegh, +971 6 515 2941, selsayegh@aus.edu

Professor of Practice and Academic Advisor
Aqeel Ahmed, +971 6 515 2905, aqeelahmed@aus.edu

Senior Administrative Assistant
Annie Rose Regio, +971 6 515 4931, aregio@aus.edu

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