The School of Engineering provides students with a unique opportunity to experience American-style engineering education in one of the fastest growing cities in the world.
A message from the Dean

The School of Engineering at AUD has been at the forefront of engineering higher education in Dubai. We are located in one of the fastest growing cities in the world, thus providing our students with a dynamic learning environment that is unparalleled elsewhere in the region.

Since joining AUD as Dean of Engineering, my main goals have been to enhance the educational experience for our students, to support the faculty through a number of initiatives aimed at enriching their professional experience, and to partner with the region’s professional community with the objective of bridging the gap between academia and practice. We continue to build and equip our state-of-the-art laboratories and classroom facilities, to recruit faculty of the highest caliber, and to maintain accreditation at multiple levels for our undergraduate programs. We have initiated a field experience program for our students in collaboration with local and regional industry sponsors. Our students enjoy the unique benefits of international study tours and exchange programs in countries such as the USA, France, and Germany.

The diversity of our student body and faculty in terms of cultural and educational background has been a great asset toward fulfilling our mission and objectives.

Our faculty have set a number of short-term goals that include introduction of a master’s degree in construction management; facilities development for the newly established mechanical engineering department; positioning of the Infrastructure Sustainability and Assessment Center as an international repository for expertise in construction material durability; and the establishment of a number of competitive student scholarships in partnership with the industry. While our student enrollment is constantly on the rise, an aggressive student recruitment campaign is underway to attract the best and brightest to our School.

For more information about our programs, please feel free to visit us in person, or browse our website.

Alaa Ashmawy, Ph.D., P.E.
Dean, School of Engineering
Why Engineering at AUD?

Our School is committed to a professional yet personable rapport between students and faculty. This is what makes our programs unique and sets us apart from other institutions in the region.

We emphasize the importance of maintaining one’s cultural identity while respecting those of others. Our students learn not only how to design and develop engineered systems, but also how to communicate their ideas professionally and develop real solutions for a real world.”

Academic rigor, professional focus, and international accreditation form the cornerstone of our engineering education at AUD.

Our faculty members all hold doctoral degrees from top universities in the US, Canada, and the UK, and many are internationally recognized researchers in their respective areas.

Our third-year field experience program prepares graduates well for successful professional careers. More than 20% of our alumni have pursued post-graduate education at top universities in North America and Europe
The School offers undergraduate programs leading to Bachelor of Science degrees in Civil Engineering, Computer Engineering, Electrical Engineering, and Mechanical Engineering.

**Civil Engineering**

The Civil Engineering Program at AUD provides the comprehensive undergraduate education required for private practice and public service in civil engineering, as well as continuing education at the graduate level. Our faculty expertise covers a broad range of technical areas, including structural engineering, geotechnical engineering, construction engineering and management; environmental systems; hydraulic engineering and water resources; and transportation systems engineering.

**Computer & Electrical Engineering**

Over the past decades, the fields of computer and electrical engineering have become indispensable to the advancement of society. In today's world, electric and electronic devices such as cell phones, computers and home appliances have become a necessity rather than a luxury. Throughout, computer and electrical engineers have been at the forefront of the industrial, computer, and communication revolutions.

The Computer and Electrical Engineering Programs at AUD provide the cutting edge undergraduate education required for diverse careers in electrical or computer engineering, and prepare graduates for graduate level studies. The broad range of expertise of our faculty covers multiple areas including communication engineering, electronics, power systems, software and hardware design, control and robotics, and embedded system design and integration.

Our undergraduate programs are designed to maintain a
Engineering Programs at AUD

Balance of breadth and depth in knowledge across multiple areas of competency. Students learn how to design electrical and computer system components, and develop additional proficiency within specialty areas through a series of core and elective courses. Our cross-disciplinary approach to Engineering education has enabled our students to consistently outrank their peers from other institutions in the region. The programs culminate into a field experience and a cross-disciplinary capstone design project in which students integrate their technical knowledge, communication skills, and professional education to develop actual engineering components and systems.

Mechanical Engineering

With the growing demand for alternative and clean technologies, a rise in demand for a new generation of mechanical engineers is projected over the next two decades. The Department of Mechanical Engineering at AUD offers undergraduate students a unique opportunity to study toward a Bachelor of Science in Mechanical Engineering, with emphasis on three key areas: energy systems; mechatronics and control; and manufacturing engineering. Through their field experience and an interdisciplinary capstone design project, students integrate their technical knowledge, communication skills, and professional education to solve real engineering problems.
WHAT DO ALUMNI HAVE TO SAY?

“At AUD, Engineering extends beyond discovery, design and development. It’s a vibrant, multicultural community which focuses on excellence in knowledge, innovation and leadership. Individualized attention and strong team work at AUD have been crucial for my career development.”

Roya Homayouni
B.S.C.E., Class of 2009
Researcher, Michael Page International

“The Engineering School at AUD provided a distinct program that allowed us graduates to gain the knowledge required to succeed in any area; similar to the skills I have acquainted, which continue to guide me as a Civil Engineer in the Oil Industry.”

Reem Al Douri
B.S.C.E., Class of 2011
National Oilwell Varco

EMPLOYER’S CORNER

“At AUD, graduates considered from the best graduates in the UAE, why? Because they are well equipped with the right knowledge, drive and the competencies required from the market to start their career life with”.

Marwan A.A. Mohammad
Head of Recruitment, Organization Development Department, Dubai Aluminium (“DUBAL”)

“[AUD students are] sharp and motivated. [They] work in a professional way, [are] very friendly and leave a good impression. [They are also] good listeners with good communications skills.”

Jeanette Aazan
HR and Employee Development Officer, National Oilwell Varco
In addition to satisfying AUD’s general admissions requirements, applicants to the Bachelor of Science in Engineering have the following requirements:

- Applicants need to satisfy either of the following two requirements:
  - Minimum SAT Reasoning Score: applicants must take the SAT Reasoning Test and secure a sum of at least 1000 in the Critical Reading and Math sections, with a minimum score of 320 in Critical Reading and a minimum score of 560 in Math. For each time they have taken this test, students should have their scores sent to AUD. It is highly recommended that this test be taken by November of the senior year of high school.
  - Successfully Complete the AUD Pre-Engineering Program.

- Math readiness and placement into an appropriate math course will be determined by the university-administered Accuplacer™ Exam. Students who have the equivalent of MATH 210 transferred from another recognized university will be exempted from taking this Exam. It should be noted that Pre-calculus (MATH 191) credit will not be considered in fulfillment of any of the School of Engineering program requirements.

- Engineering students must have completed secondary school course work in Physics and two other laboratory sciences. Applicants who have not completed such course work at the secondary school level will be required to pass remedial courses in science prior to admission into Engineering.

- Engineering students are required to take the university’s Computer Proficiency Exam prior to their first term of admission into Engineering. A student who fails the Exam will be required to enroll in and pass COMP 101 within his/her first term of admission. In such cases, COMP 101 credit will not count towards any of the School of Engineering program requirements.
The Pre-Engineering Program is intended to increase the potential for student success in Engineering by ensuring readiness in the areas of Math, Science, and Computing.

In order to successfully complete the Pre-Engineering Program, a student must satisfy all of the following requirements:

- Successfully complete:
  - MATH 099 on the first attempt, or place in a more advanced Math course via the university-administered ACCUPLACER™ Exam;
  - MATH 191 with a minimum grade of C on the first or second attempt, or place in a more advanced Math course via the university-administered ACCUPLACER™ Exam;
  - COMP 101 with a minimum grade of C on the first or second attempt, or place in CSCI 140 through the university-administered Computer Proficiency Exam;

- Earn a grade of C or higher in:
  - MATH 210;
  - PHYS 201;
  - CHEM 201; and
  - ENGL 102.

A student who fails to complete the AUD Pre-Engineering Program may be granted admission to the School of Engineering only upon securing the minimum SAT Reasoning score. Alternatively, such a student may choose to pursue studies at AUD in a discipline other than Engineering, contingent upon admission into the new program. The university does not assume any responsibility for loss of credit due to the student’s change from Pre-Engineering to another program.

For further information on the Pre-engineering Program please refer to the website http://engr.aud.edu/
About the Engineering Programs

Programs Mission
The Civil, Computer, Electrical, and Mechanical Engineering Programs prepare a culturally diverse student population for successful professional careers in civil, computer, electrical, and mechanical engineering at the local, regional and global levels. The Programs are designed to ensure excellence in multiple technical areas within the broad field of engineering, while emphasizing the role of general education, ethical and social responsibility, and life-long learning in the personal and professional growth of future engineers.

Summary of Degree Requirements
The Bachelors of Science in Civil, Computer, Electrical and Mechanical Engineering are four year programs.

<table>
<thead>
<tr>
<th>Course Classifications</th>
<th>Credit Hours Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics/Natural Sciences</td>
<td>29</td>
</tr>
<tr>
<td>Major Core</td>
<td>54</td>
</tr>
<tr>
<td>Major Electives</td>
<td>15</td>
</tr>
<tr>
<td>Arts and Sciences Core</td>
<td>36</td>
</tr>
<tr>
<td>General Electives</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>137</strong></td>
</tr>
</tbody>
</table>

For further information on the B.S. in Engineering degrees, please refer to the website [http://engr.aud.edu/index.asp](http://engr.aud.edu/index.asp)
MINORS IN ENGINEERING

An undergraduate minor is a cluster of courses taken in a field of study outside the student’s major. The minor consists of a minimum of 15 credit hours of coursework beyond the requirements of the major and is intended to broaden the student’s knowledge beyond the immediate field of study. Minors offered by the various academic units are listed in the appropriate sections.

MINOR IN ENVIRONMENTAL ENGINEERING

This minor allows students to further their knowledge in the areas of environmental engineering and sustainability. The field of environmental engineering is wide but students can choose to focus on a particular area depending on the courses they choose.

The minor in Environmental Engineering is open to students majoring in any field except Civil Engineering.

MINOR IN STRUCTURAL ENGINEERING

This minor can be of great value especially to Architecture students who wish to broaden their technical knowledge in structural analysis and design. The minor in Structural Engineering is open to students majoring in any discipline except Civil Engineering.
The Civil Engineering, Computer Engineering, and Electrical Engineering programs are accredited by the Engineering Accreditation Commission of ABET. Launched in Fall 2010, the Mechanical Engineering program will apply for ABET accreditation immediately upon graduating its first class (expected in Spring 2014), for retroactive accreditation of the program for all Mechanical Engineering graduates.

The American University in Dubai is a member of the International Telecommunication Union.

**ENGINEERING ALUMNI PURSUE THEIR STUDIES**

“Choosing AUD was a vital step to set me on the right path to excel academically and professionally. AUD’s School of Engineering offers a top-notch education which provided me with the foundation to outshine during my studies. I owe AUD the chance to achieve my dreams.”

Jamal Azzeh  
B.S.C.E., AUD, Class of 2011  
M.A.Sc. Student in Civil Engineering, University of Toronto

“AUD Engineering programs are undoubtedly the top-notch in the Middle East. Apart from the state of the art facilities, I have immensely gained from the quality of the faculty and their excellent mentoring. Since my graduation, I have been a recipient of many promising career opportunities. This is testimony to the faculty’s arduous work, and consummate environment that AUD Engineering provides for the professional upgrading of a student.”

Mouin Al Masoodi  
B.S.C.E., AUD, Class of 2011  
M.S. Student in Geosciences, University of Oklahoma
Faculty Members

Alaa K. Ashmawy, Dean of the School of Engineering and Professor of Civil Engineering
Ph.D., Purdue University

Wael Bazzi, Chair of Mechanical Engineering and Associate Professor of Computer Engineering
Ph.D., University of Waterloo

Adnan El Nasan, Chair of Electrical and Computer Engineering and Associate Professor of Computer Engineering
Ph.D., Rensselaer Polytechnic Institute

Elias Saqan, Chair and Associate Professor of Civil Engineering
Ph.D., University of Texas at Austin

Edgar Small, Coordinator of Construction Management and Associate Professor of Civil Engineering
Ph.D., State University of New York at Buffalo

Jinane Mounsef Biri, Instructor in Electrical and Computer Engineering
Cand. Ph.D., Arizona State University; M.E., American University of Beirut

Mohammad Ghanim, Assistant Professor of Civil Engineering
Ph.D., Michigan State University

Mansoor Janjua, Assistant Professor of Mechanical Engineering
Ph.D., New Jersey Institute of Technology

Peiman Kianmehr, Assistant Professor of Civil Engineering
Ph.D., University of Waterloo

Wathiq Mansoor, Professor of Computer Engineering
Ph.D., Aston University

Abraham Mansouri, Assistant Professor of Mechanical Engineering
Ph.D., University of Alberta

Majid Poshtan, Associate Professor of Electrical Engineering
Ph.D., Tulane University

Eslam Soliman, Assistant Professor of Civil Engineering
Ph.D., University of New Mexico

Kwon Joong Son, Assistant Professor of Mechanical Engineering
Ph.D., University of Texas at Austin

Haitham Tayyar, Assistant Professor of Electrical Engineering
Ph.D., University of British Columbi
The Advisory Board of the School of Engineering consists of prominent engineering professionals, with the main role of advising the School’s administration on matters relevant to the engineering programs, and assisting the School in formulating and implementing its strategic priorities. The Board members also play an important role in setting our program standards and providing feedback on our alumni position in the market.

Current Board Members of the School of Engineering

- **Mr. Ali Bin Towaih**, Executive Director, Energy & Environment Park, TECOM Investments
- **Mr. Andrea Emiliani**, Regional Manager, Learning Solutions, IBM Middle East
- **Dr. Eesa Bastaki**, President, IEEE UAE Section
- **Dr. Elie Daher**, Director, Technical Consulting, Schlumberger Information Solutions
- **Dr. J. David Frost**, Vice Provost, Georgia Institute of Technology, USA
- **Mr. Hamed Zaghw**, Vice President, Parsons Corporation
- **Mr. Khaled Nasser Lootah**, Managing Director, Green Energy
- **Mr. Mahmood Al Burai**, Director, Dubai Real Estate Regulatory Authority
- **Mr. Samir Khoury**, General Manager, Northern Emirates, CCC

“One thing I would say is that we had 3 years of AUD students joining for summer internships. And it has been a continuous history of successful experiences. The students appeared well geared with engineering knowledge. **AUD has given them the most important capacity in the ability to learn how to learn and progress in their profession.**”

Karim Khalaf
General Manager, Fugro Middle East
AUD Department of Civil Engineering Advisory Board Member
FLUID MECHANICS LABORATORY

This lab is equipped to perform and demonstrate a number of experiments that provide students with the practical applications of fluid mechanics. The lab includes a Hydrostatic Pressure apparatus, an Orifice and Jet apparatus, a Fluid Friction, Bends and Fitting apparatus, a Pipe Network apparatus, a Flow Visualization Channel, and an Osborne Reynold's.

MATERIALS/STRUCTURES LABORATORY

This lab is equipped with several testing apparatuses specifically chosen to demonstrate a wide variety of experiments necessary to enhance the students’ knowledge in materials engineering as well as structural theory. The lab houses a 150 kN Instron Universal Testing Machine, a 2000 kN Autocon concrete compressive strength machine, a range of non-destructive testing tools including Shmidt Hammer and ultrasonic kit, a Profometer, and a RAB Rockwell/Brinell hardness tester. A wide range of experiments that demonstrate concepts in mechanics of materials and structural analysis are available and incorporated into several courses throughout the curriculum.

GEOENGINEERING LABORATORY

This lab occupies more than 200m² of lab space; it houses multiple sets for soil classification and testing, including Casagrande and fall cone devices for liquid and plastic limits, sieve sets for particle size analysis, and manual and automatic compaction devices. Four panel stations are available for constant head and falling head permeability testing, including rigid and flexible wall permeameters. Other automated testing equipment include a pneumatic consolidation apparatus, and a direct shear apparatus. Unconfined compression loading frames and triaxial cells are also available for shear strength testing of soil specimens.
The student branch at AUD provides students with essential technical knowledge through seminars, field trips, workshops, competitions, and study tours.

AUD Departmental Clubs serve as professional organizations that address the special needs and interests of students in specific areas of study. They encourage members to explore their interests and talents and organize major specific activities such as lectures, seminars, professor’s lunches, competitions, exhibitions, workshops and field trips. The clubs also serve as a liaison between the student body and faculty of each department.

The club aims to promote civil engineering practice and research, to participate in activities related to civil engineering, and establish an environment that provides information and assistance to civil engineering students by their peers.

The student branch at AUD provides students with essential technical knowledge through seminars, field trips, workshops, competitions, and study tours.

Women in Engineering
The purpose of WIE is to inspire, engage, encourage and empower women in engineering at AUD. WIE advocates women in leadership roles and different technical disciplines. It enhances students networking with the professional institutes and companies in various technical conferences.
Admissions at AUD

Pursuant to the Mission of AUD, the Admissions Department consists of a professional team that assists prospective students gain accessibility to opportunities in higher education.

The Admissions team is held to a high level of integrity and is charged with providing quality service and accurate information to all students.

AUD admits to its degree programs only those students who possess appropriate credentials and the demonstrated capacity and potential to successfully complete the educational programs provided by the university and meaningfully participate in the total educational experience offered by AUD.

AUD Admissions Department
P.O. Box 28282, Dubai, UAE
T. +971 4 399 9000
F. +971 4 399 5585
E. admissions@aud.edu
www.aud.edu

For specific admissions requirements, please consult: the AUD Undergraduate Catalog or the website http://www.aud.edu/Admissions/ugrad.asp

Application Deadline
Fall semester: August 10
Spring semester: December 21

The American University in Dubai is accredited by the Commission on Colleges (COC) of the Southern Association of Colleges and Schools (SACS) to award Bachelor’s and Master’s degrees. The United Arab Emirates Ministry of Higher Education and Scientific Research (MOHESR) has licensed the university and accredited all of its programs.