



## CSE AT A GLANCE

### FACULTY

9 Professors  
2 Associate Professors  
2 Assistant Professors  
1 Visiting Assistant Professor  
1 Lecturer  
2 Senior Lab Instructors  
3 Lab Instructors

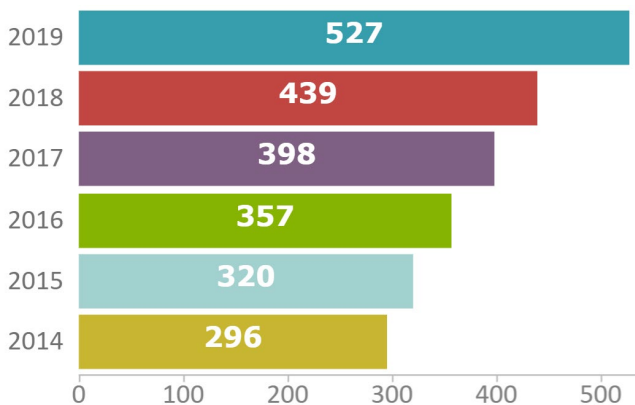
### PROGRAMS OFFERED

Master of Science in Computer Engineering (MSCoE)  
Bachelor of Science in Computer Engineering (BSCoE)  
Bachelor of Science in Computer Science (BSCS)  
Minor in Computer Engineering  
Minor in Computer Science

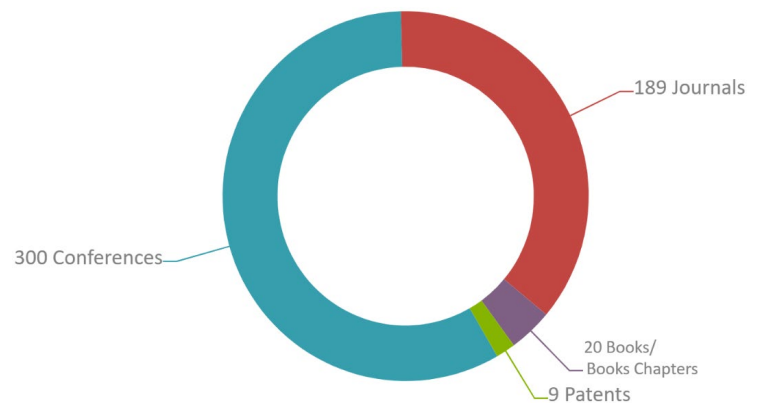
### GENDER DISTRIBUTION

65% Men  
35% Women

### STUDENT ENROLLMENT



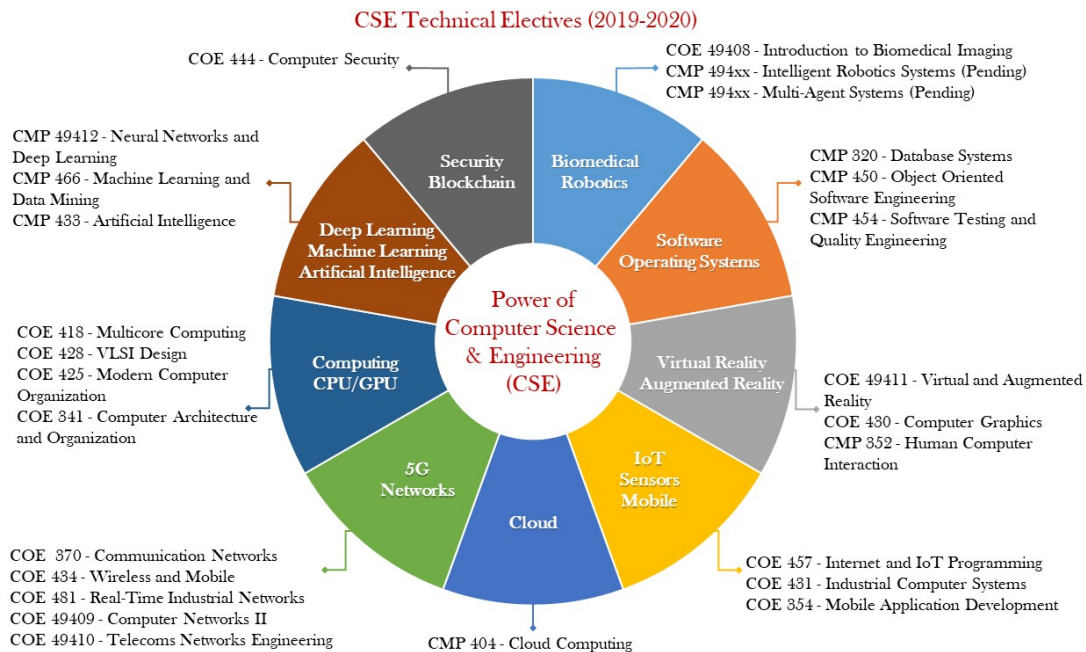
### CSE PUBLICATIONS (2006-2019)



## Power of CSE

**Jan 1, 2020:** The Department of Computer Science & Engineering (CSE) at the American University of Sharjah (AUS) is proud to offer a rich list of technical electives to its students focused on various areas related to AI, Smart Cities, and Data Science.

**To learn more about CSE Curriculum, [click here.](#)**



## CSE enrollment continues to rise

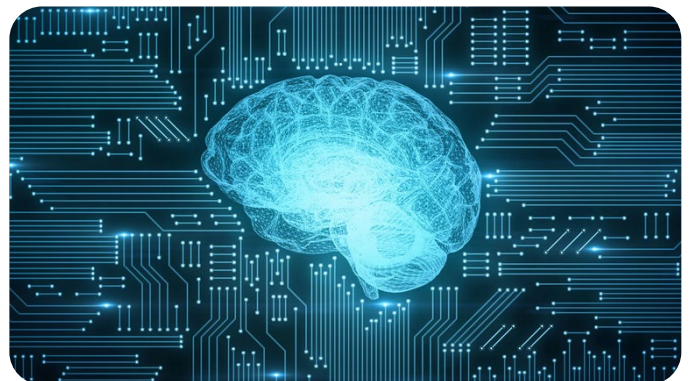
**Jan 1, 2020:** CSE welcomed around 150 new freshmen students in Fall 2019. The number of undergraduate students in CSE is 527 (296 in Computer Engineering and 231 in Computer Science). CSE represents 26% of the 2015 undergraduate Engineering students and is the largest department in the college.

**To learn more about CSE Statistics, [click here.](#)**

## CSE offers a new technical elective on Neural Networks and Deep Learning in Spring 2020

**Jan 1, 2020:** A new elective on Neural Networks and Deep Learning will be offered in Spring 2020. The new course focusses on various types of neural networks including feedforward networks, auto-encoders, convolutional neural networks, and recurrent neural networks. Moreover, the course discusses topics in generative deep learning.

**To learn more about CSE Curriculum, [click here.](#)**





## Virtual and Augmented Reality Elective offered in Fall 2019

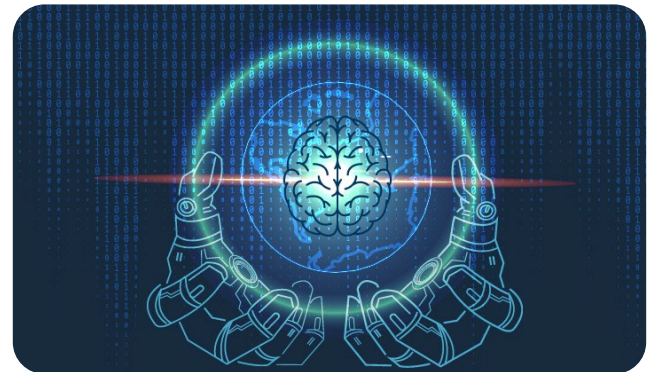
**Jan 1, 2020:** A new elective on Virtual and Augmented Reality was offered in Fall 2019. The course focuses on the hardware and software aspects of virtual reality (VR) and augmented reality (AR) systems. Moreover, the course addresses the integration of AR and VR technologies in the development of computer games and other smart applications used in our daily life. The course practical aspects are conducted in the CSE High Performance Computing (HPC) Lab using cutting edge technology GPUs and VR/AR kits.

**To learn more about CSE Curriculum, [click here.](#)**

## CSE to offer an Introduction to Machine Learning and Deep Learning workshop in Spring 2020

**Jan 1, 2020:** As one of its services to the AUS community, CSE will offer an Introduction to Machine Learning and Deep Learning workshop. This is an interactive workshop and students will go through a series of hands-on exercises to apply the most successful recent techniques in Machine Learning and Deep Learning. After taking this workshop, students will have a broad overview of how to apply these technologies and the types of problems they can address. The workshop will take place in the first week of February 2020 and will be presented by Dr. Imran Zualkernan and Hend ElGhazaly.

**To learn more about CSE Extracurricular Activities, [click here.](#)**



## CSE offers a new professional Amazon Web Services (AWS) certification in Spring 2020

**Jan 1, 2020:** A new professional AWS Academy Cloud Architecting course will be offered in Spring 2020. The new professional course covers the fundamentals of building IT infrastructure on AWS. The course is designed to teach solutions architects how to optimize their use of the AWS Cloud by understanding AWS services and how they fit into cloud-based solutions. The course is offered to all undergraduate and graduate students seeking cloud computing expertise.

Other certificates being offered by the CSE in Spring 2020 academies are:

- Introduction to HP Cloud Computing
- CISCO CCNA Cybersecurity Operations (CyberOps)

**To learn more about CSE Certifications, [click here.](#)**





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## CSE family welcomes three new members

**Jan 1, 2020:** The CSE family welcomed three new members.

Dr. Hicham Hallal, Lecturer and Student Advisor, joined in Fall 2018. He earned his Ph.D. from McGill University, Montreal, Canada. His areas of expertise are Distributed System Analysis, Embedded Systems' Development and Applications, Formal Modeling of Systems.

Dr. Osameh Al-Kofahi, Visiting Assistant Professor, joined in Fall 2019. He earned his Ph.D. from Iowa State University, Iowa, USA. His areas of expertise are Wireless Sensor Networks, Cognitive Radio Networks, Survivability and Fault-Tolerance of Computer Networks, and Practical Network Coding Applications.

Hend ElGhazaly, Lab Instructor, joined in Fall 2019. She earned her M.Sc. from University of Sheffield, UK. Her areas of expertise include Software Engineering, Software Design, and Internet of Things (IoT).

**To learn more about CSE Faculty, [click here.](#)**



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## CSE faculty invited as a Keynote Speaker at the IEEE International Symposium on Signal Processing and Information Technology

**Dec 12, 2019:** Dr. Abdulrahman Al-Ali, Professor of Computer Science and Engineering, was a Keynote Speaker at the IEEE International Symposium on Signal Processing and Information Technology (ISSPIT 2019), Ajman, United Arab Emirates. Dr. Al-Ali keynote speech was entitled "Internet of Things Role in Smart Cities Applications."

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## Industry expert delivers talk on AI

**Nov 28, 2019:** In an engaging lecture delivered at AUS, various aspects of the increasingly influential fields of artificial intelligence, machine learning, and deep learning were analyzed by a seasoned veteran from the IT industry.

Raed Hijjer, Senior Principal Engineer and Product Technologist at Dell, spoke about the ways in which enterprises across different industries are applying machine learning and deep learning to gain actionable insights from their increasing data to enhance their operational efficiency, increase productivity and become more competitive.

**To read more, [click here.](#)**





## CSE Faculty invited as a Panelist at the London Business School Innovation & Society Club

**Nov 20, 2019:** Dr. Fadi Aloul, Professor and Head of Computer Science and Engineering Department, was a Panelist at the London Business School Innovation & Society Club to discuss the “Future of Education.”

## Two CSE students present at the IEEE UAE Cyber Intelligence Summit

**Nov 14, 2019:** Two CSE students have presented in the IEEE UAE Cyber Intelligence Summit “AI and the Future of Cybersecurity.” Sheikh Abdur Raheem Ali and Yousef Awad’s talk was entitled “AI mutated malware: the next threat.” The summit was organized by Dubai Cyber Security Center (DESC) and The Institute of Electrical and Electronics Engineers (IEEE).



## Women leaders in tech share their expertise and knowledge

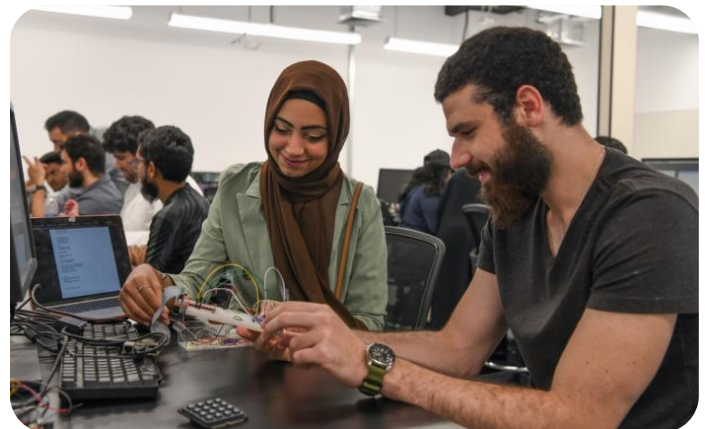
**Nov 6, 2019:** With the ever-increasing significance of the leadership roles played by women in the technology sector, students at AUS got an opportunity to listen to and interact with three distinguished guests from the industry at a special event held recently. Entitled “Women in Tech: How to Build a Career in the Open Source Community,” the talk featured senior officials from Red Hat who shared their knowledge and expertise with the audience.

*To read more, [click here.](#)*

## Science for the future: AUS launches minor in data science

**Nov 4, 2019:** AUS prepares its students for the digital age with a range of initiatives, including a new minor in data science launched this semester. Any undergraduate student can pursue the minor, regardless of the degree they are seeking. The minor in data science allows students to investigate and apply the essentials of data science, a field of increasing importance to all sectors, from medicine and marketing to space exploration and engineering. The minor in data science was developed by the Department of Mathematics & Statistics in collaboration with the Department of Computer Science & Engineering.

*To read more, [click here.](#)*







## CSE Faculty invited as a Panelist at the Digital Transformation Forum

Oct 31, 2019: Dr. Fadi Aloul, Professor and Head of Computer Science and Engineering Department, was a Panelist at the Digital Transformation Forum (DigiTrans 2019). The panel discussion title was "Industry Dialogue: National cybersecurity: Ensuring security through digital transformation."

## AUS launches environmentally sustainable Engineering and Sciences Building

Oct 27, 2019: A new Engineering and Sciences Building has been opened at AUS by His Highness Sheikh Dr. Sultan bin Muhammad Al Qasimi, Member of the Supreme Council of the United Arab Emirates, Ruler of Sharjah and President of AUS. The new four-story facility houses two auditoriums, 35 teaching and research laboratories, and 24 classrooms (including smart classrooms). The new building features six new CSE technical labs.

To read more, [click here](#).



## Virtual and Augmented Reality visit to Dubai VR Park

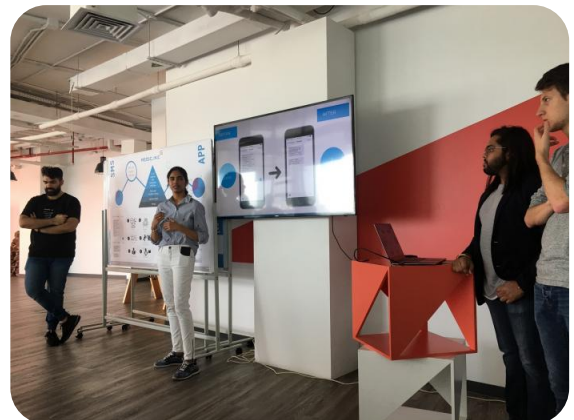
Oct 27, 2019: Students from COE 49411 Virtual and Augmented Reality along with Dr. Hicham Hallal, Lecturer of Computer Science and Engineering, had a field visit to Dubai VR Park on Sunday, Oct 27, 2019. The visit was organized by the Computer Engineering Club at AUS.

## Students produce creative healthcare solutions at the First Design4Health Boot Camp

Oct 21, 2019: Engineering undergraduate students from CSE took part in the first Design4Health Boot Camp, a collaborative event hosted by AUS, Mohammed Bin Rashid University of Medicine and Health Sciences (MBRU) and Dubai Institute of Design and Innovation (DIDI).

Three teams of students each comprising a mix of students from the three institutions met-up with a number of healthcare providers to understand the challenges of healthcare provision and to come up with creative solutions to address them.

To read more, [click here](#).





## CSE student achieves overwhelming success in CEOx1Day program

**Oct 16, 2019:** Touqa Beltagui a CSE student among nine students from AUS were selected to shadow prominent UAE businessmen for a day as part of the CEOx1Day program, an initiative that pairs third and final-year undergraduate students with top CEOs. More than half of the 16 students selected for the competition were from AUS, reaffirming the university's stellar academic reputation and the employability potential of its students.

To read more, [click here](#).

## The Future of Computing

**Oct 17, 2019:** "The Future of Computing" was the subject of an interesting talk by AUS Chief Research Officer Dr. Wei Zhao recently. The lecture, which was organized by CSE department, was held at the College of Engineering Auditorium.

In his lecture, Dr. Zhao showed that computing problems can be classified as "easy" and "hard" based on complexity theory. This means that easy problems are those in which computation time is bounded by a polynomial of input size. He noted that the majority of computing problems fall within this category.

To read more, [click here](#).



## CSE Faculty invited as a Panelist at the Fire Eye Security Conference

**Sep 19, 2019:** Dr. Fadi Aloul, Professor and Head of Computer Science and Engineering Department, was a Panelist at the Fire Eye Security Conference (FireEye 2019). The panel was entitled "Cyber Security Challenges within the Region."

## CSE Faculty invited as a Speaker at the SmartSec Cyber Security Conference

**Sep 4, 2019:** Dr. Fadi Aloul, Professor and Head of Computer Science and Engineering Department, was a Speaker at the SmartSec Cyber Security Conference (SmartSec 2019), Manama, Bahrain. The talk was entitled "The 2019 Cyber Threats Landscape."







## AUS High School Computing Camp introduces Sharjah youth to engineering design and innovation

**Aug 1, 2019:** Students from the Sharjah Youth Center participated in the Sixth AUS High School Computing Camp, where they learned about engineering and innovation. During the five-day event, the Emirati students had the opportunity to attend theoretical sessions and labs that covered the areas of digital systems design, programming, web development, mobile application development, smart home development, and robotics building and programming.

*To read more, [click here.](#)*

## CSE faculty invited as a Keynote Speaker at the University of California, Berkley

**Jun 28, 2019:** Dr. Abdulrahman Al-Ali, Professor of Computer Science and Engineering, was invited as a Keynote Speaker at the 3<sup>rd</sup> International Conference on Smart Grid and Smart Cities (ICSGSC 2019), University of California, Berkley, USA. Dr. Al-Ali keynote speech was entitled "Smart Manufacturing Enabling Technologies in Smart City."

During the same conference three CSE Alumni; Miraal Kamal, Manal Atif, and Hafsa Mujahid, presented their senior project based accepted paper entitled: "IoT Based Smart Bus Stops." The paper is coauthored by Drs. Tamer Shanableh and Abdulrahman Al-Ali, Professors of Computer Science and Engineering, as well as Ahmad Al Nabulsi, Lab Instructor of Computer Science and Engineering.





# AWARDS

## CSE teams receive funding for research projects

**Jan 1, 2020:** Three CSE teams were declared recipients of Sandoog Al Watan Fellowship's Capstone Design Project which supports undergraduate students in the UAE fund their research projects.

The first team project was entitled "Autonomous Vehicle Detection and Monitoring System," the team included Bashayer Almarzooqi, Anwar Elsheikh, and Maryam Al-Saedi. The team was advised by Dr. Abdul Rahman Al-Ali and Dr. Assim Sagahyroon, Professors of Computer Science and Engineering.

The second team project was entitled "Using Artificial Intelligence (AI) and BLE Beacons to Characterize Behavioral Patterns," the team included Abdalla Mohamed, Mariam Alhammadi, Hanin AlRais, and Amna Al Ali. The team was advised by Dr. Fadi Aloul and Dr. Imran Zualkernan, Professors of Computer Science and Engineering.

The third team project was entitled "Open-source infrastructure for smart homes," the team included Arwa Alblooshi, Rami Abuassi, Raaid Salha, and Amir Dougla. The team was advised by Dr. Fadi Aloul and Dr. Imran Zualkernan, Professors of Computer Science and Engineering.

**To learn more about CSE Student Projects, [click here.](#)**



## CSE team declared 2020 winners of prestigious IEEE Consumer Electronics Society Chester Sall Award

**Nov 12, 2019:** Faculty members and graduates of CSE were named the 2020 winners of the IEEE Consumer Electronics Society Chester Sall Award for the First place best paper in the IEEE Transactions on Consumer Electronics 2018.



Dr. Abdul Rahman Al-Ali and Dr. Imran Zualkernan, Professors of Computer Science and Engineering, along with three graduates, Mohammed Rashid, Mazin Alikarar, and Ragini Gupta comprised the team. Their paper, entitled "A Smart Home Energy Management System Using Internet of Things (IoT) and Big Data Analytics Approach," focused on how recent computer technologies can be used to provide meaningful information on consumers' energy needs and inform utilities stakeholder's decisions.

**To read more, [click here.](#)**

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## CSE teams win the 1<sup>st</sup> and 2<sup>nd</sup> place awards in the Cyber Battle of the Emirates 2019

**May 8, 2019:** Two CSE students were part of teams that won the Cyber Battle of the Emirates 2019. Yousef Awad and Ashith Farhan teams won the 1<sup>st</sup> and 2<sup>nd</sup> place respectively. The CTF took place as part of HITB Security Conference, and had over 20 teams that had qualified to the final round from around the UAE.



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## Team led by CSE student wins 2nd place in AI competition

**Nov 3, 2019:** Two CSE students were part of a team that won second place at the Artificial Intelligence (AI) Challenge held at the Hack in the Box and Cyber Week Conference 2019.

CSE students Sheikh Abdur Raheem and Yousuf Awad and their team members received an award of \$35,000 for their entry which was to build an AI system to modify malware and bypass and detect anti-viruses.

*To read more, [click here.](#)*



# CONTACT

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