

# Arizona State University

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Middle East and North Africa  
MENA region

# ASU Charter

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ASU is a comprehensive **public research university**, measured not by whom it excludes, but by **whom it includes** and how they **succeed**; advancing **research and discovery** of public value; and assuming **fundamental responsibility** for the economic, social, cultural and overall health of the **communities** it serves.

## New American University

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Arizona State University has become the foundational model for the New American University, a new paradigm for the public research university that transforms higher education. ASU is committed to excellence, access and impact in everything that it does.

**#1 in the U.S.  
for innovation**

**ASU ahead of MIT and Stanford**

— U.S. News & World Report, 7 years, 2016–2022



**#1 in the U.S. for  
global impact**

**#2 in the world**

— Times Higher Education, 2022

# Welcome

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**We are proud** that ASU is the academic home of more than **1,535 students from the Middle East and North Africa region**, and that the university has impacted the lives of more than **5,315 alumni from the Middle East and North Africa region**.

**We are committed to helping our students succeed** — not just academically, but throughout their lives — and be prepared for a rapidly changing world in which new careers are constantly evolving.

**Our legacy of excellence in education grows** because of the strengths of our award-winning faculty who invest in collaborative, interdisciplinary and solution-focused approaches to research, education and entrepreneurship.

**We look forward to working with you** to empower the workforce and leadership of the 21st century through discovery and impact.

Warmest regards,

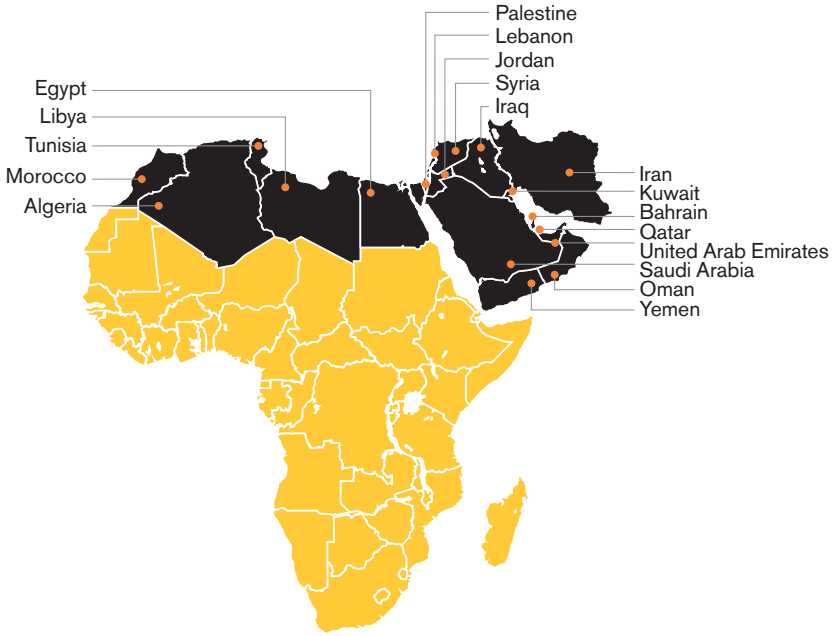
**Julia Rosen**

Vice President, Global Academic Initiatives  
Office of University Provost



# Student enrollment

## MENA



# 1,537

**students from MENA** enrolled at ASU in fall 2021.

## 854

undergraduate  
students

## 683

graduate  
students

## 753

**students from MENA**  
enrolled in fall 2012.

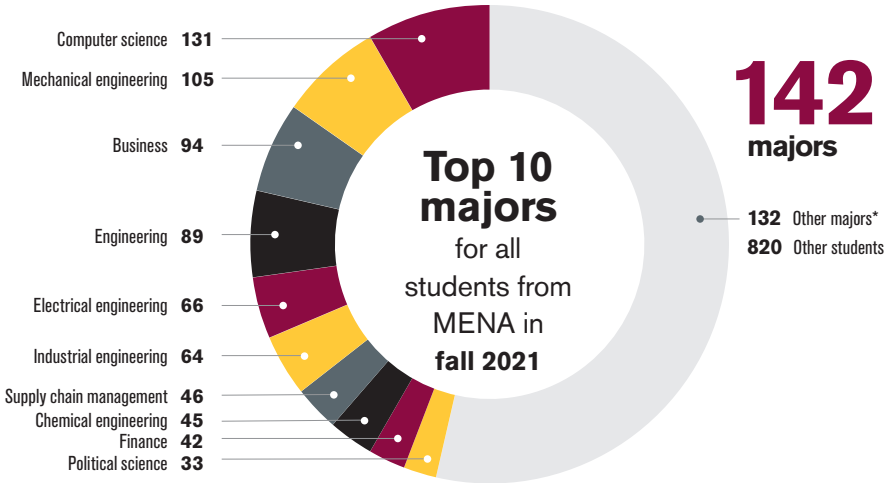
## 104%

**increase in international  
student enrollment** from MENA  
between fall 2012 and fall 2021

# Student enrollment

2021

## Top ASU programs chosen by students from MENA in 2021



### \* The remaining 132 majors

include civil, environmental and sustainable engineering, economics, construction management and technology, international health management and organizational leadership.

# Student stories



## Soud Alothman (Kuwait)

Electrical engineering, undergraduate

“I chose ASU because of its reputation and huge expansion in the electrical engineering department, as well as the amount of resources it holds. The networking experience at ASU has provided a great outcome when it comes to overachieving in the field. Also, I’ve had more than one professor who has personally reached out to offer the help I needed.”

# Student stories

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## **Azra Hussain** (Kuwait)

Religious studies, BS

Azra was born and raised in Kuwait and recently graduated from ASU with a degree in religious studies and a certificate in Islamic studies. During her time as a student, Azra raised four children and ran an educational nonprofit that she co-founded called the Islamic Speakers Bureau of Arizona. The bureau provides education about Islam and Muslims to build interfaith dialogue. Azra also conducts cultural sensitivity training for police departments, hospital personnel, educators and corporations.

**“Professor Agnes Kefeli Clay showed me how to approach and navigate the academic study of religion, but I stayed with ASU because of two amazing student advisors who have helped me navigate and stay on top of my degree through the decades.”**



## **Hussam Malibari** (Saudi Arabia)

Economics, undergraduate

**“Since I came here, ASU has been helping me to improve myself, to get to know myself even better and do my best for my future. They have the tutoring center, huge libraries, study rooms and many services here that will help you become a successful person. ASU has resources like the career center where you can always go to ask questions, and that can give you opportunities to be in contact with companies. Every city I go, I have a friend. Here in the U.S. and all over the world.”**

# Student stories

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## Adil Mounir

Hydrosystems engineering, PhD candidate

With bachelor's and master's degrees in civil engineering, Adil joined the School of Sustainable Engineering and the Built Environment under the guidance of Assistant Professor Giuseppe Mascaro to pursue his doctorate. He is currently part of the Innovations at the Nexus of Food, Energy and Water Systems project funded by the National Science Foundation. He is developing a model that can simultaneously evaluate the water and energy systems for the Phoenix metropolitan area. The goal is to implement this model to explore the effects of population growth as influenced by water and energy policies and management under a changing climate.

**“During my undergraduate degree, I was introduced to the importance of water management in my home country, Morocco. I then found out that ASU has a number of professors who produced an impactful body of work related to simulating water availability in regions suffering from water scarcity. I wanted to learn firsthand from their expertise. Since I have joined ASU, I feel like I have been given all the tools necessary to investigate the water issues I am interested in.”**

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## Farid Taqatqa (Jordan, United Arab Emirates)

Engineering, MS

Originally from Jordan, Farid is an ASU Online graduate now living in Dubai. He received an Open Learning scholarship through the Abdulla Al Ghurair Foundation for Education, a Dubai-based organization that provides underserved, high-achieving Arab students with scholarships, support and skills training. A chemical engineer, he works full time as a quality assurance technician.

**“The most exciting parts of my experience are the online learning experience itself, the high standards of the education system I am taking and the interesting curriculum of the program.”**

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# Student support and services

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## Student support:

- African Students Association.
- Arabic Language and Culture Club.
- Egyptian Student Association in North America.
- Emirates Student Association.
- Iranian Students Association.
- Kuwaiti Students Club.
- Lebanese Student Association.
- Omani Students Association.
- Saudi Students Club.
- Students for Justice in Palestine, ASU Chapter.



## ASU's Saudi Students Club

Zied Alghamdi (left), the president of the ASU Saudi Students Club, sits with graphic information technology first-year student Ashley Carpenter, who is wearing traditional clothing from Saudi Arabia.



## Nearby access to the Islamic Community Center of Tempe

This beautiful mosque, opened in 1984, is modeled after the Dome of the Rock in Jerusalem.

## Interfaith reflection and ablution rooms

ASU recently added an interfaith reflection room and ablution rooms to its Memorial Union to accommodate students who want to practice their religious beliefs, such as Wudu. The private rooms include a place to sit, running water, a hand-washing station and paper towels.



# Alumni

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**MENA is the No. 3 region for international alumni at ASU.**

**5,236**

**alumni from MENA** earned a degree from ASU between 1981 and 2021.

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**3,477**

**alumni from MENA** have graduated from ASU between 2012 and 2021.

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### **ASU Thunderbird Global Innovation Center**

The Thunderbird Global Innovation Center, located in the heart of the Innovation Hub of the Dubai International Financial Center, partners with governments in MENA to support workforce development; designs programs for companies to expand their global presence; and offers global leadership programs tailored to the learning and cultural nuances of the region. It also focuses on student recruitment to the various Thunderbird programs, alumni engagement, and thought leadership.

### **ASU alumni chapters**

There are ASU alumni chapters in Egypt, Iran, Kuwait, Morocco, Oman, Palestine, Qatar, Saudi Arabia and United Arab Emirates.



### **Najla Abdalla** (Sudan)

Social work, BA

Originally from Sudan, Najla and her family moved to Iraq after the Second Sudanese Civil War. After 10 years of peace and prosperity, her family was forced to flee again to escape the Iraq war in 2004. Highly motivated, she worked two jobs to help her family while she pursued her degree at ASU part time. Najla also interned with the International Rescue Committee in Phoenix, supporting refugees and the organization that once supported her own family. After graduation from ASU, Najla's plans include pursuing her master's degree in social work and eventually her doctorate.

**“Some people just get a degree because they want to get money. But if you're willing to help someone with your heart ... that's what I think is the most important.”**

# Alumni

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## **Mariam Alhabidi** (Saudi Arabia)

Global technology and development, MS

While at ASU, Mariam explored entrepreneurship for women in Saudi Arabia and its potential to increase their sociocultural autonomy, financial independence and overall well-being. She went on to found 'Cr8ive' Digital Marketing and Consulting in Abu Dhabi-Khober, out of a passion to help youth find their place in the world. A CEO and self-styled digital entrepreneur, she focuses on technology development for entrepreneurs and now operates in three countries.

**“Education is key. It mattered to my father that I became independent. That has instilled in me the belief that financial independence greatly helps women.”**



## **Hanan Alhashmi** (UAE)

Urban and environmental planning, MA

Hanan wants to be an environmental planning consultant and work with all kinds of stakeholders in the UAE to aid in the country's process of shifting toward more sustainable development. Hanan will focus on how to secure development while conserving valuable resources such as groundwater.

**“I chose ASU because I knew it would have certain qualities I was looking for. It is incredibly culturally diverse, has numerous resources for students and has a variety of programs and courses, which all made it easy to find exactly what I was looking to learn.”**

# Alumni

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## **Sheikh Rashed Salman al-Khalifa** (Bahrain) MBA

Sheikh al-Khalifa has been in banking for more than 35 years and is one of the most prominent bankers in the region, with extensive knowledge and experience. Currently, he is a board member at the National Bank of Bahrain. He was the deputy CEO at the Bank of Bahrain and Kuwait, worked with Gulf International Bank in New York and Tokyo, and was a board member at Arab Banking Corporation in Jordan and Tunisia. He has a wide network of financial relations with many individuals and institutions in the Gulf and MENA regions. Sheikh al-Khalifa graduated from ASU with an MBA in 1982.

**“The value of a degree is measured in what effect and how much influence it has on one’s life. In my case, the MBA I earned at ASU has transformed my life entirely, opening new opportunities and horizons. I benefited enormously, building a rewarding career in banking primarily based on the sound education I received at ASU. I am forever thankful and indebted.”**



## **Sultan Saeed Al-Mansoori** (UAE) Industrial engineering, BSE

His Excellency Sultan Saeed Al-Mansoori, who earned a degree in industrial engineering and management systems in 1988, received the ASU Alumni Achievement Award in 2010. Saeed has held leading positions in the government of the United Arab Emirates since 2004. He first served as the minister of development for government sector and as minister of communications. In 2008, he took his current position as the UAE’s minister of economy. He is involved in a number of collaborative efforts with ASU, including the United Arab Emirates-ASU SkySong Innovation Alliance to develop a facility in the UAE to engage global businesses in investing in new research and providing educational opportunities for ASU students and faculty. In 2020, he signed a new educational and discovery memorandum of understanding with ASU. His son is a current student at ASU.

**“The best thing you can have is a good education, and with that, the world is open to you. My experience at ASU was one of the greatest in my life and greatly influenced my future, plans, goals and ambitions, gave me the strength to stand up and be part of the development of my country.”**

# Alumni

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## **Manal Al-Zadjali** (Oman)

Nursing, PhD

A native of Oman, Manal came to ASU to pursue her doctorate in nursing from the Edson College of Nursing and Health Innovation. She was the first nurse to graduate with a PhD in nursing and health innovation and the first master-prepared community health nurse in Muscat, Oman. She has taught community health nursing, studied health promotion and chronic disease, and published papers in Oman on obesity, cancer and community health nursing. She is presently the dean of the Higher Institute of Health Specialties, Ministry of Health, Sultanate of Oman. There, Manal is living out her long-term goal: applying her ASU experience in innovation to advance nursing and health care through higher education in Oman.

**“I have a long relationship with innovation, as my PhD is in nursing and health care innovation. I think innovation is not optional anymore in any role.”**



## **Amb. Maen Rashid Areikat** (Palestine)

Finance, BS

Ambassador Areikat has been the special advisor to ASU President Michael Crow on university global engagement in the Middle East and North Africa region since 2017 and is based in Washington, D.C. Before joining ASU, he was the top Palestinian diplomat in the U.S. from 2009 to 2017. Prior to this, Amb. Areikat has been involved in Palestinian-Israeli peace negotiations and served as the coordinator general of the Negotiation Affairs Department of the PLO from 1998 to 2009, and was the official spokesperson of the Palestinian delegation for peace talks with Israel from 1992 to 1994. Over the years, he has managed to establish a wide network of relations in the region, in Europe, and in the U.S. Amb. Areikat graduated from ASU with a B.S. in finance in 1983 and with an MBA from Western International University Phoenix in 1987.

# Alumni

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## Abdelhamid Hamouda (Libya)

English (linguistics), MA

Abdelhamid came to ASU on a Fulbright Scholarship in 2012. However, circumstances caused by the war in Libya required his return home. Immigration considerations further complicated his return to the U.S. Then, he lost his scholarship one month before completing his master's degree as he worked with the International Committee of the Red Cross in his home country. He reached out to his ASU advisors in the U.S. for help, and the Department of English offered him a fellowship to cover his tuition while he completed his thesis remotely. He held his thesis defense via Skype from Tunisia. Hamouda has gone on to teach English with the University of Bengazil and the Higher Institute of Comprehensive Professions in Benghazi, Libya.

**“I felt privileged to study with some of the finest linguists in the world at ASU. I cannot emphasize enough how grateful I am to the entire ASU community for standing by me and helping me finish my studies.”**



## Jad Aboul Hosn (Lebanon)

Computer engineering, MS

Jad was one of three STEM scholars seeking degrees through ASU Online, supported by the Abdulla Al Ghurair Foundation for Education, a Dubai-based foundation that provides underserved, high-achieving Arab students with scholarships, support and skills training. Jad won the scholarship after graduating from the American University of Beirut in Lebanon, where his professor recommended he attend ASU.

**“I learned pure technical skills back home, which is good, but all you do is solve a problem and solve a problem. At ASU, it's a chain of thoughts. We go over the wrong approach to see what was done wrong, and then we go over the correct one. Professors teach us to think about it.”**

# Alumni

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## **Khashayar (Shay) Khatiri** (Iran)

Political science and history, BA

Born and raised in Gorgan, Iran, Shay came to ASU after struggling with college in his home country. Despite his past trouble with schooling, Shay said ASU gave him “more than he could ever return in a lifetime.” A graduate student in the School of Politics and Global Studies and the School of Historical, Philosophical and Religious Studies, he was also heavily involved with the School of Civic and Economic Thought and Leadership, where he says he learned what it means to be a citizen. Shay founded the ASU chapter of the Alexander Hamilton Society and the AEI Executive Council at ASU, both of which have won multiple awards and competitions nationwide. He also completed fellowships on foreign, domestic and economic policies, and intellectual thought at Hertog Foundation, American Enterprise Institute and Hoover Institution. His dream was to study at the Johns Hopkins School of Advanced International Studies, where he will complete his master's degree in strategic studies in 2020.

**“ASU has been challenging in a productive way; resourceful and kind. The first time I felt that I had a home outside my family was when I walked on ASU’s campus, and that feeling always kept growing.”**



## **Mohammed Madouh** (Kuwait)

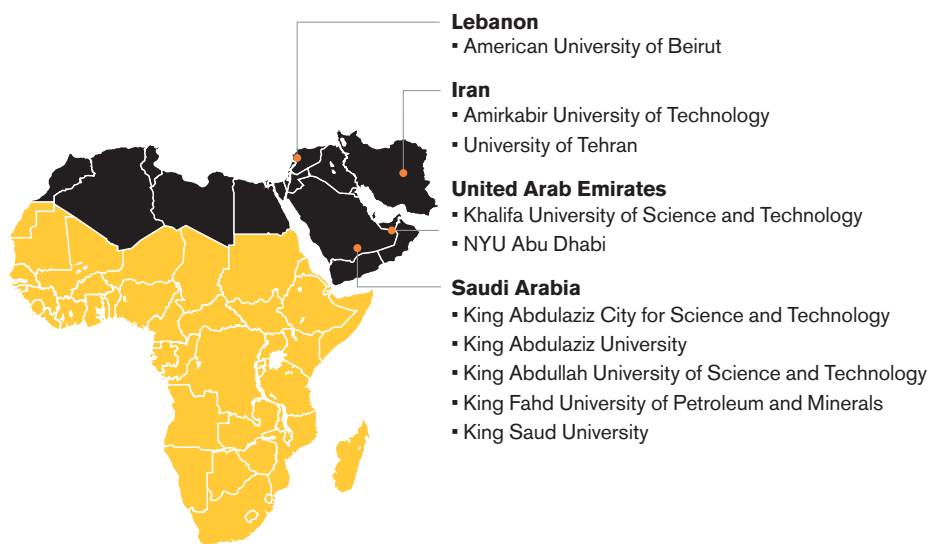
Communication and media studies, BA

When Mohammed studied at ASU, he was the fourth fastest swimmer in the history of ASU and qualified for the 2008 Olympics representing Kuwait. He was the first swimmer in Kuwait’s history to qualify for the Olympic Games and became captain of the national swimming team, a position he still holds. He’s balanced serious competition with graduate school and work. He recently obtained his master’s degree in strategic public relations at Zayed University and is the internal communications lead with the Directorate General of Civil Aviation in Kuwait City.

**“I enrolled at ASU as a student athlete and joined one of the toughest collegiate programs in the U.S.”**

# Academic partnerships and programs

## Top 10 institutions



## MENA

Between 2018 and 2022

# 592

papers were co-authored by ASU and MENA researchers with 214 collaborating institutions.

The majority of those publications were with researchers in Saudi Arabia, Iran, United Arab Emirates and Egypt.

## Middle East

Between 2018 and 2022

# 505

papers were co-authored with ASU in Middle East with 176 collaborating institutions.

## North Africa

Between 2018 and 2022

# 87

papers were co-authored with ASU researchers with 38 institutions in North Africa.

# Research awards

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**54 grants over the last 10 years from U.S.- and Middle East-sponsored foundations and private sponsors totaling more than \$50 million**

Of that, more than **\$28.9 million** currently supports **five projects** in the MENA region, which include:

- Establishment of a Center for Excellence in Energy in Egypt (USAID).
- Development of a primary school teacher training network in Morocco (USAID).
- Physics postdoctoral training at Khalifa University of Science and Technology related to the Emirates Mission to Mars (UAE).
- Engineering of next-generation nanofertilizers (Mohammed VI Polytechnic University, Morocco).
- Engineering processes for extraction of rare earth metals from phosphorus rock mining (OCP S.A. Morocco).

# Featured faculty

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## **Brenda Baker**

Associate professor, School of Human Evolution and Social Change  
Researcher, Center for Bioarchaeological Research

Baker is a bioarchaeologist with extensive field experience in Egypt, Sudan, Cyprus and the U.S. Her research integrates archaeology and biological anthropology to investigate the lives and health of past people. She directs the Bioarchaeology of Nubia Expedition in northern Sudan, currently funded with a multi-year grant of \$1.81 million from the Qatar-Sudan Archaeological Project. Baker will direct work in a roughly 36-square-mile area along the right bank of the Nile River. The tract includes known sites dating from the Neolithic period (around 5,000 BCE) through the Christian era. She is also the bioarchaeologist for the North Abydos Expedition, sponsored by New York University's Institute of Fine Arts and Princeton University, where she conducts burial excavation and analysis of human remains from both cemetery and settlement contexts.

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# Featured faculty

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## **Rajesh Buch**

Senior sustainability scientist, Sustainability Scientists and Scholars Business development director, Rob and Melani Walton Sustainability Solutions Service

Arizona State University partnered in 2015–2020 with Cultivation New Frontiers in Agriculture, a nonprofit organization that conducts cost-benefit analyses, develops methodology and implements regular follow-ups to track on-farm net present value indicators for the Feed the Future of Egypt Food Security and Agribusiness Support program. The program's goal was to increase incomes and improve food security for at least 14,000 Egyptian smallholder farmers across seven locales. The expected impact includes a 12% annualized increase in incomes and a yield increase of up to 50% on selected crops such as basil. ASU's project was initiated by Buch.

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## **Phil Christensen and Lindy Elkins-Tanton**

School of Earth and Space Exploration

The UAE's first Mars mission orbiter, Amal (which translates to hope), lifted off on July 14, 2020. The Emirates Mars Infrared Spectrometer, a tool the mission is using to measure the lower atmosphere, was developed by Regents Professor Phil Christensen of ASU's School of Earth and Space Exploration and Christopher Edwards of Northern Arizona University's Department of Astronomy and Planetary Science. In the Christensen Research Group at ASU, scientists and researchers are building instruments on spacecraft to explore the geology and mineralogy of Mars and other bodies in space. They also conduct research, create instruments and software, and provide mission support to NASA. In 2021, Christensen was awarded a two-year grant to support Khalifa University Laboratory for Atmospheric and Space Physics Postdoctoral Program – Emirates Mission to Mars.

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# Featured faculty

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## Cody Friesen

Associate professor, School for Engineering of Matter, Transport and Energy

According to the United Nations, the year 2050 could see more than 5 billion people suffer water shortages as a result of climate change, increased demand and polluted supplies. Friesen, an associate professor of materials science and engineering at ASU and the founder of Zero Mass Water, is also the creator of the SOURCE Hydropanel, a device that combats water scarcity by absorbing moisture from the air and converting it into clean drinking water. Friesen developed the technology with the backing of an 11-member team of researchers at the Ira A. Fulton Schools of Engineering, and it earned him the 2019 Lemelson-MIT Prize, the largest cash prize for invention in the U.S. In the five years since Zero Mass Water was launched, SOURCE Hydropanel can be found all across the U.S. and the globe, from U.S. schools with aging pipelines and aboriginal communities in Australia to desert regions in the Middle East and sub-Saharan Africa to an orphanage for Syrian refugees in northern Lebanon. So far, the technology has been installed in more than 35 countries across the world.

**“If we could do for water what solar does for electricity, we could fundamentally shift the axis of the planet and improve the human condition with respect to water.”**



## Sayfe Kiaei

Professor, School of Electrical, Computer and Energy Engineering

Kiaei is the director of the Connection One Center (National Science Foundation I/UCRC Center) and Motorola Chair in Analog and RF Integrated Circuits at ASU. In 2021, he established a Center of Excellence for Energy in Egypt with \$22 million in support from U.S. Agency for International Development and will work to improve the capacity of Egypt's higher education institutions to drive public and private sector innovation, modernization and competitiveness; strengthen government policy to stimulate economic growth; and contribute solutions to the country's development challenges in the energy sector. Prior to this project, Kiaei led a successful five-year program funded by USAID for more than \$45 million in Pakistan, resulting in two new university colleges in energy with more than 10 new degrees, 75 new courses and 1,000 new master's degrees and doctoral program students enrolled in the program.

# Featured faculty

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## **Orde Kittrie**

Professor, Sandra Day O'Connor College of Law

Kittrie is a tenured professor of law and the director of the Sandra Day O'Connor College of Law's Washington, D.C. program. He is a leading expert on nonproliferation law and policy with a focus on Iran sanctions, and an expert on international law, particularly as it relates to the Middle East. Kittrie is the author of "Lawfare: Law as a Weapon of War" (Oxford University Press 2016), which describes how and why law is becoming an increasingly powerful and prevalent weapon of war, through examples of lawfare use by the U.S., China, Israel, Palestine, as well as nongovernmental organizations and individuals. Prior to entering academia, Kittrie served for eleven years at the Department of State. As the department's lead nuclear affairs attorney, he helped negotiate five U.S.-Russia nuclear agreements and a UN treaty to combat nuclear terrorism.

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## **Rhett Larson**

Richard Morrison Professor of Water Law, Sandra Day O'Connor College of Law

Larson is an expert on water issues in the Middle East and played a leading role in a collaboration awarded \$1.95 million to provide affordable sources of clean water throughout Jordan and Lebanon. The consortium, which also includes six engineering faculty members, has developed a holistic water system that operates at the household and community levels by making use of nontraditional water resources in order to avoid further depleting the region's scarce groundwater supply. The project, funded by the United States Agency for International Development, involves an international mix of public and private partners: H2O for Humanity (Illinois), GreenCo Water (Australia), Mercy Corps (a global development organization), the René Moawad Foundation (Lebanon) and Zero Mass Water (Arizona).

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# Featured faculty

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## **Larry Mays**

Professor, School of Sustainable Engineering and the Built Environment

Mays received the Prince Sultan Bin Abdulaziz International Prize for Water – Surface Water Prize in 2014 in Saudi Arabia “for his comprehensive work in surface water hydrology and water resources engineering, culminating in three leading and innovative textbooks in the field, and for his applying this extensive knowledge base to develop optimization models in practical hydrology for current problems, including real-time optimal dam release during flood conditions and watershed development in urban areas.” Mays’ research in hydrosystems engineering has focused on the application of optimization, and risk and reliability analysis, to the design, management, and operation of water infrastructure systems. He has published 24 books, and one of his major efforts has been the study of ancient water systems, such as the Aflaj in Oman, and the relation that these systems could have on solving problems of water resources sustainability using the concepts of traditional knowledge.



## **Martin Pasqualetti**

Professor, School of Geographical Sciences and Urban Planning

Pasqualetti’s general research interests encompass three areas of emphasis: energy and society, energy and land use, and renewable energy development. His current research concentrates on the social acceptance of renewable energy landscapes and recycling of energy landscapes. He is the ASU liaison to the Coalition for Action within the International Renewable Energy Agency in Abu Dhabi, United Arab Emirates. In 2015, he received the Alexander and Ilse Melamid Gold Medal from the American Geographical Society for his international contributions to the study of energy. He has worked in Palestine, Oman and UAE, in addition to efforts in the U.S., Mexico, Canada, the United Kingdom, Turkey, the Czech Republic, Israel, China, Singapore and Guyana.

# Featured faculty

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## **Francois Perreault**

Assistant Professor, School of Sustainable Engineering and the Built Environment

The Perreault Laboratory combines the tools of nanotechnology, chemistry, and microbiology to address global environmental challenges and achieve a sustainable future. As part of the Nanosystems Engineering Research Center on Nanotechnology-Enabled Water Treatment, the Perreault lab is researching how to integrate nanomaterials in water treatment systems in a safe and sustainable way. In North Africa, Perreault is also working to engineer safe and sustainable next generation nanofertilizers for enhance phosphorus efficiency, with support from Mohammed VI Polytechnic University in Morocco.



## **Beth Polidoro**

Associate professor, New College of Interdisciplinary Arts and Sciences

Polidoro studies environmental chemistry and aquatic conservation in the School of Mathematical and Natural Sciences. Polidoro and ASU's Salt Water Assessment Team strive to keep the oceans and sea life safe. She looks at pollution, including microplastics, in the marine environment: where it comes from, where it ends up, and what the impact of chemicals are on both marine species and people who eat seafood. She also studies contaminants in freshwater lakes and urban ponds in Arizona. Polidoro enjoys translating her research findings for nonexperts and guiding conservation and environmental policies as well. Her studies take her to Cuba, the Philippines, American Samoa and the Gulf of Oman.

# Featured faculty

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## **Bruce Rittmann**

Regents Professor, School of Sustainable Engineering and The Built Environment  
Director, Biodesign Swette Center for Environmental Biotechnology

Rittmann studies microbial communities in humans, water and biofuels. His lab explores how to manage these microbial communities and how to exploit them to an advantage. His work also extends into renewable energy. He is developing technology that uses naturally occurring microorganisms to remove contaminants in water. Professor Rittmann, along with research scientist Chen Zhou, is also using photosynthetic bacteria to develop biofuels and is looking at recovery of rare earths from phosphorus mining in Morocco. He is a member of the National Academy of Engineering and a fellow of American Association for the Advancement of Sciences, American Society of Civil Engineers, National Academy of Inventors. He is reported by the Institute of Scientific Information to be one of the world's most cited researchers. He has 17 patents and was the co-winner of the 2018 Stockholm Water Prize.



## **Manoochehr Shirzaei**

Associate professor, School of Earth and Space Exploration

Manoochehr Shirzaei leads the Radar Remote Sensing and Tectonic Geodesy Lab, which conducts interdisciplinary research covering a broad spectrum of geophysical, hydrological and industrial processes, such as seismic and aseismic faulting, volcanism, landslide, land subsidence, induced seismicity, coastal erosion, hydrocarbon sequestration, and planetary atmosphere. Shirzaei uses data from various Synthetic Aperture Radar satellites and physics-based numerical and analytical modeling to investigate the cause of crustal deformation associated with the tectonic, volcanic, geological and hydrological processes.

His research efforts aim to improve understanding of the underlying mechanism associated with seismic and aseismic faulting processes, the evolution of crustal stresses and seismic hazard due to fluid extraction and disposal, change in groundwater resources, and coastal deformation and inundation hazard.

# Featured faculty

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## **Shahla Talebi**

Assistant professor, School of Historical, Philosophical and Religious Studies

Talebi is a professor of religious studies. A native of Iran, she lived through the 1979 revolution and the Iran-Iraq War. She has lived in the U.S. since 1994. She received her undergraduate degree in sociocultural anthropology from the University of California at Berkeley and her master's and doctorate degrees, also in sociocultural anthropology, from Columbia University. Talebi's research interests include questions of self-sacrifice and martyrdom, violence, memory, trauma, death, burial, funerary rituals, commemoration and memorialization, religion, revolution, and nation-state in contemporary Iran.



## **Nicole Thompson**

Professor, Mary Lou Fulton Teachers College

Thompson is a professor and vice dean of the division of teacher preparation in Mary Lou Fulton Teachers College at Arizona State University. Her work focuses on how best to prepare teachers to educate preK-12 students. Her research interests include teacher preparation, American Indian education and transformation and reform in education. Thompson is the lead on a \$5 million U.S. Agency for International Development grant that supports a collaboration to create a comprehensive, 21st-century curriculum for primary grade teacher education in Morocco. During a five-year period, Thompson and the Teachers College will work with Morocco's Ministry of Education, universities within the kingdom and teacher training institutions, with the aid of experienced technical assistance and private sector agencies, to form the Higher Education Partnership–Morocco.

# Academic partnerships in MENA

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## 2

### General collaboration agreements

University-to-university agreements seeking a broad variety of collaboration opportunities across both institutions

## 1

### Global visiting programs

Undergraduate students attend ASU for one semester or for one year

## 3

### Memoranda of understanding

Signed agreements between universities

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## University partners

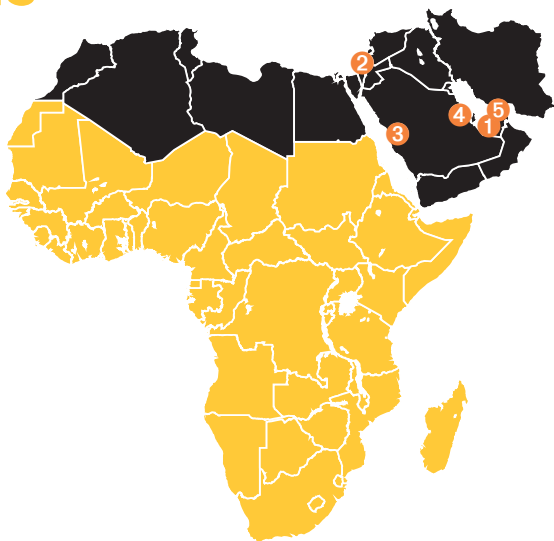
1. Abu Dhabi University
2. American University of Beirut, Lebanon
3. King Abdullah University of Science and Technology, Saudi Arabia
4. King Fahd University of Petroleum and Minerals, Saudi Arabia

### Other partnerships:

5. UAE Ministry of Economy

## Partnership countries

Lebanon  
Saudi Arabia  
UAE





# Student exchange programs

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## **Social Entrepreneurship and Sustainability in Jordan**

This program provides a global immersion experience in Jordan and the Middle East. Students will complement their prior knowledge in social entrepreneurship and sustainability with hands-on learning experiences from NGOs, nonprofits, and emerging entrepreneurs in Jordan. While emphasizing the unique issues and best practices at each organization, the program also offers a broad, macroeconomic view on the Jordanian economy by studying its economic environment and policies.

## **International Studies Abroad: Arabic studies, international relations and language in Meknes, Morocco**

Located in Hamra, the ISA Meknes Study Center offers excellent academics with courses taught by local, U.S. and visiting professors from Carroll College. Students have the option to choose from a variety of course options in many disciplines such as political science, Middle Eastern studies, gender and religious studies, and international relations. Courses consist of only ISA students, and the small student-professor ratio allows for an interactive classroom setting.

## **Council on International Educational Exchange: Business, engineering, arts and sciences program at the American University of Sharjah, UAE:**

This program allows students to study with their peers from the Arab world in an academic environment and structure based on a U.S. university system. Most Arabic courses are designed for nonnative speakers and focus on modern standard Arabic. Students take innovative courses in social sciences, humanities, natural sciences, business, engineering, architecture and Middle Eastern studies.

## **Global Intensive Experience: The Future of Modernity, Expo 2021 Dubai**

This program gives students the opportunity to connect with entrepreneurs around the world and examine how futures are created and the impact they can have. Students go behind the scenes at the World's Fair to meet with innovators and see how the future is being built in Dubai and Abu Dhabi. Students visit places like the Dubai Future Foundation, the Museum of the Future, the Louvre Abu Dhabi, and the Burj Khalifa, the world's tallest building.

# Academic partnerships and programs

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## ASU Thunderbird Center in Dubai

Thunderbird's Dubai office partners with governments in the region to support workforce development and nationalization efforts; designs programs for companies that want to expand their employees' global management capabilities; and offers global leadership programs tailored to the learning and cultural nuances of the Middle East.

## Campus-based programs

### STEM Scholars Program

Abdulla Al Ghurair Foundation for Education, a UAE-based foundation provided scholarship to high-achieving Arab students with a passion for science, technology, engineering and math. Eligible students received a full scholarship to enroll in undergraduate programs at ASU while participating in mentorship and community service. This program stopped accepting applicants in 2019.

## Expanding educational access

### Building Leadership for Change through School Immersion in Saudi Arabia

This initiative of the Ministry of Education of the Kingdom of Saudi Arabia and Mary Lou Fulton Teachers College was created in direct response to specify government's goal of investing in the future of their country by changing the educational landscape in their local schools. It aims to strengthen the values, skills, knowledge and attitudes of teachers, counselors and principals through university-led structured immersion in high-performing, English-speaking K-12 school systems. The ministry designed the initiative to transform the Saudi Arabian education system to strengthen the country's competitiveness, support

economic diversification and provide the support required for the success of the National Transformation Program. Building Leadership participants are expected to be effective change agents when they return to Saudi Arabia.

### The Al Ghurair Young Thinkers Program

Arizona State University is expanding its global reach to the United Arab Emirates with a new college- and career-readiness platform for young Emirati people. The Al Ghurair Young Thinkers Program, developed jointly with the Abdulla Al Ghurair Foundation for Education, was launched to help Emirati students ages 15 to 25 prepare for university life and professional careers in fields critical to the future of the UAE. EdPlus created the online platform for the Young Thinkers Program, which includes college-readiness modules in English and Arabic, the interactive me3® career pathway game, and a live chat application to talk to trained coaches. The platform is optimized for smartphones.

### Education for Humanity in Lebanon

The Education for Humanity initiative leverages the resources and digital strengths of ASU to extend educational access to displaced communities. The initiative focuses on the distribution of digital learning tools offered in a blended learning model to enable admission to university and proof of academic and workplace readiness. The program seeks to work in close collaboration with both local partners and implementing organizations to offer a comprehensive and holistic learning ecosystem that addresses the critical barriers refugees face when trying to pursue a degree. In Lebanon, Education for Humanity has partnered with Lebanese University to offer modules on how to be a successful learner.

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# Academic partnerships and programs

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## **Empower Kids Palestine (Palestine)**

Mary Lou Fulton Teachers College is working in partnership with the Ministry of Education and Higher Education, An-Najah University, and other local and international nonprofit organizations to educate students, teachers and community members about the science and benefits of renewable energy technology. The curriculum and training complement photovoltaic panels installed on schools across Palestine to provide the electricity to run school and community infrastructure.

## **Expanding education outreach (Lebanon, Jordan, Iraq)**

### **Education for Humanity at ASU**

Education for Humanity at ASU works in partnership with humanitarian organizations and local universities to provide ASU's online education offerings and other tech-enabled education solutions to support refugees and communities affected by displacement. It has served refugees in Lebanon, Jordan, Iraq, Uganda and Rwanda. The program is developing "micro-credentials" in areas including teacher training and entrepreneurship to serve as the midway point between short-term skill development, like English courses, and a long-term degree pathway.

### **Higher Education Partnership – Morocco**

Partners with ASU's Higher Education Partnership with Morocco support Moroccan faculty in designing and piloting a comprehensive systems approach to teacher preparation. Participants receive a three-year license in primary teaching through pedagogical preparation and apprenticeships. Offered by Mary Lou Fulton Teachers College and led by associate

professor Nicole Thompson, this USAID-funded program references international standards in inclusive education with particular attention to gender equity.

### **Leadership Through Problem-Based Learning Initiative (Egypt)**

Peter Rillero, associate professor of science education at ASU, last year created the Leadership Through Problem-Based Learning Initiative, a grant-funded STEM program to teach high school-aged girls how to solve complex problems involving biology and physics. The program is available to young women at Xavier College Preparatory, a private Catholic high school in Phoenix, and Al Farouk Islamic Language School in Cairo to work together through virtual, collaborative, problem-based learning in science. The students communicate virtually through WhatsApp, Dropbox and social media websites like Facebook. For both physics and biology classes, each student partners with one or two students from the other country to solve current science problems.

### **Open Learning Scholars Program**

EdPlus at ASU launched more than 30 online master's programs available in 22 Arab countries in association with the Abdulla Al Ghurair Foundation, including Mauritania, Comoros, Djibouti, Sudan and Somalia but not Iran. The program has provided full scholarships for more than 300 Emirati and Arab youth. These master's programs represent the ongoing commitment by ASU to expand its diverse and increasingly global student body of students and by the foundation to help train a new generation of Emirati and Arab youth who also may be working full time or handling family responsibilities.

# Academic partnerships and programs

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## Fostering economic development

### **ASU and UAE partner for global decision-making platform**

Partnered with the United Arab Emirates, ASU created a decision platform designed to provide relevant, knowledge-driven support, planning and action-oriented outcomes to critical challenges confronting the world today. This initiative to create a global decision network advances a set of innovative processes and tools to help leaders and decision-makers in both the UAE and Arizona address some of the most complex economic, social and environmental challenges we face today while building a more sustainable global future. The network would be based on the ASU Decision Theater, an innovative research facility designed to address shared challenges and explore a new decision-making landscape through the application of focused research within a flexible platform.

### **Partnership with King Abdullah University of Science and Technology (Saudi Arabia)**

The partnership allows ASU and KAUST to share entrepreneurial expertise, advance sustainability research and commercialize research discoveries from both institutions. KAUST students who visit ASU will have access to ASU's resources and connections in Arizona and Silicon Valley, including Draper University. The partnership will not only further advance entrepreneurialism, innovation, technology transfer and economic development in Arizona and Saudi Arabia, but also bring world-class scientists together to tackle grand challenges, such as water resource management, quality and conservation, through interdisciplinary research.

## Global initiatives

### **The Francis and Dionne Najafi Global Initiative**

Toward the goal of educating 100 million learners by 2030, the Francis and Dionne Najafi Global Initiative contributes \$25 million to the Thunderbird School of Global Management for an accredited online Global Management and Entrepreneurship certificate consisting of five world-class courses in 40 languages. Of the 100 million learners the program will reach worldwide, it is estimated that 70% will be women and young women. Never before has such an ambitious global higher education program been launched. The certificate will be covered by full scholarships; there is no cost to students because of the philanthropic support undergirding the initiative. In year one, the initiative aims to reach learners in their native languages in Iran, Kenya, Mexico, Indonesia, Egypt, India, Senegal, Brazil, and Vietnam. By year two, the program will be expanded to at least 25 languages across Africa, the Middle East, Asia and Latin America. By year four (perhaps earlier), the program will have expanded to Europe and Central Asia and comprise 40 languages.

## Preparing the next generation of MENA leaders

### **Next Generation Leaders (Palestine)**

ASU's Next Generation Leaders Program is effectively helping train students in leadership by engaging educational leaders from a range of settings who want to transform and better their practice. The program teaches educators how to enhance learning opportunities for students of all ages in Palestine, and thereby creates a network of leaders capable of affecting change

# Academic partnerships and programs

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throughout the educational system. The program includes a focus on three customized courses, field experiences and engagement with university life.

## **Stevens Initiative**

The Stevens Initiative is an international effort to build career and global competence skills for young people in the U.S., the Middle East, and North Africa by growing and enhancing the field of virtual exchange: online, international and collaborative learning. It prioritizes virtual exchange projects that focus on science, technology, engineering and math while supporting the education of refugees across the MENA region and proposing an in-person exchange to complement the virtual learning experience.

## **Promoting scholarly exchange and collaboration**

### **Historic roles of the Maghreb region**

The Center for Maghrib Studies at ASU produces knowledge and understanding of the Maghreb region, which consists of North African countries west of Egypt. The center focuses on the historic roles of the Maghreb culture over the centuries to increase understanding of and insight into this understudied and pivotal region. The center has a pedagogical mission to promote educational innovation, research and dialogue between the U.S. and the Maghreb region. Their goals are implemented through conferences, newsletters and collaborations with scholars and institutions of learning in the U.S. and North Africa.

### **Amal Mars Mission: Launching the Arab world into the space race**

The Amal Mars Mission, also called the Emirates Mars Mission, is the first unmanned, interplanetary satellite spearheaded by the United Arab Emirates and the first planetary science mission led by an Arab-Islamic country. A collaboration with the University of Colorado Boulder, University of California, Berkeley, and ASU, the Amal spacecraft is in many ways a state-of-the-art weather satellite. It will help answer some outstanding questions about the changes and history of Mars' climate and atmosphere. It will create a global picture of how the Martian atmosphere varies throughout the day, season and year.

### **Sustainable Cities Workshop in Cairo**

This workshop was funded by the National Science Foundation's Office of International Science and Engineering through a grant to the University of Alabama Birmingham's Sustainable Smart Cities Research Center, and was sponsored by the Egyptian Housing and Building Research Center and Alexandria University. Participants came from several U.S. universities as well as universities and organizations in Canada, the United Kingdom, Germany and Egypt. The products of each working group were potential collaborative proposals.

**#1 in the U.S.  
for innovation**

**ASU ahead of MIT and Stanford**

- U.S. News & World Report, 7 years, 2016-2022

**#1 in the U.S. for  
global impact**

**#2 in the world**

- Times Higher Education, 2022