

Texas A&M University at Qatar:  
Research and Education Experiences  
in the Middle East

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Dean and CEO

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# Qatar Foundation

- Founded in 1995 by HH Sheikh Hamad bin Khalifa Al-thani, Emir of Qatar
- Guiding principle is that Qatar's greatest natural resource is the potential of its people
- Led by HH Sheikha Mozah Bint Nasser Al Missned, wife of the emir
- Focuses on education, science and research, community and health

# Qatar Foundation

- Education City
  - 2,600-acre campus in Doha undergoing substantial development
  - Described as a “multiversity”
  - Academic Bridge Program
  - Qatar Academy
  - American universities
    - Carnegie Mellon, Cornell, Georgetown, Northwestern, Texas A&M and Virginia Commonwealth
  - The Learning Center
  - Qatar Leadership Academy

# Qatar Foundation

- Science and research
  - State of Qatar has committed 2.8 percent of its GDP to research
  - Qatar National Research Fund
    - National Priorities Research Program
    - Funding awarded to scholars in a myriad of disciplines in institutions throughout the world
  - RAND-Qatar Policy Institute

- Qatar Science and Technology Park
  - Provides “premises, services and support programs that help organizations to develop and commercialize their technology”
  - Members include Cisco, ConocoPhillips, ExxonMobil, GE, Microsoft, Rolls-Royce and Shell
  - “Incubator of start-up enterprises” to cultivate a knowledge-based economy in Qatar
  - QSTP is the point of confluence for industry and science in Qatar

# Qatar Foundation

- Community development
  - Al Jazeera Children’s Channel
  - Doha Debates
  - Doha Institute for Family Studies and Development
  - Qatar Diabetes Association
  - Qatar National Symphony Orchestra
  - Sidra Medical and Research Center
  - Social Development Center

# Timeline of Relationship between Qatar Foundation and Texas A&M

- Qatar Foundation's first contact with Texas A&M was in fall 2001
- First delegation from Texas A&M visited Doha in summer 2002
- Agreement for Texas A&M University at Qatar was signed in May 2003
- Classes began in Doha in September 2003
- Full academic program operational by the fall 2007 semester

# Principles of the Agreement for Texas A&M University at Qatar

- Operated by Texas A&M University to offer qualified students an undergraduate engineering education equal in quality to that offered by the Dwight Look College of Engineering
- Faculty, staff, students and curricula are held to the same standards as in College Station
- Recruitment and admissions standards run parallel to those used in College Station
- All Texas A&M at Qatar faculty have appointments with Texas A&M University
- SACS accreditation applies to Texas A&M at Qatar as a branch campus of Texas A&M; Texas A&M at Qatar is pursuing its own ABET accreditation



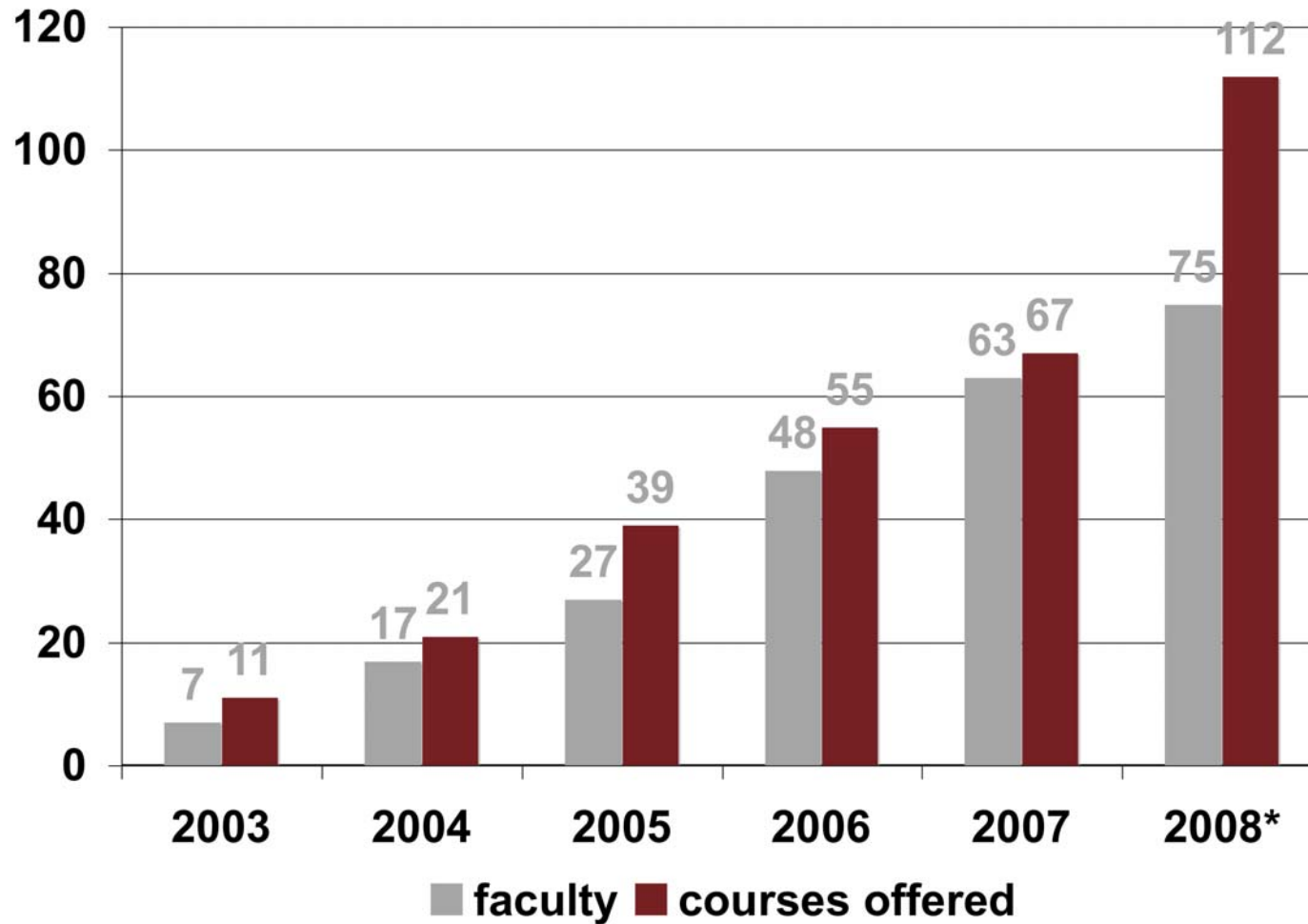
# Academic Year 2007–2008

- Academic program offering full array of courses and approaching “steady state”
- 32 engineers have graduated
- Selection of courses being offered for summer term in Doha
- Research activities are ramping up for the summer as courses conclude



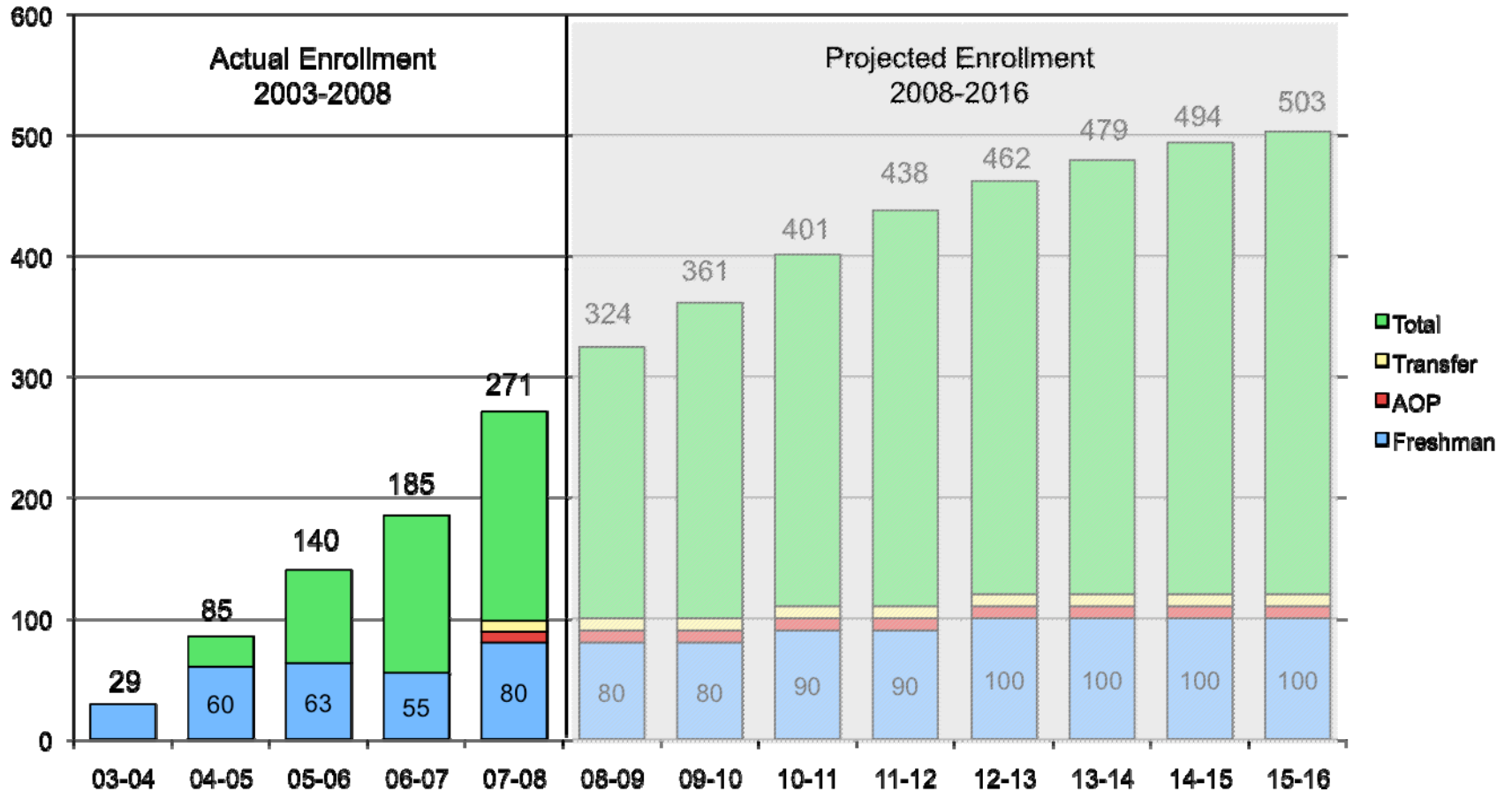


# Faculty and academics

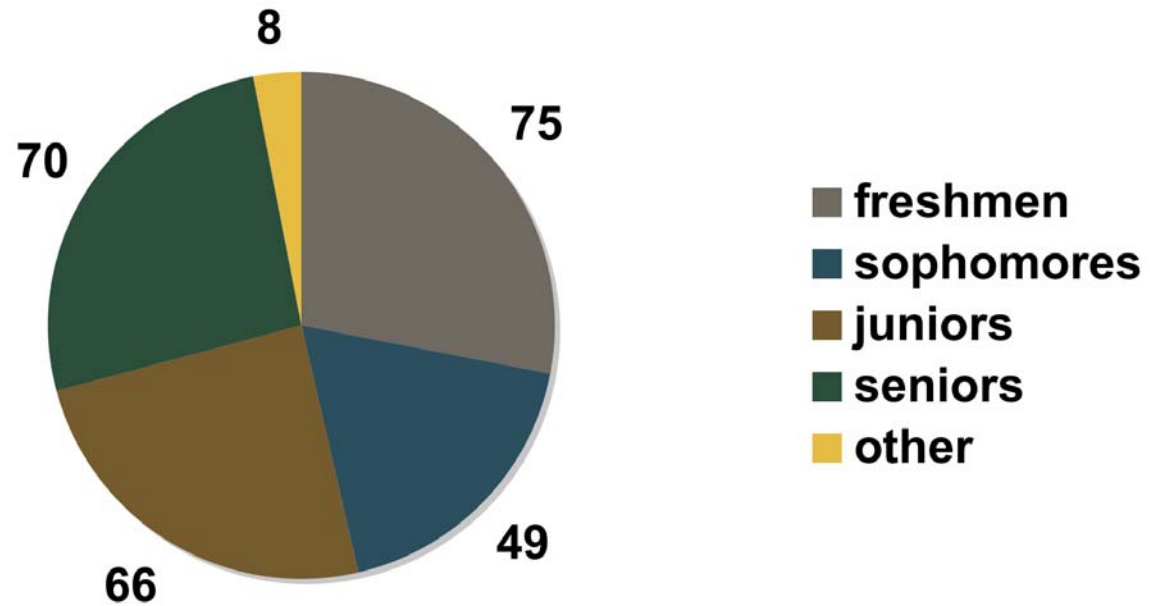


\*projected

# Enrollment Trends and Outlook



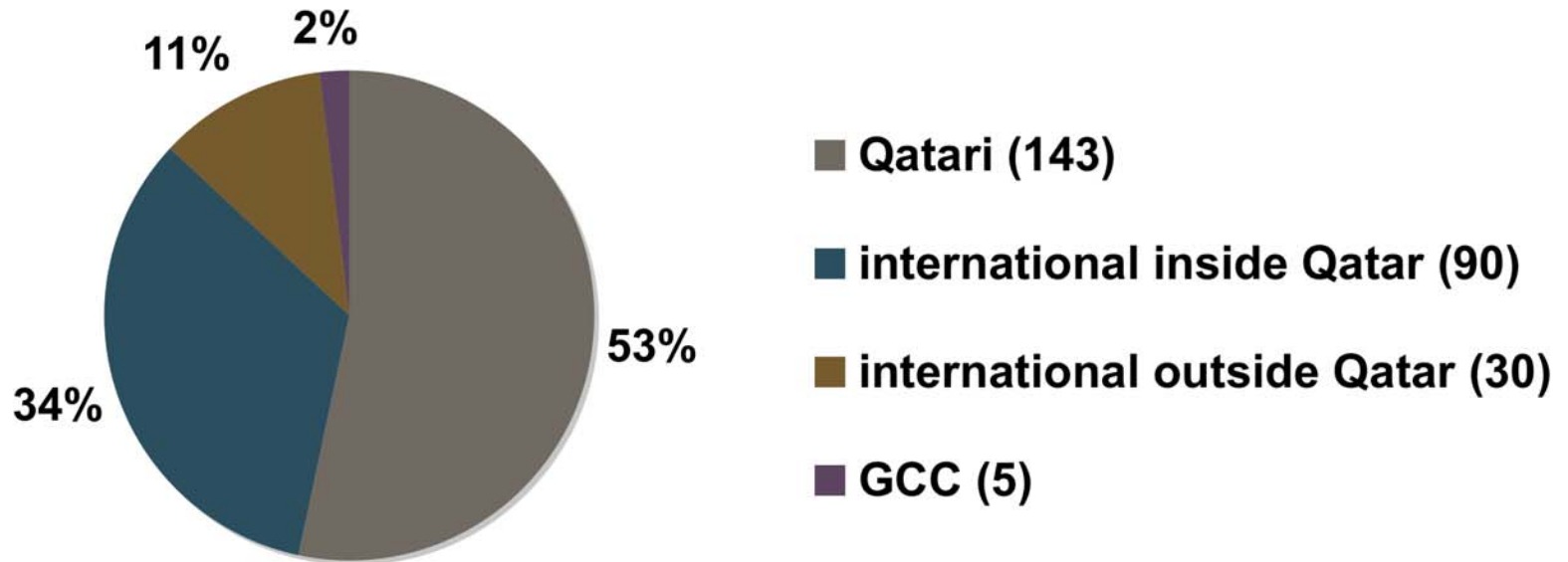
# Official Student Enrollment Spring 2008



# Official Enrollment Numbers Spring 2008 by Major

	Male	Female	Total
Electrical	39	26	65
Mechanical	46	3	49
Chemical	33	33	66
Petroleum	49	31	80
undeclared	1	7	8
<b>TOTAL</b>	<b>168</b>	<b>100</b>	<b>268</b>

# Citizenship Statistics Spring 2008



# Academic Experiences

- Reciprocal exchange program
  - About 20 Doha-based students to study in College Station this summer
- Opportunities for cross-registration
- Summer political science course in collaboration with Georgetown SFS Qatar
  - USMA cadets participating
- Plans to host 2-3 midshipmen/women from the US Naval Academy this fall



# Student Life

- 35 Aggie rings presented in May
- Sports teams
  - Soccer
  - Basketball (boys and girls)
  - Cricket
- ASME cookout
- Chili cook-off during International Education Week





# Student Life

- AIChE student delegation attended conference in Salt Lake City
- SPE technical paper competitions
- Technical Writing Trade Show
- Student leader exchange trips in College Station and Doha
- Robotics demonstrations



# Research Partnerships

- External research relationships
  - Existing (total ca. \$2 million)
    - Qtel: wireless communications
    - Suncor: salt removal from process water
    - RasGas: wireless borehole communications and wireline device research
    - Shell: asphalt pavement technology
    - BP: LNG spill behavior
  - Pending
    - Qtel: additional research support
    - QSTP PoC: zero liquid discharge water desalination

# Industry Partnerships

- Qatar Fertiliser Company sponsors annual chemistry conference
- Scholarship donations from ConocoPhillips
- Industry interest in using virtualization lab
- 2008 graduates have taken jobs with RasGas, Qatar Petroleum, Shell, General Electric, ExxonMobil and Qatar Chemical Company

# Qatar National Research Fund

- National Priorities Research Program (NPRP)
  - 59 proposals submitted with TAMUQ PI or co-PI
    - 29 percent of all proposals received by QNRF (206)
  - 20 awards received
    - 43 percent of all awards funded by QNRF (47)
    - 17 awards with TAMUQ faculty as lead PI
  - Total funding slightly over \$12 million
  - Second cycle of grants is now in the RFP stage

"All the News  
That's Fit to Print"

# The New York Times

Late Edition

Today, blustery, cold, mostly sunny, high 26. Tonight, clear, then clouds late, very chilly, low 19. Tomorrow, mostly cloudy, snow, rain late, high 34. Weather map is on Page D8.

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\$1.25

Some of the Mbuguas' neighbors The well-established middle Continued on Page A10

## In Oil-Rich Mideast, Shades of the Ivy League

By TAMAR LEWIN

DOHA, Qatar — On a hot October evening, hundreds of families flocked to the sumptuous Ritz Carlton here in this Persian Gulf capital for an unusual college fair, the Education City roadshow.

Qataris, Bangladeshis, Syrians, Indians, Egyptians — in saris, in suits, in dishdashis, in jeans — came to hear what it takes to win admission to one of the five American universities that offer degrees at Education City, a 2,500-acre campus on the outskirts of Doha where oil and gas money pays for everything from

### GLOBAL CLASSROOMS

*Destination: Qatar*

adventurous architecture to professors' salaries.

Education City, the largest enclave of American universities overseas, has fast become the elite of Qatari education, a sort of local Ivy League. But the five American schools have started small, with only about 300 slots among them for next year's entering classes. So there is a slight buzz of anxiety at the fair, which starts with a nonalcoholic cocktail hour, with fruit juices passed on silver trays as families circulate among the booths.

"I just came to get my mind together," said Rowea al-Shrem, a junior in a head-to-toe black abaya who came to the fair on her own. "I wanted to know what to expect, so I don't go crazy next year."

At a time when almost every major American university is concerned with expanding its global reach, Education City provides a glimpse of the range of American expertise in demand overseas. Five universities have brought programs here, and more are on their way.

Cornell's medical school, which combines pre-med training and professional training over six years, will graduate the first Qatari-trained physicians this spring. Virginia Commonwealth University brought its art and design program to Qatari women 10 years ago and began admitting men this year. Carnegie Mellon offers computer and business programs.

Texas A&M, the largest of the Education City schools, teaches engineering, with petroleum engineering its largest program. Georgetown's foreign service

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# More than Oil and Gas

- “Scalable Wireless Multimedia in Qatar (and the rest of the world)”
  - Khalid Qaraqe, Electrical Engineering Program
- “A Holistic Approach to the Sustainable Use of Seawater for Process Cooling”
  - Ahmed Abdel-Wahab, Chemical Engineering Program
- “Novel Biodetection Methods”
  - Hassan Bazzi, Science Program, and Hanadi Sleiman, McGill University
- “Quantum Entanglement for Secure Communication”
  - Hyunchul Nha and Suhial Zubairy, Science Program



# Collaborations in Qatar

- Qatar University
- Supreme Education Council Math Standards Committee
- Omar bin Al-Khattab Independent School
  - GCC Math Olympiad
- Ministry of Municipal Affairs and Agriculture

# Collaborations within the US

- US Department of Transportation
- University of Minnesota
- University of Wisconsin-Madison
- University of Nevada-Reno
- Western Research Institute
- Lawrence Livermore National Laboratory
- Los Alamos National Laboratory
- University of Arkansas-Fayetteville
- US Forest Service
- National Geographic Society
- US National Center for Atmospheric Research

# International Collaborations

- Delft University of Technology (Netherlands)
- Korea Institute for Advanced Study
- King's College (UK)
- Norwegian University of Science and Technology
- Universite de Nice Sophia Antipolis (France)
- University of Athens (Greece)
- University of Auckland (New Zealand)
- University of Jyvaskyla (Finland)
- University of Nottingham (UK)
- University of Victoria (British Columbia, Canada)
- University of Stuttgart (Germany)

# What are we working on?

- Graduate engineering program for the 2008 academic year
  - research and professional options
- A new Engineering Research Center
- Further collaboration with Qatar Science and Technology Park

