Inside Successful Branch Campuses: Perspectives from Texas A&M University at Qatar

Global Forum
25-27 May 2011
Vancouver, British Columbia

Dr. Mark H. Weichold
Dean and Chief Executive Officer
Professor of Electrical Engineering
Qatar Foundation and Texas A&M

• Qatar Foundation contacted Texas A&M in fall 2001
• First delegation from Texas A&M visited Doha in summer 2002
• Agreement for Texas A&M University at Qatar signed in May 2003
  – Strength of engineering programs
  – Potential for research opportunities
Texas A&M University at Qatar

- Classes began in Doha in September 2003
- First graduates in December 2007
- Texas A&M at Qatar teaches in English in a coeducational setting
- Admissions criteria and curricula are the same as on the main campus
- Aggie Gateway Program
Academics

- Full academic program operational by the fall 2007 semester
- Degree Programs
  - Chemical Engineering
  - Electrical Engineering
  - Mechanical Engineering
  - Petroleum Engineering
- Graduate program in Chemical Engineering (Fall 2011)
- More than 150 courses offered per year
- Cultural and academic exchange provided by study-abroad
ABET Accreditation

• ABET is the premier accreditation authority for institutions offering degree programs in applied science, computing, engineering and technology

• Received accreditation in Aug. 2009

• Accreditation applies to all degrees awarded to Texas A&M at Qatar students after 1 Oct. 2007
Vibrant Student Life

• More than 20 student clubs and organizations
• Sports teams compete with other schools in Education City and in Doha
• Student leadership exchange program
Our graduates

• Total of 207 Engineers as of June 2011
  • 81 Female/126 Male
  • 110 Qatari citizens

• Most working in local industries

• Pursuing graduate studies at
  • Stanford
  • Imperial College
  • Cambridge
  • Texas A&M
  • Caltech
Degrees Awarded - as of June 2011

<table>
<thead>
<tr>
<th></th>
<th>Female</th>
<th>Male</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical</td>
<td>26</td>
<td>22</td>
<td>48</td>
</tr>
<tr>
<td>Electrical</td>
<td>22</td>
<td>29</td>
<td>51</td>
</tr>
<tr>
<td>Mechanical</td>
<td>3</td>
<td>33</td>
<td>36</td>
</tr>
<tr>
<td>Petroleum</td>
<td>30</td>
<td>42</td>
<td>72</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>81</strong></td>
<td><strong>126</strong></td>
<td><strong>207</strong></td>
</tr>
</tbody>
</table>
Academics

Faculty

Courses Offered

- 2003
- 2004
- 2005
- 2006
- 2007
- 2008
- 2009
- 2010
- 2011
Undergraduate Enrollments

Historical and Projected Totals

03-04 04-05 05-06 06-07 07-08 08-09 09-10 10-11 11-12 12-13 13-14 14-15 15-16

Controlling
Transfer
AGP*
FTIC^

*Aggie Gateway Program
^FTIC-First Time in College
# Enrollment by Major, Spring 2011

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical</td>
<td>35</td>
<td>46</td>
<td>81</td>
</tr>
<tr>
<td>Electrical</td>
<td>56</td>
<td>49</td>
<td>105</td>
</tr>
<tr>
<td>Mechanical</td>
<td>94</td>
<td>10</td>
<td>104</td>
</tr>
<tr>
<td>Petroleum</td>
<td>73</td>
<td>52</td>
<td>125</td>
</tr>
<tr>
<td>undeclared</td>
<td>10</td>
<td>18</td>
<td>28</td>
</tr>
<tr>
<td>TOTAL</td>
<td>268</td>
<td>175</td>
<td>443</td>
</tr>
<tr>
<td>non-degree</td>
<td>24</td>
<td>15</td>
<td>39</td>
</tr>
<tr>
<td>seeking</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GRAND TOTAL</td>
<td>292</td>
<td>190</td>
<td>482</td>
</tr>
</tbody>
</table>
Citizenship Statistics

Countries
- Qatar: 41%
- Egypt: 24%
- India: 6%
- Lebanon: 5%
- Pakistan: 5%
- Jordan: 4%
- United States: 4%
- Other Nationalities: 11%

Research

• Over 100 active research projects with total funding commitments of US $69 million

• Most projects address specific needs of industry in Qatar

• Students are active in research by participating in the Undergraduate Research Experience Program sponsored by Qatar National Research Fund and other sponsored projects
Research Activities

• National Priorities Research Program
  – 64 grants with funding commitment of $56.3M
  – Grants span range of disciplines: engineering, natural sciences, medical sciences, and social sciences

• Qatar Science & Technology Park
  – Zero-liquid discharge water desalination
  – Road subsoil stabilization
  – Characterization and performance of advanced jet fuels
Industry-Funded Research Activities

• Past projects (examples)
  – RasGas
    • downhole wireless communications technology
    • well logging technology development
    • gas-condensate investigations
  – Qatar Shell Research and Technology Centre
    • asphalt/road studies
    • comparative assessment of desalination technologies
  – QAFCO (Qatar Fertilizer)
    • Residual chlorine
    • sea water discharge
Industry-Funded Projects

• Current projects
  (partial list)

  – BP and Qatar Petroleum
    • LNG safety research
  – Qatar Petroleum
    • Acid Stimulation of Carbonate Reservoirs
  – Maersk Oil Research and Technology Center
    • Crude oil & water emulsions
Lessons Learned: General

- Staff requirements are higher than main campus benchmarks due to in-country challenges (i.e., housing, immigration, schools)
- Newness wears off after a few years…keep a main campus engaged and excited about the project.
- After a initial pool of adventurous faculty and staff candidates, recruiting becomes more difficult and more regional.
- Extra resources…human and financial…are usually needed to establish an academic culture among students and families.
- Staffing and funding in place for initial start-up and infrastructure, but also to operate and refresh it in the longer run. Planning must account for buildup, maintenance, and refresh of infrastructure.
Lessons Learned: General

• HR, Finance, and Administration
  – Application of Texas rules in Qatar
  – Application of Qatar rules
  – Purchasing and delivery of goods
    • Export control issues
  – Banking issues
  – Workforce experience
  – Nationalization of workforce
Lessons Learned: General

• Faculty and Staff
  – Proper pre-departure orientation essential
  – Expectations management
  – Academic and business environment different from that in West
  – Academic standards
Lessons Learned: Students

• Admissions
  – Standardized testing not the norm
  – Deadlines not as urgent as in West
  – Looking for “flexibility” in requirements
  – Importance of family in decision making
Lessons Learned: Students

• Academics
  – Most of the parents have not had exposure to western style higher education
  – Qatari nationals generally attend gender segregated secondary schools
  – Time management a bigger issue than in West
  – Critical thinking skills are not as developed by the K-12 system as in West
  – Introduction of an Honor Code
  – Different work ethic
  – Seek “flexibility” in grading
Lessons Learned: Students

• Significance of Family Relationships
  – Role qualitatively different from that of North American and European student
  – More frequent communication with parents and family members
  – Many parents do not speak English
  – Greater expectation for the student to maintain ties with family
  – Student need to co-ordinate family responsibilities with college obligations
  – Eldest male in the family may have responsibilities to act as the head of the household
  – Students are not always able to participate in extracurricular/co-curricular activities
  – Strongly held views of the parent’s responsibility to maintain control of their children…potential conflicts with FERPA
  – Student’s personal autonomy/responsibility vs the need for family relatedness
  – Promote activities or events that to encourage better understanding of the goals of the university and become more integrated into the university community
Lessons Learned: Students

• Gender-based Issues
  – Limited prior experience interacting with members of the opposite sex outside their immediate family
  – Required team assignments (mix gender) can be very difficult for freshmen students
  – Female graduates are frequently underutilized in the workplace
  – Female students may not be able to participate in extracurricular activities that take place in the evenings or on weekends
  – Families’ concerns about female children participating in Study Abroad programs and other programs that involve international travel
Lessons Learned: Students

• Religion
  – Vast majority of students are Sunni Muslim
  – Impact of religion on academic calendar – we have to take into account the observance of the holy month of Ramadan.
  – Must have prayer rooms on campus (Muslim students are obligated to pray 5 times daily)
  – Although we are considered a secular institution, religious observances and traditions need to be acknowledged and supported
Lessons Learned: Students

• Culture
  – Cultural influences vary, however, the culture is predominantly Gulf Arab
  – Cultural influences shape the students’ ideas about what constitutes effective leadership – sometimes differs from western notions of leadership
  – Different understanding of what constitutes good citizenship – sometimes differs from western notions of citizenship
Questions?