

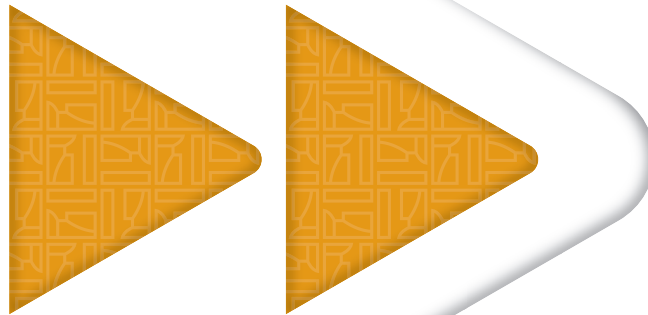


الهيئة الاتحادية  
للتنافسية والإحصاء  
FEDERAL COMPETITIVENESS  
AND STATISTICS AUTHORITY



# Policy in Action

The Heart of Competitiveness:  
Higher Education Creating the UAE's Future



**Fast-Forwarding the Nation**

Issue 6 | 2014

**Federal Authority | هيئة اتحادية**

# Policy in Action Series

The Policy in Action Series is published by the Federal Competitiveness and Statistics Authority (FCSA). The series is intended to raise public awareness and stimulate discussion on key areas of competitiveness & policy work related to the United Arab Emirates (UAE).

The Federal Competitiveness and Statistics Authority (FCSA), is a UAE federal government entity created by Presidential Decree No.6 of the year 2015. The authority's mission is to strengthen and enhance UAE's national data and competitiveness capacities. The FCSA is one of the official government sources for national statistics and is one of the government representatives on matters related to national competitiveness. The FCSA aims at improving the UAE's global competitiveness performance by working with stakeholders on defining and implementing reforms and policies across sectors.



**Copyright © 2017 Federal Competitiveness and Statistics Authority**

Federal Competitiveness and Statistics Authority:

T +971 4 608 0000

F +971 4 327 3535

Email: [info@fcsa.gov.ae](mailto:info@fcsa.gov.ae)

Website: [www.fcsa.gov.ae](http://www.fcsa.gov.ae)

هيئة اتحادية  
Federal Authority



@FCSAUAE

ISBN 978-9948-20-923-2

Published in 2014, Republished in 2017

Dubai - United Arab Emirates

# Higher Education: Lifeblood of the New Economy

## INTRODUCTION

We approach the year 2021 - UAE's Golden Jubilee - at a time of sweeping changes in the world. In this tide of global transformation, countries that thrive are those that build on human talent and are driven by information, knowledge and innovation. The UAE's vision is to engage all Emiratis in making valuable contributions to their nation's growth by building their knowledge and applying their talent with innovation and drive (Vision 2021).

To successfully compete in the global arena countries increasingly rely on knowledge-intensive, value-added goods and services to enhance productivity, and less on physical goods and labor. In this context, Higher education<sup>1</sup> is the lifeblood of knowledge economies, where human potential and creativity are the engine for human sustainable economic growth. Relevant tertiary educational institutions cultivate the expertise needed to catalyze knowledge-driven economies, spurring the progress towards greater innovation, diversification, enterprise development, job creation, and prosperity.



Today's global economy is characterized by seismic shifts in the marketplace, game-changing technologies, a global skills race and cross-border mobility of expertise. Within this race, education, knowledge and skills assume ever-greater importance. To develop skills that are relevant in the fiercely competitive global marketplace, higher education must significantly transform its outreach, scope, and delivery. A successful higher education system requires an enabling policy environment to support higher education, infrastructure of strong institutions, sufficient funding, and a population of



*"We want all Emiratis to make a valuable contribution to their nation's growth by building their knowledge and applying their talent with innovation and drive."*

local and international talent—both faculty and students. Importantly higher education curricula must respond to local priorities and be aligned with the needs of a workplace and the labor market. These are foundational aspects for nations to create, capture, mobilize and leverage knowledge to compete in the innovation-driven world.

As it strives to be a key global economic power by 2021, a vital aspect of the UAE's national strategy is the significant investment in centers of higher learning. Emerging from this vision are networks of higher education institutions, research communities, and innovation-led industries creating a nascent

knowledge ecosystem throughout the nation. These educational hubs and centers of excellence are putting in place the foundations for a globally skilled workforce to meet the needs of competitive businesses and industries by 2021 and beyond. Gordon Brown, Former Prime Minister of the UK aptly said "Globalization dictates that the nations that succeed will be those that bring out the best in people and their potential."<sup>2</sup>

This case study provides a window into the UAE's higher education landscape that is preparing Emiratis to compete in the 21st century. Specifically the report examines two themes: Part 1 is an analysis of the inextricable link in the global knowledge

economy between relevant higher education and a nations' competitiveness; while Part 2 explores specifically how the UAE is fortifying its competitive advantage through policies and investment to develop a national world-class higher education sector that builds national capacity and attracts international talent through its education hubs and centers of excellence. The document concludes with an annex that profiles select institutions highlighting aspects of the knowledge-driven educational landscape.

<sup>1</sup> The higher education sector, is defined by UNESCO and OECD as all universities, colleges of technology and other institutions of post-secondary education, whatever their source of finance and legal status, and includes all research institutes, experimental stations, and clinics operating under the direct control of or administered by or associated with higher education institutions (OECD, 2002).

<sup>2</sup> TLRP and ESRC (2008)

# Higher Education: Anchor for Global Competitiveness

## PART ONE

### *Shifts in the Global Economy*

We are a global community facing complex demographic, business, political, scientific, technological, health and environmental challenges. Creating a 21st century higher education system aligned to these challenges is a priority for policymakers over the next decade.

### **The Knowledge Economy Does not Exist in Isolation**

The innovation-driven economy does not exist in isolation. Nor does the new economy negate the necessity for more traditional economies that are based on industry or even agriculture. Instead, today's information-intensive economy infiltrates all sectors, with the potential to rejuvenate more traditional ones, creating new opportunities and avenues for growth and development. The new knowledge economy can invigorate agriculture, industry, and services by augmenting performance, streamlining processes, reducing costs, inspiring entrepreneurship, and generating new jobs. In order for this to happen productively, it requires a sustainable source of human talent, skills, and ideas that are appropriate to the demands of the labor market. Much of this aptitude in successful economies is cultivated and nurtured within institutions of higher learning.

*HH Sheikh Mohammed bin Rashid Al Maktoum,  
UAE Vice President, Prime Minister and Ruler of Dubai*

Quality tertiary education systems are a precondition for productive, sustainable and competitive societies, laying the foundation for citizens to thrive in the new economy.

Scientists, medical professionals, educators, lawyers, engineers, designers, civil service professionals and other knowledge-workers and all stripes of educated workers are the backbone of functioning modern societies, and their training and accreditation relies almost exclusively on quality postsecondary education. In addition to generating a core group of professionals, sophisticated educational networks allow individuals and countries to leverage opportunities in knowledge-intensive sectors by encouraging receptivity to innovation, ideas, and enterprise while generating a steady pool of human talent. As an integral component of national innovation systems, quality higher education that is responsive to changes in the labor market and receptive to future-oriented skills enables nations to capitalize on their core strengths, capture added-value by generating novel concepts and technologies, and remain competitive in the global landscape.

Moreover, higher education generates important social returns. Educated citizens contribute to the social outcomes of a country including health, civil commitment, and political engagement. Tertiary education is a lynchpin in this virtuous circle that links economic prosperity and social cohesion.

By many measures, higher education boosts creativity, job creation and overall prosperity. Tertiary education therefore features highly in many measurements of competitiveness.

Currently the UAE ranks 19th out of 148 countries in the World Economic Forum's (WEF) Global Competitiveness Report (GCR) 2013-2014. Classified as "innovation-driven"—the most advanced stage of economic development—the country has maintained this distinction for seven consecutive years—the only Arab country to have done so. This categorization places it alongside countries such as the United States, Singapore and Germany, indicating that the UAE's economy primarily competes in the innovative sectors, another competitiveness ranking. The INSEAD Global Innovation Index places the UAE at 38th out of 142 countries for innovation across all sectors. Both reports assess countries' tertiary education systems, human capital and research, knowledge and technology outputs, and creative outputs.

Similarly, the World Bank's Knowledge Economy Index (KEI) takes into account whether an environment is conducive for knowledge to be used effectively for economic development. It considers the following pillars: 'Economic Incentive and Institutional Regime'; 'Educational Training and Skills'; 'Innovation and Technology'; 'Information and Communication Technologies (ICT)'. In this index the UAE outperforms all Arab countries.

### *Higher Institutions Must Respond to Changes in the Workplace*

Across the globe, companies are rapidly changing how they are organized and the way they do business. Employees are expected to have greater responsibilities and contribute more to their organization's and company's value, productivity and competitiveness. To do so calls for technical skills, creativity, and agility to solve complex problems, an ability to communicate effectively, manage information, work collaboratively and create new knowledge—all of which are fostered and honed in higher education systems.

Higher educational systems must therefore create efficient mechanisms for generating, upgrading, and reskilling talented employees with skills aligned with the needs of the labor market. A strong skills system includes three important components: (1) Developing relevant competencies; (2) Putting skills to effective use; and (3) Activating skills supply (Figure 1. Skills Outlook).<sup>3</sup> Tertiary education has an essential role in implementing and sustaining a robust national skills system, particularly in developing relevant talent and putting skills to effective use. **Figure 1.** Source: OECD Skills Outlook, 2013

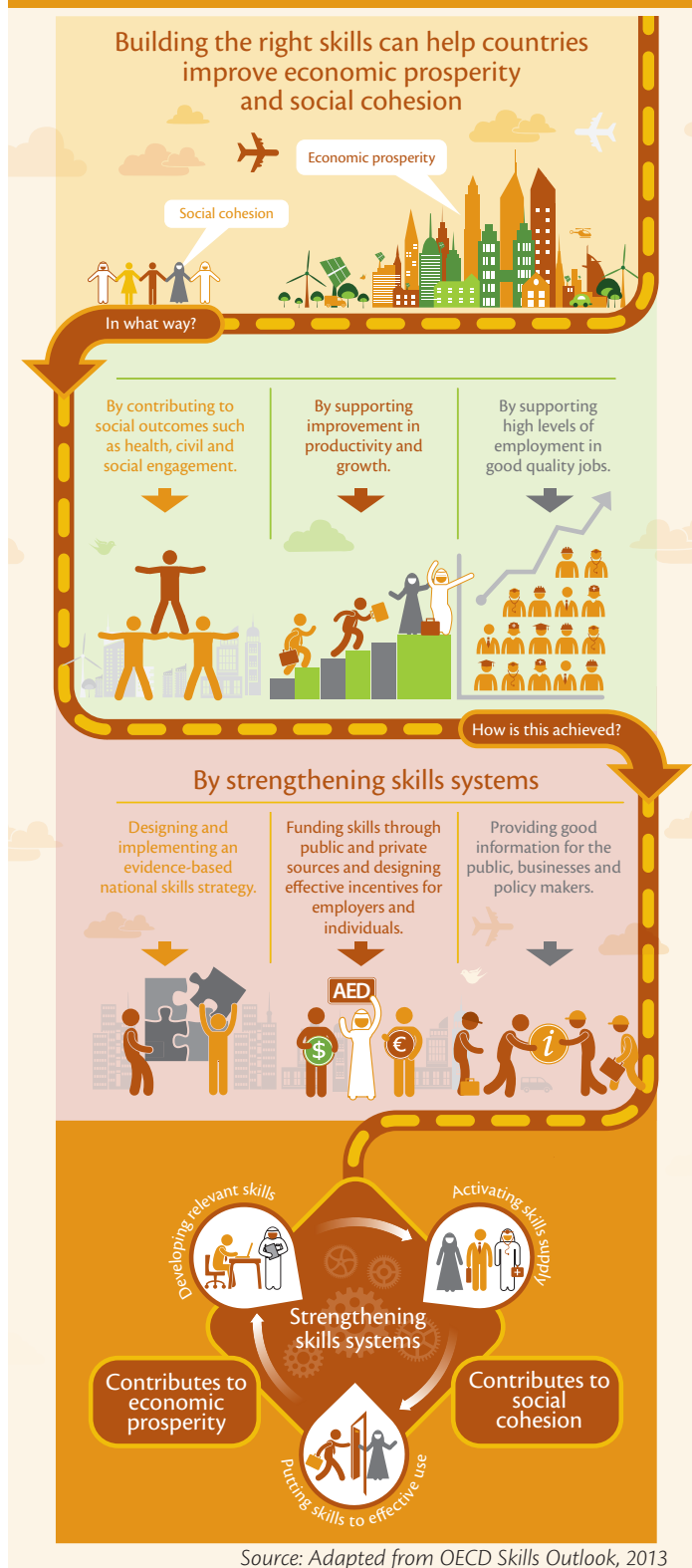
### Skills and Talent for Succeeding in the 21st Century

Over the next decade, employability and productivity in the workplace will require high-level cognitive skills such as problem-solving and critical thinking, proficiency in digital media and ICT, self-management, as well as mastery of foreign languages.<sup>4</sup> See **Figure 2.**

In many countries, firms and industry face intense shortages of appropriate and adequate skills, as structural shifts reshape both the supply and demand for talent across the globe. The lack of human resources with the right configuration of skills and expertise poses significant obstacles to business operations and economic growth.

By keeping a close tab on high-demand skills, higher education can not only develop human potential to meet the needs of future-oriented sectors, but also mitigate the talent mismatch—between where talent is most needed and where it will be most available—which is expected to widen over the next decade.<sup>5</sup> Talent mismatches can be addressed by forming strong partnerships with the private sector and government to train workers in accordance with anticipated changes in the workplace, emerging technologies, consumer needs and behavior, and increased competitiveness.

**Figure 1: Building Skills for the 21st Century**



<sup>3</sup> OECD (2013)

<sup>4</sup> OECD(2013); Oxford Economics (2013), World Bank (2010)

<sup>5</sup> Oxford Human Talent Report (2013)

# Higher Education: Anchor for Global Competitiveness

**Figure 2: Skills Considered Important for the Workplace**

Digital skills				
Digital business skills	Ability to work virtually	Understanding of corporate IT software and systems	Digital design skills	Ability to use social media and "Web 2.0"
50.6%	44.9%	40.1%	35.2%	29.3%
Agile thinking skills				
Ability to consider and prepare for multiple scenarios	Innovation	Dealing with complexity and ambiguity	Managing paradoxes, balancing opposing views	Ability to see the "big picture"
54.8%	46.0%	42.9%	40.9%	15.3%
Interpersonal and communication skills				
Co-creativity and brainstorming	Relationship building (with customers)	Teaming (including virtual teaming)	Collaboration	Oral and written communication
48.3%	47.4%	44.9%	30.4%	29.0%
Global operating skills				
Ability to manage diverse employees	Understanding international markets	Ability to work in multiple overseas locations	Foreign language skills	Cultural sensitivity
49.1%	45.7%	37.5%	36.1%	31.5%

Source: Oxford Economics

When surveyed about workplace skills, executives around the world ranked four groups of skills considered to be important to the function of their company for the next five to ten years.

## Linking Academia and Industry for Greater Knowledge Spillover

A smooth transfer of innovation from higher education institutions to the private sector requires academia and private sector to remain in close proximity, secured by enabling policies and government funding. Encouraging such close partnerships among enterprises, universities, and research institutes (particularly those with a science and technology focus), propped by private spending on research and development (R&D), and braced by intellectual property protection, ensures that research from a variety of streams can be captured, absorbed, and translated into marketable products and services.

Future-oriented sectors such as information and communication technology (ICT), biotechnology, nanotechnology, clean energy and aerospace, heavily depend on explicit and tacit knowledge of specialized and highly technical information and know-how, requiring higher educational systems to provide much of the foundational learning and talent development. Many sectors

such as biotechnology, rely on knowledge transfer that occurs on postsecondary platforms and is built on R&D, funded through institutions of higher learning, before innovative ideas can enter the private sector and be fully commercialized. The future demand for talent in the MENA region indicates high growth in sectors such as industrial, business services, and financial services, with moderate growth in heavy manufacturing, energy, and travel and transport sectors. (See **Figure 3**). All of these industries will depend on knowledge nurtured at institutions of higher learning.

Increasingly studies demonstrate, and corporations argue that leading edge scientific and technical skills need to be complemented by tacit knowledge. Tacit knowledge is the kind of know-how that cannot be captured explicitly in publications or patents—it is often the most valuable kind of knowledge. Cutting-edge scientific and technical knowledge is embodied in people more than in machines or equations. And economic geographers and regional economic developers show that it is the personal connections between academics, corporate researchers, entrepreneurs, and venture capitalists that enable innovation. These networks are very difficult to copy and can take decades to evolve.<sup>6</sup>

**Figure 3: How will the Landscape for Talent Change Over the Next 5-10 Years?**

	Western Europe	North America	Developed Asia	Eastern Europe	MENA	Latin America	Emerging Asia
<b>Total (% change)</b>	3.5%	6.1%	10.0%	10.0%	12.7%	13.0%	22.2%
<b>Industrial</b>	-0.5%	-2.4%	11.4%	2.4%	28.7%	17.1%	37.7%
<b>Emerging</b>	26.1%	38.3%	8.4%	19.8%	6.3%	10.2%	13.3%
<b>Heavy manufact.</b>	24.6%	1.7%	1.7%	33.2%	10.3%	17.8%	60.3%
<b>Business services</b>	-4.4%	0.3%	51.4%	6.8%	30.1%	-0.6%	40.0%
<b>Financial services</b>	13.2%	-8.1%	4.9%	-9.9%	31.6%	48.6%	20.9%
<b>Energy</b>	-11.3%	22.7%	8.0%	8.7%	12.2%	-11.9%	33.0%
<b>Travel and transport</b>	-9.3%	-1.4%	36.5%	5.0%	14.1%	32.9%	32.6%
<b>Life sciences</b>	-4.1%	4.2%	8.2%	19.7%	8.6%	20.4%	16.6%

Source: Oxford Economics

The future demand for talent will continue to change. The demand for skills in emerging markets in Asia will spike, with above average growth in demand in the Middle East/Africa region, Eastern Europe and Latin America

<sup>6</sup> David Attis, accessed January 5, 2014

# Higher Education in the UAE

## PART TWO

### UAE Enhancing Competitiveness through Education Hubs

Forty-three years after the UAE embarked on its journey as a union, it continues to advance as a global economic power at an unprecedented pace. World-class higher education is a key component of the UAE government's federal policy and competitiveness strategy. From this commitment, the UAE has continued to expand educational opportunities at a remarkable rate, with significant investment in a tertiary education system as a means to develop its human capacity, diversify its economy and ensure that it can compete sustainably as a knowledge-driven economy. This focus on education however is not recent. It has been a development priority since the country's inception in 1971, articulated by the country's visionary Founding Father, His Highness Sheikh Zayed bin Sultan Al Nahyan, who stated that "The real asset of any advanced nation is its people, especially the educated ones, and the prosperity and success of the people are measured by the standard of their education."<sup>7</sup>

### Budgetary Commitment to Higher Education

The growth in the education system been supported by policy commitment and a rise in the budget committed to education. The UAE's commitment to higher education is backed by significant government investment in both infrastructure and talent. At a time when other governments, including the United States, are retrenching on their education budgets, the UAE figures show that since 2005 there has been a clear upward trend in financing for education. The budget for public and higher education combined has grown to approximately 10 billion AED in 2009: 28% of the federal budget for that year (see **Figure 4**).<sup>8</sup> In 2013, AED 3.9bn was set aside for the specific growth of higher education with an emphasis on promoting scientific research in universities, funding study abroad for Emiratis and upgrading buildings and equipment at government universities.<sup>9</sup>

**Figure 4: Growth in the UAE Federal Budget Allocations to Public and Higher Education 2004-2009**



Source: UAE Ministry of Finance

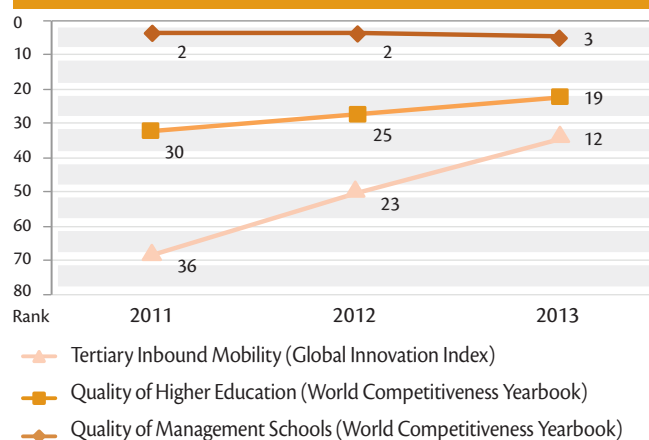
*"The future we aspire to is not merely a wish; it is rather a set of advanced practices that aim at maintaining a safe nation and an objective-led development. The means for achieving this are higher quality education...systems that enrich society values, increase its capacities and improve the quality of its outputs. This is in addition to practices that protect national identity and encourage technical and vocational education, enabling knowledge to play its true role in society."*

HH Sheikh Khalifa bin Zayed Al Nahyan,  
President of the UAE

### Laying the Groundwork: Structure of Higher Education in the UAE

Today the UAE is home to 79 accredited institutions of higher learning,<sup>10</sup> poised to take advantage of the rapid changes in the global landscape. The higher education system is composed of both national as well as international institutions. Post-secondary institutions in the UAE range from large public research universities and R&D centers, to teaching colleges and vocational schools, offering more than 780 academic and research programs. Through these institutions, the UAE is addressing issues of access, equity, quality, relevance, curriculum and pedagogical innovations, and governance within tertiary education. As well, tertiary institutions are addressing cross-cutting issues such as the role of universities in economy and society and the construction of innovative partnerships in education and research.

**Figure 5: Ranking in Key Aspects of Higher Education in the UAE 2011-2013**



Sources: IMD, World Competitiveness Yearbook, 2011, 2012, 2013  
INSEAD, Global Innovation Index, 2011, 2012, 2013

<sup>7</sup> Jayanti Maitra (2007)

<sup>8</sup> UAE Ministry of Finance (2009)

<sup>9</sup> UAE Ministry of Cabinet Affairs (2013)

<sup>10</sup> Ministry of Higher Education and Scientific Research (MOHESR), 2014

<sup>11</sup> MoHESR (2014)

# Higher Education in the UAE

Reflecting UAE's support to education, **Figure 5** demonstrates the upward trend in features of UAE's educational landscape as reported by key international reports. This includes the quality of higher education offered; the quality of management schools and tertiary inbound mobility, demonstrating the number of students entering the UAE for education, in which the UAE currently ranks an impressive third out of all countries assessed.

The UAE's federal Ministry of Higher Education and Scientific Research (MoHESR) is mandated to develop a national tertiary educational system that provides world-class education, aligned with the needs of the private sector to boost employment and prosperity. Its mission is to achieve excellence in higher education and scientific research output, and contribute to the knowledge-based society and sustainable development of the UAE.<sup>11</sup> In addition to the ministry there are emirate-level bodies that oversee implementation of quality standards and government reforms. These are: Abu Dhabi Education Council, ADEC (Abu Dhabi); the Knowledge and Human Development Authority, KHDA (Dubai); and education zones in the other emirates.

UAE's national universities have been foundational in the country's educational system. United Arab Emirates University, Higher Colleges of Technology, American University of Sharjah, Mohammed Bin Rashid School of Government, Ras Al Khaima College of Dental Sciences and Zayed University with its dual campus in Dubai and the recently opened multibillion dirham Abu Dhabi campus are just a few of the national tertiary institutions that dot the country's landscape. They continue to be cornerstones in the educational system offering diverse curricula. The early institutions, UAE University, Higher Colleges of Technology and Zayed University are spotlighted below. These universities demonstrate increased participation in higher education, cultivation of national talent and the diversification of course offerings.

## United Arab Emirates University

The United Arab Emirates University (UAE University) opened its doors in 1976, marking the launch of higher education in the UAE. The university remains among the leading 500 institutions in the world today.<sup>12</sup> It also currently ranks as the number one research university in the GCC, second in the Arab World, and 370th globally.<sup>13</sup> Founded by His Highness Sheikh Zayed Bin Sultan Al Nahyan the late President of the UAE, the UAE University is a research institution currently enrolling about 14,000 Emirati and international students. The institution offers a range of accredited, undergraduate and graduate (masters and doctoral) programs through its colleges including: Business and Economics; Education; Engineering; Food and Agriculture;

Humanities and Social Sciences; IT; Law; Medicine and Health Sciences; and Science.<sup>14</sup> Through its research centers, it works closely with industry to seek solutions to national and regional challenges from water resources to cancer treatments.<sup>15</sup>

## Higher Colleges of Technology

The Higher Colleges of Technology (HCT) was established in 1988 using a model of technical and vocational education developed in community colleges in OECD countries. The institution has approximately 20,000 students attending 17 men's and women's campuses in Abu Dhabi, Al Ain, Dubai, Fujairah, Madinat Zayed, Ras Al Khaimah, Ruwais and Sharjah.<sup>16</sup> HCT's programs include applied communication, business, computer & information science, engineering technology, health sciences and education. Since 1991 60,000 academic credentials have been awarded to its graduates.<sup>17</sup>

*Compared to many OECD countries, the history of higher learning in the UAE is relatively young: While many OECD countries have had the advantage of decades, if not centuries of developing institutions of higher learning, the history of tertiary education in the UAE is substantially younger, with less than four decades in the making. For instance, in the UK, universities such as Oxford became recognized as an independent institution in 1231. Similarly, the first college at the University of Cambridge was founded in 1284. In France, the Collège de Sorbonne was founded in 1257. In the United States, Harvard University was established in 1636, and most other leading US universities have had at least a century to grow and develop into flourishing, reputable institutions of higher learning.*

*Source: Emirates Competitiveness Council*



<sup>12</sup> QS World University Ranking (2014)

<sup>13</sup> UAE University (2014)

<sup>14</sup> UAE University (2014)

<sup>15</sup> UAE University (2014)

## Technical and Vocational Education and Training (TVET)

Competitive countries require a workforce with a wide range of mid-level trade, technical, and professional skills alongside high-level skills associated with typical university education. TVET is an important component of postsecondary education with a focus on preparing students or apprentices for specific trades, crafts, and professional careers at various levels through training and industry collaborations. Vocational training spans professional positions in engineering, accountancy, nursing, medicine, architecture, pharmacy, law, retail, tourism, information technology and other industries.

In the UAE the Vocational Education and Training Awards Commission (VETAC) under the auspices of the National Qualifications Authority was set up to manage and coordinate the vocational, technical and professional education and training sector. In consultation with key stakeholders, VETAC's mandate includes development of a quality assured modern industry-led national vocational education and training system with improved labor-market integration and information management, development of planned policies and initiatives, and the establishment of industry-led advisory.

*Source: National Qualifications Authority*

### *Zayed University*

Zayed University was instituted in 1998 with two branches, one in Abu Dhabi and the other in Dubai. The university was modeled on an American liberal-arts curriculum. Originally dedicated to the education of women, today, Zayed University has 9,429 female and male students from 19 countries. Zayed University received international accreditation from the Middle States Commission (USA) on Higher Education in 2008, making it one of only six in the Arab Middle East to be accredited by one of the American regional college and university accrediting bodies,<sup>18</sup> enabling its certification to be recognized internationally. It offers undergraduate and graduate programs across eight colleges including Business, Communication and Media Sciences, Education, Technological Innovation, and Sustainability Sciences and Humanities.<sup>19</sup>

### *Academic Programs: Competing in the Global Education Market*

In a move to swiftly globalize its education system, the UAE embraced partnerships with top-tier international educational institutions early in its history. In doing so, it created an ecosystem that promoted sharing the lessons of global knowledge across a network of international educational institutions. Partnerships exist between institutions, such as Massachusetts Institute of Technology (MIT), Sorbonne, NY University, INSEAD, ESMOD and several others. Building on these partnerships with international institutions the UAE now offers diverse models of educational delivery through



<sup>16</sup> Higher Colleges of Technology (2014)

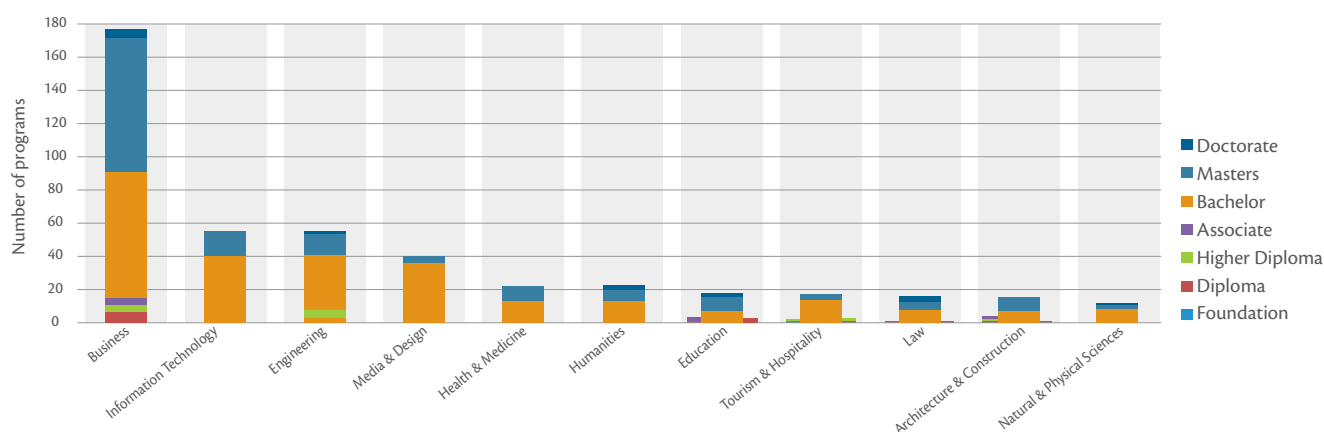
<sup>17</sup> Higher Colleges of Technology (2014)

<sup>18</sup> Khoury and Lindsay (2011)

<sup>19</sup> Zayed University (2014)

# Higher Education in the UAE

**Figure 6: Academic Programs in Dubai by Level and Major Field of Study, November 2012<sup>20</sup>**

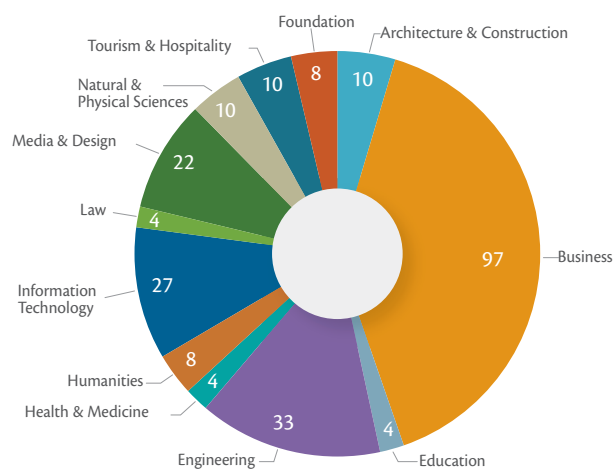


International branch campuses in Dubai offer 237 programs, all of which lead to an internationally recognised qualification. Many of these (43%) are at the Master's degree level, and offer a wide range of specialisations to enhance the skills of the working population in Dubai. Refer to the graph for the range and number of international degrees available in Dubai.

local and international providers. These include full-fledged campuses, international branch campuses, as well as other satellite institutions and programs that encourage the flow of knowledge, innovation, and talent from around the globe. In addition to serving Emirati nationals, the educational system now serves a number of international students from the GCC region and beyond.

The UAE's national and international institutions are putting in place building blocks for a future-oriented society. Curricula have diversified to include courses in science, technology, engineering, and mathematics (STEM) fields as well as liberal arts, encouraging reflection, creativity, strategic thinking, problem-solving, with bilingual fluency in Arabic and English. Programs span established fields such as management, architecture, engineering, health sciences, media, fashion, design and emerging fields such as aerospace, nanotechnology, robotics and biosciences. **Figure 6** is indicative of the breadth of degrees available in Dubai at its international branch campuses, and **Figure 7** illustrates the Number of degrees available in Dubai at International branch campuses. **Appendix 1** highlights some of the areas in which select national and international institutions are shaping a creative, knowledge-driven economy.

**Figure 7: Number of Degrees Available in Dubai at International Branch Campuses<sup>21</sup>**



It is evident that universities in Dubai are responding to the need for a wider variety of programs to ensure that Dubai addresses the educational needs of a more diverse population. As the population in the UAE and surrounding Gulf countries increases, the demand for healthcare, transportation, school education, financial services and housing increases. This translates into the need for more qualified healthcare professionals, teachers and engineers. In order to meet the demands of Dubai's economy, it is important to continue to develop and increase the variety of programs. University research is an important area that also requires further development in Dubai.

<sup>20</sup> KHDA (2012)

<sup>21</sup> KHDA (2012)

## Standing Tall: UAE's Women Have Among the Highest University Enrollment Ratios



Since its formation the UAE laid the foundation for women's development through access to quality higher education. Over the past several decades women have excelled both in the local universities and also internationally. Today the UAE has among the highest ratios of women to men pursuing tertiary education in the world. Their education has given Emirati women the means and competencies to play visible and significant roles in transforming the UAE into the competitive society that it is today.

In 2012, the UAE Cabinet mandated the presence of a female Emirati member on the board of every government entity. Prior to this ruling, women have been playing key

roles along with their male counterparts in developing the country. This includes prominent roles such as membership on the Federal National Council, federal judges, federal cabinet ministers, ambassadors, fighter pilots in the UAE Air Force, and soldiers in the UAE Army, and officers of the police force.

Women in the UAE are increasingly becoming entrepreneurs and are integral to the success of the private sector. Approximately 12,000 women run ventures currently estimated at AED 12.5 billion (US\$3.4 billion). Women also work as managers, mechanics, aerospace engineers, and other highly technical jobs previously dominated by men.

Source: Shaikha Al Maskari 2013

As it progresses towards a more innovation-led economy, the country requires greater focus on education that adequately prepares students for a working in the innovative fields. One of the areas that requires nurturing is the uptake of science and technology fields in the UAE. **Figure 6** indicates a preference among students for commercial studies and humanities over science and technology. This trend is observed around the UAE,<sup>22</sup> and is a feature common to many developed countries. The UAE requires more engineering and science and technology graduates to meet rising domestic demand for more technical skills, notably in rapidly expanding technology-intensive industries. To address this, higher education can begin to raise greater awareness of the relevance of science and technology in modern societies and the career paths that these areas offer citizens of the UAE.

### Ensuring International Quality

With the globalization of higher education and student mobility across nations, graduates need assurance that their qualifications are of high international caliber and recognized across borders. In an important step to ensure precisely that, the MoHESR set up the Commission for Academic Accreditation (CAA). The institution ensures that UAE's colleges and universities operate at international standards, with curricula of sound international standing. The CAA's benchmarks and standards provide measures of quality that all institutions in the UAE must meet for licensure and program accreditation, and reflect a consensus within the international higher education community on the essential characteristics required of institutions to achieve continuous improvement.<sup>23</sup>

<sup>22</sup> UAE National Qualifications Authority (2013)

<sup>23</sup> CAA website (2013)

# Higher Education in the UAE

## *Fostering Skills Relevance and Growth through Industry-Academia Collaborations*

Strategic partnerships between industry and academia merge the discovery-driven culture of the university with the innovation-driven environment of the company, pushing the frontiers of knowledge, creating powerful catalysts for economic growth. The globalization of knowledge has made such collaborations all the more important. For universities, the benefits include external funding streams and enhanced opportunities for professors and graduates to work on groundbreaking research. These are vital inputs to keep teaching and learning on the cutting edge of a discipline, and the impact of delivering solutions for pressing global challenges.

**Figure 8** highlights a few examples of industry-academia partnerships in the UAE. A select but growing number of higher education institutions in the country are forging partnerships with leading local and international firms and with government entities to enhance learning and strengthen their competitive edge.

To bolster industry-academia partnerships MoHESR launched the Absher initiative in 2013 to encourage UAE companies to become more proactive in training, mentoring and developing young Emiratis for today's knowledge-intensive, technology enriched job environments, and to encourage mutually beneficial relationships with academia.

Additionally, to ensure greater alignment between the curricula, graduate skills and workforce demands the UAE launched an important initiative, The National Qualifications Authority (NQA), which sets guidelines and standards, to boost closer alliances between industry and academia. Through its National Occupational Skills Standards (NOSS), the NQA sets the standards for education providers, industry and business sectors in jointly designing and delivering curricula and training programs.<sup>24</sup> NOSS are developed by industry groups working closely with employers and professional bodies to define a minimum level of skills content within a given job. Training providers then use NOSS to inform the skills to be included in the curricula.<sup>25</sup>

## *Strengthening UAE's R&D Culture*

Through collaboration with the private sector, institutions of higher education serve as catalysts for the transfer and production of new knowledge and technologies, while producing the next-generation of concepts and value-added products and

services. It is generally accepted—and econometric analysis shows—that R&D funding contributes to economic growth. Indeed, scientific and technical knowledge, and R&D, are considered the hallmarks of a knowledge-based economy. Yet, increasingly policy makers recognize that in a global innovation environment it is no longer true that basic research performed within the borders will necessarily directly benefit the country. Rather, the economic benefits depend on the degree to which universities (together with entrepreneurs, venture capitalists, and corporations) can translate the results of basic research into marketable innovations. The benefits now also depend on how well firms commercialize and produce those innovations through global networks.

A noteworthy program is the UAE's National Research Foundation (NRF), a MoHESR initiative launched in 2008, with the intention of increasing and enhancing research and innovation activities in the country and fostering creative ideas within the UAE research community.<sup>26</sup> Based on the model of cooperation between government, industry and academia, the NRF brings together universities, government, and the private sector, to promote research activity in private and public universities, colleges, centers, institutes and companies in the UAE.

This model is allowing the UAE to create a strong base for research in higher educational institutions and developing research leadership and competitiveness in the country. The NRF supports research projects that undergo international peer review, that contribute social and economic benefits to the UAE, and enhance the development process in the country. The NRF assists in the knowledge industry and supports innovation through the awareness and application of knowledge and its dissemination through multiple institutions of higher education in the state.<sup>27</sup>

In an assessment of the R&D performance of UAE universities, research by the Emirates Competitiveness Council found that within R&D universities professors typically spend half of their time on R&D. When the teaching session is not on-going the time allocated to teaching is instead directed at R&D. This time use split agrees with the general research-teaching-service shares reported in most western institutions (40%-40%-20%).<sup>28</sup> This is not surprising given that the research institutions in the UAE essentially compete in a global marketplace.

<sup>24</sup> UAE National Qualifications Authority (2014)

<sup>25</sup> UAE National Qualifications Authority (2014)

<sup>26</sup> UAE National Research Foundation (2014)

<sup>27</sup> UAE National Research Foundation (2014)

<sup>28</sup> Emirates Competitiveness Council (2013)

**Figure 8: A Glimpse into Industry-Academia Partnerships in the UAE**

### United Arab Emirates University Strategic Partnership with Mubadala Aerospace and Lockheed Martin

Mubadala Aerospace has signed an AED 4.9 million agreement with UAE University (UAEU) to train the next generation of Emirati technicians to work at Strata's aircraft composite production facility. The new initiative, with key modules delivered by professional trainers from Lockheed Martin, builds on the success of existing programs, which have already resulted in the employment of over 95 Emirati staff at Strata over the past two years.

Strata Manufacturing PJSC (Strata), an aero-structures manufacturing facility wholly owned by Mubadala Development Company, has been making significant strides in its efforts to recruit, train, and promote local talent.

This program will introduce an additional 90 to 100 Emirati employees to Strata by early 2015, using the high level technical skills gained to construct composite parts for the world's leading Original Equipment Manufacturers (OEMs) including Airbus and Boeing. Hosted in a state-of-the-art facility built at UAE University, equipped with the tools used in the working Strata environment, students will also receive essential training in math and sciences to ensure they are fully prepared to develop their careers in the high-tech aerospace industry.

### Khalifa University Strategic Partnership with Etisalat and British Telecom

The Etisalat-BT Innovation Center (EBTIC), is a jointly owned venture between Etisalat, British Telecom and Khalifa University housed on the university's campus. EBTIC aims to be an enabler for innovation in the United Arab Emirates through investment in people by creating one of the largest Next Generation Networks, Systems and Services

research and innovation centers in the Middle East through partnership between Etisalat, BT, Khalifa University and the UAE Government.

Among its goals is to establish a center of excellence for research and innovation in Next Generation Networks and ICT Systems and Services by attracting talent from across the world to the UAE and attempting to build a regional innovation network; to promote world-class research, technology transfer, research training and open innovation; and to put in place the support infrastructure to facilitate, encourage and enable industry collaboration with the UK and the UAE.

These partnerships help Khalifa University provide the UAE with highly qualified engineers, technologists and scientists, capable of making major contributions as leaders and innovators of industry and society.

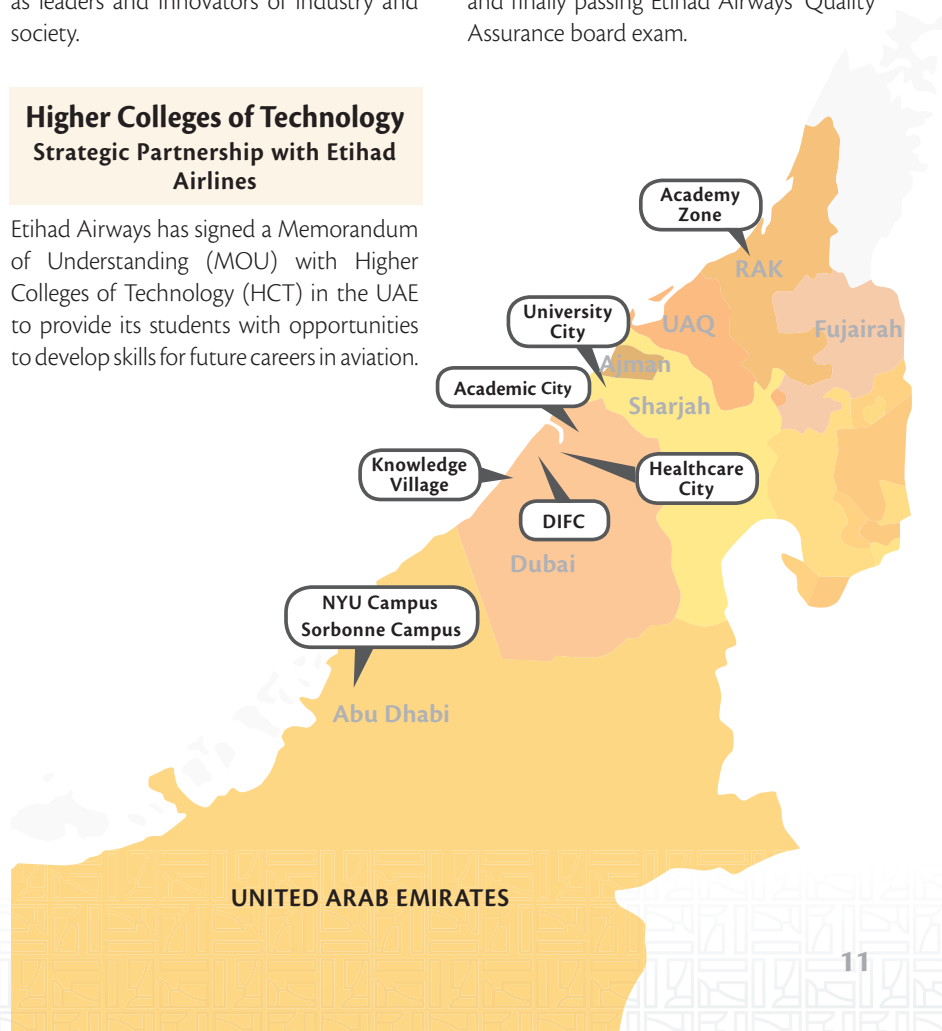
### Higher Colleges of Technology Strategic Partnership with Etihad Airlines

Etihad Airways has signed a Memorandum of Understanding (MOU) with Higher Colleges of Technology (HCT) in the UAE to provide its students with opportunities to develop skills for future careers in aviation.

The agreement between the Abu Dhabi-based airline and the higher education institution supports the development of the UAE national workforce by providing students with the skills and knowledge required to pursue a career in aviation engineering technology.

At the forefront will be work placements by HCT students with Etihad that will take place during their courses. Specialist seminars and workshops in areas such as engineering, business administration, hospitality and human resource management will also be offered to the students.

The certification process for the Graduate Engineering Trainee Program is threefold and includes obtaining basic licences after fulfilling the requirements of the European Aviation Safety Agency (EASA), the UAE's General Civil Aviation Authority (GCAA) and finally passing Etihad Airways' Quality Assurance board exam.



# Higher Education in the UAE

## Leading with Educational Hubs and Transnational Education

In the world's most successful and dynamic economies, competitiveness and innovation are concentrated in clusters. A country's ability to produce high-value products and services that support high wage jobs depends on the creation and strengthening of such clusters.<sup>29</sup> Educational hubs are an important aspect of the UAE's strategy to enhance its competitiveness, global brand, and international ranking.<sup>30</sup> These clusters of academic institutions have recently attracted international attention and include: International campuses of New York University and Sorbonne in Abu Dhabi; Dubai Knowledge Village; Dubai International Academic City; Healthcare City; and Dubai International Financial Center, University City in Sharjah; and Academy Zone in Ras al Khaimah. Through such education hubs, the UAE is building a critical mass of national and international actors—including students, institutions, companies, knowledge industries, science and technology centers—who engage in education, training, knowledge production, and innovation.

Today the UAE is among the largest hosts of transnational education in the world with more than 37 international institutions of higher learning within its borders.<sup>31</sup> At a time when global knowledge and talent is at a premium, being a center of transnational education provides the UAE with the significant competitiveness potential for attracting the brightest minds—faculty and students—from within the country and externally to participate in shaping an innovation-driven economy. Such clusters create environments that are difficult to replicate and allow the UAE to maintain a competitive position in the global knowledge market.

*"More Emiratis will enter higher education, where they will enrich their minds with the skills that their nation needs to fuel its knowledge economy. Universities will listen closely to the needs of Emiratis and of their future employers, and will balance their teaching to the demands of the workplace."*

UAE Vision 2021

## CONCLUSION

As it prepares itself to be a leading knowledge-based economy of the 21st century, the UAE continues to put in place several policies, procedures and institutions towards its long-term growth and prosperity. Despite the UAE's young history, its postsecondary system has made enormous strides since its inception in 1976, keeping pace with trends in global education, best-practices, and international standards, while establishing strong collaborations with leading institutions of higher learning from around the world. In the process, there have been several success stories including, most remarkably the higher educational attainment women (among the highest women to men ratios in the world); universal, free access to higher education for all citizens; and government institutions to uphold international standards, accreditation and accountability.

While higher education progress has been substantial, the UAE has not lost sight of the fact that several other countries are bolstering their knowledge capacities as part of their competitiveness strategies. Singapore, India and China, and other economies are augmenting and enhancing the quality of their higher education systems in a bid to attract global talent and compete with more established innovation-driven economies. In this regard the UAE's educational hubs are not only building national capacity, but they are leveraging the country's great geographic location to act as a bridge connecting the three major economic blocs of the world—the USA, Europe and the Far East. In so doing, it is also building on the nation's historical legacy and ability to bring people and ideas together. The UAE is well-placed to become a 'magnet' economy, supplying the region with knowledge intensive skills.

The higher education system provides the framework and context for UAE policymakers' overarching objective: to focus on the nation's human capacity development. The UAE's vision is to ensure the younger generation is given every opportunity to play influential roles in advancing and leading its knowledge-based economy. In its quest to provide an unparalleled education for its citizens, and to attract the brightest minds to tertiary education in the UAE, students are being equipped with habits of the mind for success in the 21st century, entrepreneurial drive and a good understanding of their relationship with the world. This prime opportunity allows individuals to build their capacities and create the next generation of knowledge products and services. Beyond this there is an impetus for graduates to apply their knowledge towards addressing regional and global challenges, and shape the nation's future as a competitive knowledge-based economy.

<sup>29</sup> Michael Porter (2001)

<sup>30</sup> See Knight (2009)

<sup>31</sup> See Knight (2011)

# Appendix

This index is in no way a ranking of any sort. A comprehensive ranking is certainly beyond the scope of our remit, and the institutions featured here are a small sample of the country's wide-ranging institutions committed to the nation's competitiveness.

Institutions Featured (in alphabetical order):

1. American University of Sharjah
2. ESMOD, Dubai
3. Higher Colleges of Technology
4. INSEAD, Abu Dhabi
5. Khalifa University
6. Masdar Institute of Science and Technology
7. Mohammed Bin Rashid School of Government
8. New York University, Abu Dhabi
9. Paris-Sorbonne University, Abu Dhabi
10. RAK Medical and Health Sciences University
11. United Arab Emirates University
12. University of Sharjah
13. Zayed University



Central Courtyard of Masdar Institute Campus

## American University of Sharjah

**AUS** | الجامعة الأميركية في الشارقة  
American University of Sharjah

AUS combines a world-class American university education with the opportunity to experience true campus life in a regional setting. Because of this, AUS continually attracts top high school graduates from across the region. AUS is proud to be a reflection of the progressive spirit of the Emirates, admitting bright young men and women as students solely based on their academic qualifications regardless of race, color, gender, religion, disability, age or national origin. Strategically placed between the Far East and the West, between Africa and Asia, AUS's location is one of its greatest assets, attracting students from all parts of the world and providing an environment of a wide variety of students from different backgrounds. [www.aus.edu](http://www.aus.edu)

### Competitive Advantage Spotlight

An international marketplace requires skills that are global in nature. American University of Sharjah offers students cross-border perspectives and solutions, through its extensive cross-university partnership program and partnerships with international companies. This cultivates student with greater sensitivity to cultural differences, openness to new and different ideas, and the flexibility to adapt to change.

All six of the bachelor degree programs in the AUS College of Engineering are accredited by ABET, the recognized accrediting organization for college and university programs in applied science, computing, engineering, and technology of the United States. AUS was the first university in the Gulf region and the second outside the United States to receive this accreditation.

The Bachelor of Architecture program of the College of Architecture, Art and Design is accredited by the National Architectural Accrediting Board (NAAB) of the United States. This is the first program outside of North America to receive this prestigious accreditation. NAAB is the only organization authorized to accredit professional degree programs in architecture in the United States.

### Exchange Programs

AUS students may cross-register at the following international universities:

- American University in Washington
- Louisiana State University
- Sciences Po, Paris
- University of Chester (UK)
- University of Vermont
- West Virginia University
- Lourdes College
- Virginia Polytechnic Institute & State University
- Clarion University of Pennsylvania

### Internships & Career Placement

Students in AUS get the opportunity to work in organizations and companies such as:

- KPMG
- Ernst & Young
- Emirates NBD
- MetLife Alico
- PriceWaterhouse Coopers
- Central Bank
- Total
- Al Bukhoosh
- CNN
- Microsoft
- Mubadala
- Dubai World
- HSBC
- ADNOC
- Emirates Airlines

## ESMOD, Dubai



ESMOD Dubai is the first Fashion Institute established in the Middle

East fully dedicated to fashion. ESMOD Dubai is a branch of ESMOD International Fashion Institutes and University Group with a global reputation and a growing network of schools. The school also offers a Business Administration Course related to professions in the fashion sector, with post-graduate courses in fashion marketing and management. ESMOD Dubai has a unique range of specialisations: Ready to Wear, Deluxe Ready to Wear, Creator, New Couture & Haute Couture. ESMOD Dubai has a rich cultural diversity, counting more than 70 nationalities among its students and graduates. [www.esmod-dubai.com](http://www.esmod-dubai.com)

### Competitive Advantage Spotlight

ESMOD is a worldwide leader in fashion education. ESMOD has developed a high level of training that is equally technical and artistic. Students develop computer skills, knowledge of new textiles, marketing and business skills with an international approach and vision. Learning combines creativity, technics and professionalism through a network of 19 schools located in around the world.

ESMOD Dubai is the only regional institution fully dedicated to fashion education, providing fashion courses based on a 170 years patented method actualized yearly by fashion design & pattern making program coordinators.

Faculties are trained yearly either by visiting trainers or in ESMOD-ISEM Paris home campus. Faculties are professional fashion designers & pattern makers with proven professional experience and success in the industry.

### ESMOD Fashion Designers Incubator

The ESMOD Fashion Designers Incubator is a unique platform to guide young designers and ESMOD Graduates through the design, manufacturing, retailing, branding and marketing of their collections. ESMOD graduates to showcase their collections, accessories and other exclusive creations. With consideration prices are kept to a minimum markup to be in line with market prices and for ESMOD Designers to generate maximum revenue.

Its goal is to support ESMOD Fashion Design Graduates to launch their brands and to enhance the business skills of aspiring fashion entrepreneurs who follow ESMOD Dubai Fashion Marketing Certification training by teaming them with ESMOD Designers.

### Global Network

ESMOD offers many off-campus study options worldwide. Second year students can decide to study in one of ESMOD's global schools for a year to discover new cultures and environment of fashion. ESMOD's global network includes 24 schools located in 16 countries:

- EUROPE: France, Germany, Norway
- ASIA: China, Japan, South Korea, Indonesia
- MIDDLE EAST: Lebanon, Syria, UAE
- AFRICA: Tunisia
- SOUTH AMERICA: Brazil

## Higher Colleges of Technology



Founded in 1988 by a federal decree, the Higher Colleges of Technology (HCT) is the largest higher educational institution in the UAE, having a reputation for innovative learning. HCT offers many different, work-relevant, English-taught programs in Applied Communications, Business, Computer & Information Science, Engineering Technology, Health Sciences and Education. All programs are designed in consultation with business and industry leaders to ensure the students' skills are job-relevant and to the highest standards. [www.hct.ac.ae](http://www.hct.ac.ae)

### Competitive Advantage Spotlight

The Center of Excellence for Applied Research & Training (CERT) is the commercial, research and training arm of the Higher Colleges of Technology (HCT). Since its creation in 1996, CERT has grown to be one of the largest private education providers in the Middle East. With the development of new technology initiatives, CERT is unique in being the only such provider in the region.

CERT provides the only on-demand super-computing center in the South Asia, Middle East, and the North Africa regions. The CERT Blue Gene supercomputer offers 5.7 teraflops calculating speed to corporate clients for use in biotechnology, nanotechnology, and genetics research as well as oil and gas simulation.

CERT Technology Park provides a central base to both local and international technology corporations looking to establish themselves in the Middle East and North Africa region. Developed to promote the exchange of technical knowledge and expertise between the educational and business communities, the CERT Technology Park offers distinct incentives to organisations such as cost-effective office facilities, high-quality specialized infrastructure and access to the extensive resources of the Higher Colleges of Technology. The CERT Technology Park is home to international companies such as IBM, Honeywell and Intel.

### International Partnerships

- Wharton School of the University of Pennsylvania
- University of Waterloo
- Oxford, Cambridge
- MIT
- Harvard
- Stanford
- University College London
- IBM
- Boeing
- Siemens
- TERI
- University of Melbourne
- Asia Pacific University-Japan

### International Opportunities

Each year, students participate in international events, conferences and courses which take them to international destinations such as Australia, China, United States of America, Japan and UK to name a few.

## INSEAD, Abu Dhabi



INSEAD offers several Management programs: the Transition to General Management; the Strategic R&D Management; and the Supply Chain Management program. Through its programs, it is training students

from all over the world to become better and more innovative managers. INSEAD was founded in 1957 as a business school for the new Europe. Until today, it is considered to be the only business school to have three campuses in different world regions: Europe, Asia and the Middle East (located in Abu Dhabi, UAE). [campuses.insead.edu/abu\\_dhabi](http://campuses.insead.edu/abu_dhabi)

### Competitive Advantage Spotlight

INSEAD is one of the largest Executive Education providers in the world with over 45 open enrolment programs and over 170 customized programs in more than 40 locations. These programs are designed to match the needs of business leaders in an increasingly uncertain world.

True thought leaders change the way we look at the world. Their ideas disrupt accepted practices and set a new path for others to follow. Recently seven INSEAD professors have been identified among the world's most influential business disrupters, by Thinkers50, a biennial ranking of management and leadership thinkers. INSEAD's presence in Abu Dhabi demonstrates the importance accorded to developing UAE's management capacity.

### Company-Specific Education

INSEAD has been working with the top management of the world's leading companies in developing executive education tailor-made to meet strategic needs. Working closely with its partners, INSEAD develops an understanding of their needs and capabilities, which allows it to develop a solution specific to the requirements and challenges of its partners. INSEAD has already launched a number of innovative company-specific programs in the Middle East with companies such as Mubadala, the National Commercial Bank of Saudi Arabia, the Abu Dhabi Tourism Authority and Johnson & Johnson.

### Social Innovation Center

The INSEAD Social Innovation Center is an inclusive platform for cross-disciplinary research and engagement in the area of social innovation. A diverse group of research teams explore innovative solutions in business and policy to address global social and environmental challenges. The center consists of several research groups that work on initiatives covering several areas:

- Research groups and initiatives
- Corporate Social Responsibility & Ethics
- Healthcare Management Initiative
- Humanitarian Research Group
- Social Entrepreneurship
- Sustainability

## Khalifa University



Khalifa University of Science, Technology and Research is an independent, non-profit, coeducational institution

inaugurated in 2007 as part of an Abu Dhabi Government initiative. Khalifa University is making a mark internationally as a research university that promotes regionally relevant research and that catalyzes innovation in the UAE. Its competitive edge is sharpened through its tradition of partnering with leading international academic institutions. See: [www.kustar.ac.ae](http://www.kustar.ac.ae)

### Competitive Advantage Spotlight

Khalifa University is closely aligned with Abu Dhabi's 2030 vision to expand the knowledge economy and diversify into strategic high technology sectors. Current courses include bachelor's degrees in Computer Science, Communications, Electrical and Electronic Engineering, Mechanical Engineering, Aerospace Engineering, Civil Engineering, Industrial and Systems, and Biomedical Engineering and master's degrees in Electrical & Computer Engineering, Nuclear Engineering, Information Security and International and Civil Security, and a doctorate degree program in Engineering with optional specialization in Mechanical, Aerospace, Nuclear, Biomedical, Electrical & Computer, or Robotics Engineering.

### Strategic Partnerships

Students and faculty at Khalifa University stay current globally with opportunities to conduct R&D and apply learning through the university's network of leading institutions which include:

- The Georgia Institute of Technology
- The Korea Advanced Institute of Science & Technology
- The University of Bristol
- Armed Forces
- ADNOC
- Dubal, Mubadala
- Emirates Nuclear Energy Corporations
- The Federal Authority for Nuclear Regulation (FANR)
- Etisalat
- British Telecom

### Research and Innovation Centers

Khalifa University conducts R&D in five priority research areas aligned with Abu Dhabi 2030 vision: Information and Communications Technology (ICT), energy and the environment, aerospace, transport and logistics, security, and healthcare.

Major research centers and groups include:

- Etisalat-British Telecom Innovation Center (EBTIC)
- ATIC-SRC Center of Excellence for Energy Efficient Electronic Systems (AEC4S)
- KU-Mubadala Aerospace Research & Innovation Center (ARIC)
- Visual Signal Analysis & Processing Center (VSAP)
- KU Robotics Institute (KURI)
- Nuclear Engineering Labs
- Biomedical Engineering Labs
- Information Security Group
- International & Civil Security Institute

Future research areas are expected to include energy and environment, materials and manufacturing, and medical research.

## Masdar Institute of Science and Technology



Masdar Institute of Science and Technology is an independent, non-profit, research-driven graduate-level university dedicated to higher education and research in advanced energy and sustainable technologies. Established as an ongoing collaboration with the Massachusetts Institute of Technology (MIT), Masdar Institute integrates theory and practice to incubate a culture of innovation and entrepreneurship that will develop tomorrow's critical thinkers and leaders in sustainable technologies and advanced energy. Masdar Institute seamlessly integrates research and education, positioning UAE as a knowledge hub and engine for socio-economic growth. It also supports economic diversification by nurturing human and intellectual capital and partnering with industry leaders. [www.masdar.ac.ae](http://www.masdar.ac.ae)

### Competitive Advantage Spotlight

Masdar Institute of Science and Technology is the world's first graduate-level university dedicated to providing real-world solutions to issues of sustainability. The Institute's goal is to become a world-class research-driven graduate-level university, focusing on advanced energy and sustainable technologies. Within its campus, Masdar Institute is establishing an educational environment, a culture of R&D excellence, and ties with government and industry that are essential to fostering indigenous innovation, human capital and knowledge development, and a spirit of entrepreneurship and global competitiveness.

The Massachusetts Institute of Technology (MIT) is Masdar Institute's primary partner and stakeholder. MIT has played a key role in the creation of Masdar Institute as a whole. The joint partnership extends from collaborative research and development of the Institute's degree programs, to the assessment and recruitment of potential faculty, students and senior administration staff. Masdar Institute graduates are issued, in conjunction with their Master of Science diploma, a certificate jointly signed by Masdar Institute & MIT in recognition and endorsement of the successful completion of the requirements for the Master of Science degree.

### Technology Transfer

The Technology Transfer Office (TTO) is responsible for managing the Institute's intellectual property and promoting the effective commercialization of Masdar Institute's research. To achieve this, the TTO manages the patenting and licensing of faculty and student inventions, provides training on intellectual property and advises on intellectual property terms of sponsored research and other agreements with external parties.

### Research Domains

*Water, Environment and Health:* Research that addresses challenges behind ensuring sufficient, cost effective and equitable access to water, while maintaining the integrity of natural water supplies and minimizing any impact on the environment.

*Future Energy Systems:* Development and deployment of technologies, systems and policies for efficient and cost effective production, delivery and use of energy with minimal impact on the environment.

*Microsystems and Advanced Materials:* Projects that explore and develop microelectronic devices and circuits as fundamental building blocks that enable current and future transformations in energy, embedded systems, medical electronics and large scale systems.

## Mohammed Bin Rashid School of Government



كلية محمد بن راشد  
للإدارة الحكومية  
MOHAMMED BIN RASHID  
SCHOOL OF GOVERNMENT

The Mohammed Bin Rashid School of Government is a research and teaching institution focusing on public policy in the Arab world. Established in 2005, the school aims to promote good governance through enhancing the region's capacity for effective public policy. The school is committed to the creation of knowledge, the dissemination of best practice and the training of policy makers in the Arab world. Over 2,000 high-level private and public officials from over 200 organizations throughout the region have attended the school's executive education programs since their roll-out in 2005. [www.dsg.ae](http://www.dsg.ae)

### Competitive Advantage Spotlight

The school has established collaborations with local and international institutions to deliver educational programs, regional forums and conferences that share best practices and enhance the skills of policy makers in the region.

*Project Encounter:* A non-profit venture based in the UAE and hosted by the Mohammed bin Rashid School of Government that promotes constructive engagement between the Middle East and the West, and facilitates on-the-ground exchange.

### Executive Education

Designed and implemented in cooperation with international partners, the school's executive education programs are taught by leading scholars and practitioners from a network of regional and international educational institutions. Customized courses delivered to institutions including:

- Dubai Water and Electricity Authority (DEWA)
- Mohammed bin Rashid Programme for Leadership Development
- Sheikh Khalifa Government Excellence Program
- Government of Iraq
- Etisalat
- Dubai Courts

### Research Specialization

- Applied research in public policy and management
- Executive education for senior officials and executives
- Knowledge forums for scholars and policy makers
- Research specializations in:
  - Economic Development
  - Youth Inclusion
  - Operations Management
  - Community Development
  - Public Administration and Governance
  - Education
  - Gender and Public Policy

## New York University, Abu Dhabi



NYU Abu Dhabi (NYUAD) will be a center of cutting-edge research, scholarship, and cultural activity. Situated at a strategic hemispheric crossroads in a rapidly evolving city, the Institute creates opportunities for leading faculty members from across

the arts, humanities, social sciences, sciences, engineering, and the professions to carry out creative scholarship and conduct research on issues of major disciplinary, multidisciplinary, and global significance. [nyuad.nyu.edu](http://nyuad.nyu.edu)

### Competitive Advantage Spotlight

NYUAD is the first comprehensive liberal arts and science campus in the Middle East to be operated abroad by a major American research university.

The University nurtures in students the analytic and communicative skills, the breadth and depth of intellect, and the international perspective and experience that leadership in an increasingly interconnected world requires; engages students in active pursuit of knowledge and understanding; to foster in them the readiness and ability to embrace conceptual and ethical complexity; strengthens students' confidence and ability as producers of knowledge; and offers students opportunities, both local and global, that reinforce their development into wise and effective agents of a more united, generous, and responsive world.

NYUAD will be a center of innovative undergraduate and graduate education, and of distinctive scholarship, research, and artistic activity. Actively connected to NYU New York and its global sites, NYUAD will embody a new paradigm in higher education for a global world. Fully integrated in Abu Dhabi society, it will help to establish the UAE as a leading international hub of talent, ideas, and innovation.

### The Global Network University

The Global Network University (GNU) is a new paradigm in higher education. Designed to draw the most talented and creative students and faculty from around the world, it enables those students and faculty to circulate seamlessly throughout the network without leaving the University's intellectual community and resources. Research and learning at each of the network's sites are connected to and enhanced by the whole, and students become global citizens.

The fundamental organizational element of the GNU is the portal campus, of which NYU has three: NYU Abu Dhabi, NYU New York, and NYU Shanghai. These are among the 14 global academic centers scattered around the world.

### Research and Innovation

NYUAD is committed to local, regional, and international collaborations to support development of its research, scholarly, and creative activities. It recognizes the need for, and willingly seeks, engagement with faculty and students at other universities, and to collaboratively support the development of new knowledge in the UAE.

NYUAD also seeks relationships with UAE industry and government to address national needs and to jointly contribute to the development of a research environment in the UAE. NYUAD, through the global network of NYU, is also very active in international collaborations.

## Paris-Sorbonne University, Abu Dhabi



Paris-Sorbonne University Abu Dhabi (PSUAD) offers Humanities and Social Sciences programmes that carry the same curricula as in Université Paris-Sorbonne (Paris IV). PSUAD – in collaboration with Université Paris-Descartes – offers

Law and Political Science. The university offers a year-long Intensive French Course for those with no prior knowledge in French, in preparation for their enrolment in the Bachelor degrees. Degrees are granted from Paris and recognized worldwide.

[www.sorbonne.ae](http://www.sorbonne.ae)

### Competitive Advantage Spotlight

The research programs at PSUAD benefit from the world-class research work carried out in the fields of humanities and social sciences at Université Paris-Sorbonne and Paris-Descartes. Upon completion of their undergraduate studies in Abu Dhabi, students will be able to choose whether to carry on with one of the Master's programmes in Abu Dhabi or to join one of the departments in Paris.

PSUAD plans to open a research centre, in the field of humanities and sciences, which aims to diversify specializations and research at the university and reinforce students' proficiency in the sciences by encouraging their analytic and critical thinking skills. PSUAD is committed to opening new avenues of research, development and employment catering to demand and market evolution. The university's future initiatives include plans to commence a PhD program making studying and working in the UAE more attractive for students and employees.

The professors teaching at PSUAD are the same renowned professors currently teaching at Paris-Sorbonne and Paris-Descartes, in Paris. Some travel to Abu Dhabi to teach intensive courses for a short duration of a few weeks.

### Dialogue between Cultures

Underscoring the importance of dialogue across cultures, and the exchange of knowledge, PSUAD holds year round lectures, round table discussions and colloquia on various topics in a wide range of fields. Through its academic know-how and extensive network of professionals and intellectuals, PSUAD serves as a valuable community connector with conferences delivered in English, Arabic and French at its campus.

PSUAD constantly collaborates with government organisations and entities to obtain a deeper insight into the UAE's history. As a UAE university, PSUAD plays an active role in the society of the UAE and aspires to become a center for research promoting knowledge especially on the UAE heritage and culture.

### Research and Innovation

The Bachelor of physics is in collaboration with the renowned Pierre and Marie Curie University in France and prepares students for future global challenges related to science, energy and the environment. The Pierre and Marie Curie University (UPMC) belongs to the top 50 worldwide and to the top 10 European best universities according to the latest Shanghai Academic ranking. With 3,250 researchers in 120 laboratories, the Pierre and Marie Curie University partners with major French organizations and prestigious foreign universities, like PSUAD, to promote academic excellence.

## RAK Medical and Health Sciences University



RAK Medical and Health Sciences University (RAKMHSU) is committed, through its offering of academic programs in the medical and health sciences fields, to prepare graduates who are able to develop critical skills in their practice and application of knowledge, equipping them with practical and clinical skills and knowledge and enabling them to make a valuable contribution to patient and health care as individuals and as responsible members of society. The University is also committed to contributing to the advancement of knowledge through its support for research conducted by its faculty and students, and the promotion of lifelong learning bound by ethical clinical practice.

[www.rakmhsu.com](http://www.rakmhsu.com)

### Competitive Advantage Spotlight

RAKMHSU's vision is to be a leading medical and health sciences University in the UAE dedicated to the pursuit of academic excellence by fostering, disseminating and applying knowledge and intellectual values to ensure an enriching future for the student community and preparing them to join the medical and health sciences field of the 21st century.

RAKMHSU offers its programs through 4 Colleges:

- RAK College of Medical Sciences
- RAK College of Dental Sciences
- RAK College of Pharmaceutical Sciences
- RAK College of Nursing

All the programs offered by RAKMHSU have been granted accreditation by the Ministry of Higher Education and Scientific Research, UAE. RAK College of Medical Sciences is also listed in AVICENNA Directory maintained by the University of Copenhagen in collaboration with the World Health Organization (WHO) and the World Federation for Medical Education (WFME).

### International Collaborations

Establishing academic collaborations/associations with Universities of international repute is a continuous process at RAKMHSU in order to promote student/faculty exchange, joint research and curriculum development. Academic collaborations currently available with the following institutions:

- New York Medical College
- University of Findlay, USA
- Louisiana State University Health Sciences Center
- The Hashemite University, Jordan

### CEDAR

CEDAR updates faculty with the latest developments in the field of medical education especially in curricular strategies, teaching-learning modalities, planning and definition of the learning outcomes and most importantly in designing and conducting valid, reliable and appropriate assessments. CEDAR provides educational and facilitating support for the development, implementation and reviewing of all the educational programs by:

- Promoting research and development in the field of education.
- Encouraging a learner-centric, objective-based and outcomes-driven, medical education curriculum.
- Incorporating evidence based approach in the development and conduction of faculty development workshops.

## United Arab Emirates University



جامعة الإمارات العربية المتحدة  
United Arab Emirates University

UAEU is the first national university in the United Arab Emirates. Founded in 1976, UAEU is a comprehensive, research university. As the UAE's flagship university, UAEU offers a full range of accredited, high-quality graduate and undergraduate programs. With a distinguished international faculty, state-of-the-art new campus, and full range of student support services. UAEU works with its partners in industry to provide research solutions to challenges faced by the nation, the region, and the world. The University has established research centers of strategic importance to the country and the region which advance knowledge in critical areas ranging from water resources to cancer treatments.

[www.uaeu.ac.ae](http://www.uaeu.ac.ae)

### Competitive Advantage Spotlight

Hundreds of research studies have focused on the importance of faculty and good teachers for student achievement. No other measured aspect of schools is nearly as important in determining student achievement. To ensure an on-going supply of quality faculty in the country, UAEU has a program for National Teaching Assistants (NTA).

High-achieving students are selected for the program and are appointed according to a definite schedule to fill faculty positions within the country. Specifically, faculty members are being developed in: Humanities and Social Sciences; Sciences; Education; Business and Economics; Law; Food & Agriculture; Engineering; Medicine and Health Sciences; Information Technology.

The school offers bachelors, masters and PhD-level courses, with over 650 faculty members.

### Government Partnerships

- UAE Ministry of Education
- Abu Dhabi Education Council
- ADWEA - Abu Dhabi Water & Electricity Authority
- Careers UAE
- Sultan Qaboos University - Joint Committee
- TANMIA - National Human Resource Development and Employment Agency
- ADMAF - Abu Dhabi Music and Arts Foundation
- NAPO - National Admissions & Placement Office for Higher Education
- State Audit Institution

### Research News

- UAEU is ranked best research university in GCC, 2nd in the Arab world.
- UAEU wins 42 of 55 Emirates Foundation Research Grant Awards.
- Over 150 research projects funded between 2009 and 2010 at a total value of 50 million AED.
- UAEU develops first microchip in the UAE and will be used to pick up nerve signals in paralyzed limbs.

## University of Sharjah



The University of Sharjah (UOS) is a comprehensive academic institution with a distinctive learning style and a global vision. UOS aspires to be among the leading universities in the Arab World, renowned and

recognized around the globe for offering comprehensive academic and professional programs of the highest quality, for its distinctive style of learning that engages and prepares students for leadership roles in the society, and for being a major international center of study and research in the quest to improve human life. UOS has 14 colleges and offers 80 programs at the bachelors, masters and doctoral levels.

[www.sharjah.ac.ae](http://www.sharjah.ac.ae)

### Competitive Advantage Spotlight

UOS is the first and only university in the UAE to employ the concept of Domain Clusters where colleges and centers of similar fields are physically located in close proximity. This unique feature of the University facilitates sharing common resources like labs and libraries between the colleges. It also allows students of similar fields to interact and share their experiences and challenges.

UOS offers the largest number of accredited programs in the UAE. The programs cover a wide range of academic and professional disciplines including literature, arts, humanities, social sciences, engineering, natural and life sciences, medical sciences and healthcare, law and Islamic studies, fine arts and design, communications and journalism and business administration. The University currently offers 51 bachelor degrees, 15 master's degrees, 4 PhD degrees, 1 graduate and 9 associate diploma degrees.

UOS has achieved a major leap forward in scientific research over the last several years. Numerous innovative research projects have been funded and the University makes available state-of-the-art research equipment to researchers in its various specialized laboratories. The University is and leading in scientific research at the national and regional levels and is drawing international attention.

### Global Strategic Alliances

UOS strives to sustain long-term cooperation agreements and strategic alliances with renowned academic institutions in the UAE, USA, Canada, United Kingdom, Malaysia, Japan, Australia, Lebanon, Germany, Jordan, Egypt, France, Italy, Bahrain and Morocco.

### Research and Innovation

UOS has optimized its potential in health sciences and research through its Colleges of Medicine, Pharmacy, Dentistry and Health Sciences in addition to University Hospital - Sharjah (UDHS), the Sharjah Institute for Medical Research of the Sharjah Academy for Scientific Research, and the Clinical Training Center (CTC) as well as the Biotechnology Program in the College of Sciences. This vision has created a unique setting, the "Sharjah Medical Excellence Cluster" or SMEC.

## Zayed University



From its founding in 1998, education at Zayed University has featured the adaption of international standards and best practices to achieve its vision and mission of becoming a premier university in the United Arab Emirates (UAE) and throughout the Arab world and, increasingly, a global model for higher education. Zayed University's vision and mission empower the university to enhance the international competitiveness of the UAE. As a federal university with national and regional impact, Zayed University educates Emiratis who are proud of their rich culture, heritage and language and prepared to become the next generation of leaders in their families, their communities and their nation. [www.zu.ac.ae](http://www.zu.ac.ae)

### Competitive Advantage Spotlight

The Zayed University Learning Outcomes (ZULOs) form the foundation of its academic program. The ZULOs are:

*Critical Thinking and Quantitative Reasoning:* ZU graduates will be able to demonstrate competence in understanding, evaluating, and using both qualitative and quantitative information to explore issues, solve problems, and develop informed opinions.

*Global Awareness:* ZU graduates will be able to understand and value their own and other cultures, perceiving and reacting to differences from an informed and socially responsible point of view.

*Information Literacy:* ZU graduates will be able to find, evaluate and use appropriate information from multiple sources to respond to a variety of needs.

*Language:* ZU graduates will be able to communicate effectively in English and Modern Standard Arabic, using the academic and professional conventions of these languages appropriately.

*Leadership:* ZU graduates will be able to undertake leadership roles and responsibilities, interacting effectively with others to accomplish shared goals.

*Technological Literacy:* ZU graduates will be able to effectively understand, use, and evaluate technology both ethically and securely in an evolving global society.

### New Institutes

Six new Institutes have been created, aligned with national and regional priorities, based on evidence-based applied research and analysis:

- Institute for the Arabic Language
- Institute for Islamic World Studies
- Institute for the Development of Human Capital
- Institute for the Study of Emirates and Gulf Societies
- Institute for Leadership, Innovation and Entrepreneurship
- Institute for Global Dialogue and World Peace

### In the News

- The UAE National Film Library and Archive (UNFLA), which will document the evolution of the UAE film industry, has been officially launched at the Zayed University.
- Scientific Research Ethics Committee to propose policy and controls for connecting scientific research with priority issues of concern to the community

# References

- Abu Dhabi Education Council (ADEC), [www.adec.ac.ae](http://www.adec.ac.ae)
- Al Maskari, Shaikha, "Emirati women are pioneers in their fields," *Gulf News*, November 14, 2013
- American University of Sharjah, [www.aus.edu](http://www.aus.edu)
- Attis, David, *Higher Education and the Future of U.S. Competitiveness*, [www.educause.edu](http://www.educause.edu), accessed Jan 05 2014
- Commission for Academic Accreditation, [www.caa.ae](http://www.caa.ae)
- Cornell University, INSEAD, and the World Intellectual Property Organization (WIPO), *The Global Innovation Index 2013*, Geneva, Ithaca, and Fontainebleau 2013
- Dubai School of Government, [www.dsg.ae](http://www.dsg.ae)
- ESMOD Dubai, [www.esmod-dubai.com](http://www.esmod-dubai.com)
- Gulf News: [gulfnews.com/news/gulf/uae/general/first-emirati-graduates-from-etihad-engineering-programme-1.1241767](http://gulfnews.com/news/gulf/uae/general/first-emirati-graduates-from-etihad-engineering-programme-1.1241767), accessed Dec 20 2013
- HH Sheikh Mohammed bin Rashid Al Maktoum, *My Vision: Challenges in the Race for Excellence*, Motivate Publishing, Dubai 2006
- Higher Colleges of Technology, [www.hct.ac.ae](http://www.hct.ac.ae)
- INSEAD, Abu Dhabi, [campuses.insead.edu/abu\\_dhabi](http://campuses.insead.edu/abu_dhabi)
- Khalifa University, [www.kustar.ac.ae](http://www.kustar.ac.ae)
- Khoury, Issam E. and Lindsay, Beverly, "Globalization and Higher Education in the Middle East," in *Universities and Global Diversity: Preparing Educators for Tomorrow*, ed. Beverly Lindsay, Wanda J. Blanchett, Routledge, Abingdon, UK 2011
- Knight, Jane, "Education Hubs: A Fad, a Brand, an Innovation?" *Journal of Studies in International Education* 15(3) 221–240, 2011
- Knight, Jane, *Higher Education Crossing Borders: A Guide to the Implications of the General Agreement on Trade in Services (GATS) for Cross-border Education*, Commonwealth of Learning and UNESCO, Vancouver and Paris 2009
- Knowledge and Human Development Authority (KHDA), Government of Dubai, [www.khda.gov.ae](http://www.khda.gov.ae)
- Knowledge and Human Development Authority (KHDA), *The Higher Education Landscape in Dubai 2012*, Dubai 2013
- Maitra, Jayanti, Zayed: *From Challenges to Union*, Center for Documentation & Research, Abu Dhabi 2007
- Masdar Institute, [www.masdar.ac.ae](http://www.masdar.ac.ae)
- Mubadala Development Company, [www.mubadala.com](http://www.mubadala.com)
- New York University, Abu Dhabi, [nyuad.nyu.edu](http://nyuad.nyu.edu)
- Organisation for Economic Co-Operation and Development (OECD), *Frascati Manual*, Paris 2002
- Organisation for Economic Co-Operation and Development (OECD), *OECD Skills Outlook 2013*, Paris 2013
- Oxford Economics, *Global Talent 2021: How the new geography of talent will transform human resource strategies*, Oxford 2012
- Paris-Sorbonne University Abu Dhabi, [www.sorbonne.ae](http://www.sorbonne.ae)
- Porter, Michael, *Research Triangle: Clusters of Innovation Initiative*, Council on Competitiveness, Washington, 2002
- QS World University Rankings 2013/2014, [www.topuniversities.com](http://www.topuniversities.com)
- RAK Medical and Health Sciences University, [www.rakmhsu.com](http://www.rakmhsu.com)
- Science|Business Innovation Board AISBL, 2012
- Strata Manufacturing, [www.strata.ae](http://www.strata.ae)
- Teaching and Learning Research Programme (TLRP) and Economic and Social Research Council (ESRC), *Education, Globalisation and the Knowledge Economy*, London 2008
- UAE Ministry of Cabinet Affairs, *4 Years of Achievements - UAE Government Report 2006-2009*, Abu Dhabi 2009
- UAE Ministry of Cabinet Affairs, *Vision 2021*, [www.vision2021.ae](http://www.vision2021.ae)
- UAE Ministry of Cabinet Affairs, [www.moca.gov.ae](http://www.moca.gov.ae)
- UAE Ministry of Higher Education and Scientific Research (MoHESR), [www.mohesr.gov.ae](http://www.mohesr.gov.ae)
- UAE Ministry of State for Federal National Council Affairs, *Women in the United Arab Emirates: A Portrait of Progress*, Abu Dhabi 2008
- UAE National Qualifications Authority, *The UAE Education System: Overview of Performance in Education*, Abu Dhabi 2013
- UAE National Qualifications Authority, [www.nqa.gov.ae](http://www.nqa.gov.ae)
- UAE National Research Foundation, [www.nqa.gov.ae](http://www.nqa.gov.ae)
- UNESCO, World Conference on Higher Education 2009, *Trends in Global Higher Education: Tracking an Academic Revolution*, Paris 2009
- United Arab Emirates University, [www.uaeu.ac.ae](http://www.uaeu.ac.ae)
- World Economic Forum (WEF), *Global Competitiveness Report 2013-2014*, Geneva 2013
- World Bank, Knowledge Economy Index, [www.worldbank.org/kam](http://www.worldbank.org/kam)
- World Bank, *Stepping Up Skills for More Jobs and Higher Productivity*, Washington 2010
- Zayed University, [www.zu.ac.ae](http://www.zu.ac.ae)

## Photography Credits

INSEAD Abu Dhabi, Khalifa University, Masdar Institute of Science and Technology, UAE University and Zayed University.

## Acknowledgements

The Emirates Competitiveness Council (ECC) would like to acknowledge and thank those institutions who participated in providing information for this study through both formal interviews and discussions. We are grateful to the individuals who graciously shared with the ECC their time and knowledge. Valuable contributions, editorial and logistical support were provided by ECC staff: Mohammad Hassan, Samer Kustantini, Dr. Kai Chan, Faysal Mokadem and Fatheya Essa Juma.

## Disclaimer

The contents of this article and the views expressed here are those of the author only. The content does not in any way represent or reflect the views or approach of the United Arab Emirates Government and/or that of the Emirates Competitiveness Council.

## About the Team

This publication was authored by Shaheena Mohamed, in conjunction with Arwa Al Qassim and Latifa Al Shamsi, who provided contributions and research support. Shaheena is an Advisor at Emirates Competitiveness Council (ECC). She holds a Master of International Affairs (MIA) Degree from Columbia University, New York. Arwa Al Qassim is a Senior Research Analyst in the Data and Statistics Group at the ECC. She holds a masters (MA) in Islamic studies from SOAS, University of London, UK; Latifa Al Shamsi is a Senior Research Analyst in the Strategy Department at the ECC. Latifa completed her post-secondary studies at Zayed University in Dubai, obtaining a masters (MA) in Communications with a specialization in Strategic Public Relations in Travel and Tourism.