

# THE SCIENCE AND TECHNOLOGY PROFILE OF THE UNITED ARAB EMIRATES

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## Introduction

The UAE has established an excellent and diversified system of higher education in a very short period of time. Nationals can attend government institutions free of charge, and a wide range of private institutions, many with international accreditation, supplement the public sector. The country now has one of the highest application participation rates in the world. Ninety-five percent of all females and 80 percent of all males who are enrolled in the final year of secondary school apply for admission to a higher education institution or to study abroad.

### 1. History of science: S&T institutions

Name of the institution	Date of establishment
Zayed University (ZU)	In Abu Dhabi and Dubai, to educate UAE national women. 1998
American Universities of Sharjah	2000
The Al Ain-based United Arab Emirates University (UAEU)	1977
Abu Dhabi University (ADU)	2003
Al Hosn University in Abu Dhabi	2005
Abu Dhabi chapter of the Sorbonne University	2006

## 2. Governance of science: S&T system

### 2.1 Policies (especially S&T and R&D)

The Ministry of Higher Education and Scientific Research is responsible for the accreditation of institutes and degrees and its website, [www.uae.gov.ae/mohe/](http://www.uae.gov.ae/mohe/)

## 3. R&D performers (Establishments/ Institutions)

The Higher Colleges of Technology (HCT), on the other hand, offer a more technically oriented education in 12 well-equipped colleges spread throughout the United Arab Emirates. HCT, in conjunction with its commercial arm, the Centre of Excellence for Applied Research and Training (CERT), prides itself on responding quickly and effectively to current needs in the regional and international workplace.

Establishments/ Institutions	Website references	Scientific fields	Legal status
The Ministry of Higher Education and Scientific Research	<a href="http://www.uae.gov.ae/mohe/">www.uae.gov.ae/mohe/</a>		
Marine Resources Research Centre (MRRC)	<a href="http://www.dnr.sc.gov/marine/mrri/mrri.htm">www.dnr.sc.gov/marine/mrri/mrri.htm</a>	Aquaculture in the UAE	Public (Ministry of Environment and Water)
Institutional Research and Strategic Planning	<a href="http://www.agu.ae/irsp.html">http://www.agu.ae/irsp.html</a>	The institutional effectiveness operation is an ongoing process integrating assessment / planning / budgeting cycle. It involves a systematic gathering, analyzing and interpreting data related to the performance of all the University's units and operations.	
Ministry of Agriculture		Increasing the production of palm trees, dates, and fruit such as citrus and mangoes; fodder, pastoral, and wild plants; long-term research on agricultural	
Zayed University (ZU)	<a href="http://www.zu.ac.ae">www.zu.ac.ae</a>	in Abu Dhabi and Dubai, to educate UAE national women.	1998
Al Ghurair University	<a href="http://www.agu.ae/">www.agu.ae/</a>		Private
United Arab Emirates University (UAEU)	<a href="http://www.uaeu.ac.ae/">http://www.uaeu.ac.ae/</a>	Al Ain-based	Public
American Universities of Sharjah	<a href="http://www.aus.edu/">http://www.aus.edu/</a>		Private

Table 2 Continued

Establishments/ Institutions	Website references	Scientific fields	Legal status
Knowledge Universities (DKU)		2.33-million-square-metre, multi-university complex, in Dubai	Private
Sharjah University	<a href="https://www.sharjah.ac.ae/English/Pages/Main.aspx">https://www.sharjah.ac.ae/English/Pages/Main.aspx</a>	Established as a non-profit institution for higher education in October 1997 by His Highness Sheikh Dr. Sultan Bin Mohammed Al Qassimi, Ruler of Sharjah and Supreme President of the University to be the first university in the emirate of Sharjah.	Public
Ajman University of Science and Technology.	<a href="http://www.ajman.ac.ae/aust/index.htm">http://www.ajman.ac.ae/aust/index.htm</a>		Private
Abu Dhabi University	<a href="http://www.adu.ac.ae/">http://www.adu.ac.ae/</a>	In Abu Dhabi	Public
Al Hosn University	<a href="http://www.alhosnu.ae/alhosnu/home.aspx">http://www.alhosnu.ae/alhosnu/home.aspx</a>	In Abu Dhabi	Private
Abu Dhabi chapter of the Sorbonne	<a href="http://www.paris-sorbonne-abudhabi.ae/index.htm">http://www.paris-sorbonne-abudhabi.ae/index.htm</a>	In Abu Dhabi. has opened on the 8th October 2006	Semi public
University Wollongong			Public
Westfield University			Private

### 3.1 S&T Human Resources

UAEU is focusing on research and graduate studies and is moving from an open enrolment to a more restricted policy. The number of students enrolled at UAEU has increased from 502 in 1977/78 to 14,741 in the first semester of the academic year 2006/07. Enrolled male students represent 21 percent of the total, while female students constitute 79 percent. The total number of faculty members in the University was 700. This growth has necessitated the building of a new campus at Al Maqam, Al Ain that will provide 280,000 square metres of additional educational and residential facilities. In line with the UAE's focus on constructive public-private partnerships in education, UAEU and Mubadala Development Company (see Economic Development) executed a 30-year concession agreement in 2004 that will enable the development of the new facilities on a BOOT basis (Build Own Operate and Transfer). Knowledge Village (KV), established in 2003 in the Dubai Free Zone for Technology and Media, houses more than 200 companies and institutes for training and education. Over 6000 students come to the campus every day. Some 25 percent of them are from countries in the Middle East, whilst other students from Arab and foreign communities residing in Dubai. KV offers undergraduate, postgraduate, MBA and PhD programmes in fields such as computing, technology, business management, life science, fashion and media. Dubai Academic City (DAC), marketed as 'a new global fully integrated academic destination', was officially launched in 2006. Investment in this phased project, which is being built on a 12- million-square-metres campus, is forecast to exceed Dh12 billion (US\$3.27 billion). A completion date is set for 2012.

**Table 3: University Students and Faculty Members (2000-2003)**

1991				2001			
Student No	Women rate	From which Master Degree	Faculty member	Student No	Women rate	From which Master Degree and PH.D.	Faculty members
16,027	77%	168	665	15,955	77%	173	785

Source: ALESCO, 2006b

## 4. Sources of research Funding

**Table 4: S&T Input–Output Indicators (1990–2002)**

Public expenditure on education as % of GDP		Public expenditure on education as % of government expenditure		R & D as % of GDP	Researchers in R & D (per million population)	Patents
1990	1999–2001	1990	1999–2001	1996–2002	1990–2001	1991–99
1.9	1.9	14.6	NA	0.2	NA	15

Source: (Nour 2005: 257)

## **5. Research Output**

See supra

### **5.1 *Informal S&T structures***

## **6. Concluding section**

Indicators of the number of patents (15) in Emirates confirm the weakness of R&D activity, which lags far behind that of developed countries and other countries of the developing world.

Most R&D and S&T activities are allocated within the public and university sectors, with very small contribution from the private sector