

Graduation, attrition and time-to-degree institutional narrative - undergraduate programs

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Graduation, Attrition, and Time-to-Degree in Context

UAE University is a comprehensive public university with a mission to give UAE Nationals an opportunity for a world-class education, and to generate the necessary knowledge and skills to support the rapid development of the country and society's well-being. It offers undergraduate degrees covering all major disciplines organized in nine colleges (Humanities and Social Sciences, Science, Education, Business and Economics, Law, Food and Agriculture, Engineering, IT, and Medicine and Health Sciences). In accordance with its mission, the university provides fully sponsored undergraduate education to UAE Nationals. And, in recognition of the importance of student diversity in modern education, it also admits international students with full sponsorship in undergraduate degree programs. Currently, international students represent 23% of the undergraduate student population at UAEU. While the university offers equal admission opportunities to males and females, a large majority of undergraduate students (around 80%) are female. This imbalance is due in part to the fact that male high school-leavers have more opportunities for careers or higher education, including employment in the police and the military.

The expected duration for completing an undergraduate degree program at UAEU varies substantially across disciplines. Prior to 2009, the minimum number of credit hours (excluding the 21 credit hours of the foundation program) was 147 in Engineering, 141 in IT, 135 in Education, and 111 in the other programs. With an average course load of 15 credit hours per semester, Engineering, IT and Education majors were expected to complete their degrees in 10 semesters, while majors of the other disciplines were expected to complete their degrees in 8 semesters. Currently, the minimum number of credit hours, post foundation program, is 147 for Engineering, 136 for Law, 130 for IT, 126 for Education, and 120 for the other colleges. Thus, the expected degree completion times are 10 semesters for Engineering, 9 semesters for Law and IT, and 8 semesters for the other programs. To be comparable across programs, graduation and attrition rates should reflect student success commensurate to the expected length of the program. Given the varying length (i.e., expected duration) of degree programs at UAEU, the graduation and attrition rates for pre-2009 student cohorts are computed at the nominal length and at one-and-a-half nominal lengths of the program, that is, at 5 and 7 years for Engineering, IT, and Education, and at 4 and 6 years for the other programs.

In accordance with its mission to offer opportunities in higher education to broad segments of young Emiratis, UAEU admits students who fully satisfy the admission requirements directly to a college where they register in credit-bearing courses and it admits those with deficiencies in English, Mathematics and Arabic into the foundation program until they achieve the minimum requirements in their area of deficiency. Starting 2010-11, students are not allowed to register in credit-bearing courses - except for two General Education courses taught in Arabic - until they have passed the fourth level English Foundation course

(ENGU 1304). Prior to 2010, students were allowed to enroll in a limited number of credit-bearing courses before they achieve the English proficiency benchmark. We define (post-foundation) cohorts for this analysis based on the 2010 English proficiency benchmark (i.e. passing ENGU 1304 with "P" or "CX" grades) because it is the most tangible time point of the transition from foundation to college.

Assuming the above definition of an undergraduate cohort, we calculated the rates of graduation and attrition at the nominal length of the program for the cohorts 2006-07, 2007-08 and 2008-09 and at one-and-a-half nominal length of the program for the cohorts 2005-06, 2006-07 and 2007-08. Overall, but excluding CMHS, 50 percent of undergraduate students graduated within the nominal length of the program and 81 percent graduated within one-and-a-half nominal lengths of the program, i.e., 5 and 7 years for Engineering, IT and Education, and 4 and 6 years for the other colleges. Thirty one percent of the students were still enrolled in their programs beyond the nominal length of the program and 1 percent remained enrolled beyond 1.5 times the nominal length of the program. About nineteen percent of students dropped from the university without completing their degree by 1.5 times the nominal length of the program. There is a significant decline in the percentage of students who graduate within the nominal duration of the program from the 2006-07 to the 2008-09 cohort. Graduation rates need to be monitored in the next cohorts to either confirm or disconfirm such a decline.

Longer programs (i.e., Engineering, IT, and Education) have relatively higher graduation rates than the other programs at the 1.5 times the nominal program length. In the longer programs the graduation rates are 53 and 84 percent within the nominal length and 1.5 times the nominal length of the program, respectively. While in the other programs, the corresponding graduation rates are 49 and 79 percent. Attrition rates are similar in the two types of programs at about 19 percent.

The graduation and attrition rates of males and females do not differ significantly. Within each nationality group (Nationals vs Non-nationals), females and males have similar graduation and attrition rates. The rates of graduation within the nominal duration of the program are about 49 percent among Nationals and 61 percent among Non-nationals. The rates of graduations within 1.5 times the nominal duration of the program are 80 percent for National female, 76 for National males, and 90 percent for non-National females and 84 percent for non-National males. The overall attrition rates at the nominal length of the program are 18 percent for females and 23 for males.

The graduation rates of Non-National students are significantly higher than the rates of UAE Nationals by over 10 percentage points. While 62 and 88 percent of Non-Nationals graduated within the nominal duration and 1.5 times the nominal duration of the program, respectively, 48 and 79 percent of National students graduated within the same periods. Similarly, the attrition rate of Non-Nationals within the nominal duration of the program is 11 percent as compared to 21 for National students. Plausible reasons for this difference may be related to the higher admission criteria for Non-Nationals and the availability of more opportunities for Nationals when dropping from the university. The minimum high

school exam score for admission to the university is higher for Non-National students. However, these differences need to be investigated to determine the actual causes.

The one-year retention rates for the 2011-12 and 2012-13 cohorts are 95 and 96 percent respectively. These figures represent the percentages of students who were still enrolled in the same college one year after their admission to the college (80 and 82 percent, respectively) plus the percentages of internal transfer between UAEU colleges (15 and 14 percent, respectively). The one-year attrition rates in 2011-12 and 2012-13 are 5 and 4 percent, respectively.

When assessing the time to complete a degree, we find that the median time to complete a degree, excluding the duration of the foundation program, for students who graduated in 2012 is 5 years for Engineering, 4.5 years for IT and Education, and 4 years for all other programs. These figures suggest that, on average, students are completing their degrees within the expected duration of the programs.

UAEU graduation rates are benchmarked with those of three peer universities; two WASC^a accredited US universities, namely, the University of Hawaii at Manoa (UHM) and the University of California Riverside (UCR), and a reputable middle-eastern university accredited by MSCHE^b, i.e., the American University of Beirut (AUB). With a graduation rate at 1.5 nominal durations of the program equal to 81 percent, UAEU compares favorably to peers whose corresponding rates are 52^c, 66^d, and 87^e percent, for UHM, UCR, and AUB, respectively. Moreover, the UAEU one-year retention rate is about 90 percent which is comparable to the corresponding rates from peers (77^f in UHM, 88^g percent in UCR, and 90^h in AUB). The two peer US institutions are public research universities with a student population size that is similar to UAEU for UHM and more than double the size of UAEU for UCR. On the other hand, AUB is a private research university with two-third the UAEU student population size.

Overall, the graduation and attrition rates at UAEU compare favorably well to benchmarks and are adequately aligned with the mission of the university. Though, there is room for improving student success, the observed rates represent adequate percentages of students completing their degrees in a reasonable time given the size and mission of the university. No significant differences among the various segments of students were found, except between Nationals and Non-Nationals which may be due to their different admission requirements. Also, graduation rates of the next cohorts need to be compared to the current rates to investigate an apparent decline in these rates.

Institutional Capacity for Monitoring Retention, Graduation, and Time-to-Degree

^a Western Association of Schools and Colleges

^b Middle States Commission on Higher Education

^c Average of 6-year graduation rates of the 2000 to 2002 cohorts. See Table 1, page 12, of reference [1].

^d Average of 6-year graduation rates of the 2005 to 2007 cohorts. See reference [2].

^e Six-year graduation rate of the 2007 cohort. See page 13 of reference [3].

^f For the 2007 cohort.

^g For the 2011 cohort.

^h For the 2012 cohort.

UAEU has ample capacity to produce and monitor graduation and attrition statistics through its *Institutional Research and Analysis Section (IRAS)*. IRAS responsibilities include the systematic and ongoing process of collecting, analyzing and acting on data and information in support of the institution's mission, articulated outcomes, and quality.

Moreover, in support of decision making, UAEU uses a state of the art Data Warehouse (DW) and Business Intelligence (BI) platform that integrate various data sources. Periodic reports as well as specific ones are generated by IRAS using this decision platform system and are made available to senior managers, and internal and external stakeholders. This includes reports about student enrollment, graduation and retention.

However, the processes for the dissemination of graduation and retention statistics to colleges and relevant stakeholders, and the development of relevant improvement plans are very recent and need to be sustained. While colleges with programmatic accreditation (Business, Engineering, IT, etc.) have been monitoring student graduation and attrition as part of their reporting to the accreditation agencies, other colleges did not systematically do so. In 2012-13 UAEU instituted a 5-year program review which requires the analysis of student graduation and retention. Moreover, in 2014-15 graduation and retention statistics were disseminated to colleges for their analysis and action. This process needs to be sustained and incorporated within the yearly college reports to senior administration and relevant stakeholders.

Retention, Graduation, and Time-to-Degree Challenges

Though the overall graduation and attrition rates are adequate, there are variations among degree programs which necessitate interventions to improve student success in the less performing programs. Given the diversity of degree programs and the broad spectrum of student applicants, rates of students' success vary across programs. Colleges need to systematically monitor graduation and attrition in their degree programs and develop relevant improvement plans to improve and homogenize the student success rates in their programs.

Enrolling and retaining National male students has been a main challenge for UAEU and other federal universities. Given the employment and higher education opportunities available to National students after secondary education, it has been difficult to attract and retain this segment of students. Comprehensive and coordinated approaches at the national level need to be taken to address this challenge.

The inadequate preparation of students leaving high school for university studies has also been a challenge. The large majority of admitted freshmen need remedial support in English, mathematics, and/or Arabic. Though, the level of applicants has been improving as reflected by the increasing number of applicants who get directly admitted to a college without needing any remedial support, deficiencies in English and mathematics remain hurdles to students' success and smooth progression in their studies.

Institutional Initiatives to Ensure or Improve Student Success

The Deans Council reviewed and discussed the graduation and attrition rates at the university level and the college levels. Each college submitted to the Provost a review of these rates which addresses any deficiencies in the student success and retention.

Exclusions from Calculations

This analysis concerns all undergraduate degree programs at UAEU, except those offered by the College of Medicine and Health Sciences (CMHS). Both the curriculum and student progression at CMHS are very different from the other colleges. The Foundation program is also excluded from this analysis because it is a remedial program that assists entering students in achieving the full admission requirements into colleges. Calculations were carried out for the post-foundation cohorts of 2005-06 and 2006-07. These cohorts are annual cohorts of "post English foundation level" students. A cohort is defined as the sum of all students gaining direct entry to UAEU (without needing English foundation courses) in the spring and fall intakes of a particular academic year, plus the sum of all students who successfully completed their English requirements in the prior spring or summer terms or current fall, and therefore enrolled in credit-bearing courses in the academic year in question.

References

1. University of California Riverside - Retention and Graduation Rates for First Time Freshmen http://sara.ucr.edu/main_menu.html?id=fr_grad_rate (accessed 25 May 2015)
2. Graduation and retention rates, peer and benchmark group comparisons, University Of Hawaii at Manoa, Fall 1990 To Fall 2007 Cohorts as of 2008. <http://www.hawaii.edu/cgi-bin/iro/maps?gcma08external.pdf> (accessed 25 May 2015)
3. American University of Beirut, Fact Book 2013-14, Office of Institutional Research and Assessment/Oira. http://www.aub.edu.lb/oira/institutional_research/Documents/FB201213.pdf (accessed 25 May 2015)

Table 1A: Overall 4 year undergraduate graduation and attrition rates in CBE, CFA, CHSS, CL, and COS

	2006-07 cohort (cohort size = 1423)	2007-08 cohort (cohort size = 1755)	2008-09 cohort (cohort size = 1555)	Average of the three cohorts in 2006-09
Category	4 years (%)	4 years (%)	4 years (%)	4 years (%)
Graduation	58	47	44	49
Attrition¹	14	20	23	19

(1) indicates students who left the university without completing a degree due to academic dismissal, cancellation, withdrawal from the university, etc.

Table 1B: Overall 6 year undergraduate graduation and attrition rates in CBE, CFA, CHSS, CL, and COS

	2005-06 cohort (cohort size = 1769)	2006-07 cohort (cohort size = 1423)	2007-08 cohort (cohort size = 1755)	Average of the three cohorts 2005-08
Category	6 years (%)	6 years (%)	6 years (%)	6 years (%)
Graduation	79	82	77	79
Attrition¹	20	15	21	19

(1) indicates students who left the university without completing a degree due to academic dismissal, cancellation, withdrawal from the university, etc.

Table 2A: Overall 5 year undergraduate graduation and attrition rates in COE, CIT, and CEDU

	2006-07 cohort (cohort size = 552)	2007-08 cohort (cohort size = 685)	2008-09 cohort (cohort size = 570)	Average of the three cohorts in 2006-09
Category	5 years (%)	5 years (%)	5 years (%)	5 years (%)
Graduation	59	50	52	53
Attrition¹	14	17	25	19

(1) indicates students who left the university without completing a degree due to academic dismissal, cancellation, withdrawal from the university, etc.

Table 2B: Overall 7 year undergraduate graduation and attrition rates in COE, CIT, and CEDU

Category	2005-06 cohort (cohort size = 606)	2006-07 cohort (cohort size = 552)	2007-08 cohort (cohort size = 685)	Average of the three cohorts in 2005-08
	7 years (%)	7 years (%)	7 years (%)	7 years (%)
Graduation	86	84	82	84
Attrition¹	13	15	17	15

(1) indicates students who left the university without completing a degree due to academic dismissal, cancellation, withdrawal from the university, etc.

Table 3A: Overall undergraduate graduation and attrition rates within the nominal duration of the degree for all colleges except CMHS

Category	2006-07 cohort (cohort size = 1975)	2007-08 cohort (cohort size = 2440)	2008-09 cohort (cohort size = 2125)	Average of the three cohorts 2006-09
	Within the nominal duration of degree ² (%)			
Graduation	58	48	46	50
Attrition¹	14	19	24	19

(1) indicates students who left the university without completing a degree due to academic dismissal, cancellation, withdrawal from the university, etc.

(2) Equals to 4 years of study in CBE, CFA, CHSS, CL, & COS, and 5 years of study in COE, CIT and CEDU.

Table 3B: Overall undergraduate graduation and attrition rates within 1.5 nominal durations of the degree for all colleges except CMHS

Category	2005-06 cohort (cohort size = 2375)	2006-07 cohort (cohort size = 1975)	2007-08 cohort (cohort size = 2440)	Average of the three cohorts 2005-08
	Within 1.5 nominal durations of degree ³ (%)			
Graduation	81	83	78	81
Attrition ¹	18	15	20	18

(1) indicates students who left the university without completing a degree due to academic dismissal, cancellation, withdrawal from the university, etc.

(3) Equals to 6 years of study in CBE, CFA, CHSS, CL, & COS, and 7 years of study in COE, CIT and CEDU.

Table 4: Median time to degree of undergraduate students who graduated in 2012

College	Graduation Time (Years)	Time excluding Foundation (years)
All colleges, except CMHS	5.5	4

Table 5: Overall percentages of undergraduate retention, internal transfers, and attrition for all colleges except CMHS

College	Category	One-year retention, internal transfers and attrition (%)	
		2011-12 cohort (cohort size = 2244)	2012-13 cohort (cohort size = 2493)
All colleges, except CMHS	Retention	80	82
	Internal transfers ⁴	15	14
	Attrition	5	4
	Total	100	100

(4) Transfer between UAEU colleges during the first year

Table 6A: Overall undergraduate graduation and attrition rates within the nominal duration of the degree for all colleges, except CMHS, classified by gender and nationality

			2006-07 cohort		2007-08 cohort		2008-09 cohort		Average of the three cohorts 2006-09
All colleges, except CMHS	Subgroup	Category	Within the nominal duration of degree ²		Within the nominal duration of degree ²		Within the nominal duration of degree ²		Within the nominal duration of degree ²
			Cohort size	(%)	Cohort size	(%)	Cohort size	(%)	
National	Female	Graduation	1325	56	1589	45	1255	43	48
		Attrition ¹		14		20		24	
	Male	Graduation	323	58	424	46	418	44	49
		Attrition		20		23		33	
Non-National	Female	Graduation	209	72	279	59	286	58	62
		Attrition		4		11		13	
	Male	Graduation	118	62	148	63	166	58	61
		Attrition		9		14		17	

(1) indicates students who left the university without completing a degree due to academic dismissal, cancellation, withdrawal from the university, etc.

(2) Equals to 4 years of study in CBE, CFA, CHSS, CL, & COS, and 5 years of study in COE, CIT and CEDU.

Table 6B: Overall undergraduate graduation and attrition rates within 1.5 nominal durations of the degree for all colleges, except CMHS, classified by gender and nationality

			2005-06 cohort	2006-07 cohort	2007-08 cohort	Average of the three cohorts 2005-08			
All colleges, except CMHS	Subgroup	Category	Within 1.5 nominal durations of degree ³		Within 1.5 nominal durations of degree ³		Within 1.5 nominal durations of degree ³ (%)		
			Cohort size	(%)	Cohort size	(%)		Cohort size	(%)
National	Female	Graduation	1768	80	1325	82	1589	78	80
		Attrition ¹		19		16		21	19
	Male	Graduation	300	75	323	77	424	75	76
		Attrition		23		21		23	22
Non-National	Female	Graduation	212	90	209	94	279	87	90
		Attrition		9		5		12	9
	Male	Graduation	95	84	118	86	148	82	84
		Attrition		14		12		16	14

(1) indicates students who left the university without completing a degree due to academic dismissal, cancellation, withdrawal from the university, etc.

(3) Equals to 6 years of study in CBE, CFA, CHSS, CL, & COS, and 7 years of study in COE, CIT and CEDU.