

Student Time-to-Degree and Credit Hours Earned By First-time, Full-time, Baccalaureate Degree-Seeking Students

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Executive Summaries

- An average of 24.4% of Mason's first-time, full-time, baccalaureate degree-seeking students graduate in four years (Table 1). The national trend index for moderately-selective public institutions is 18.1% as of fall 2002.
- Over 40% of the graduates already earned 120 or more credit hours the fall before they graduate (Table 2).
- The trend seems that the length of time-to-degree is getting shorter by about .1 year each cohort in the past four years. (Table 3).
- A change of major seems to lengthen student time-to-degree (Table 4) by about an average of one semester.
- Change of majors seems to help increase student chance of graduation (Table 5).

Background of This Study

This study was done after the Vice Provost inquired how we can improve our four-year graduation rate. In order to find ways to achieve that goal, four issues were explored in this study:

1. What is our four-year graduation rate now?
2. How many credit hours do our students have upon graduation?
3. What is the average time-to-degree (T2D) of our undergraduate cohorts?
4. If students have more than 120 credit hours to graduate, what would be the reason (apart from by program requirements) for the extra hours?
5. Would change of major help or harm student chances to graduate?

I. How Many Students Graduate from Mason Within Four Years?

According to IRR's freshmen cohort tracking, since 1993, an average of 24.4% of the freshmen cohorts graduated within 4 years after their first matriculation in Mason. The majority of those graduated in five years. Table 1 tabulates the details and trends.

Table 1. Trends in 4, 5 and 6-Year Graduation Rates of First-Time, Full-Time Freshmen

		Graduation Rates					
		4-Year		5-Year		Six-Year	
Cohort Year	Cohort Total	N	%	N	%	N	%
1993	1,672	441	26.4%	734	43.9%	810	48.4%
1994	1,729	440	25.4%	731	42.3%	832	48.1%
1995	1,854	487	26.3%	768	41.4%	878	47.4%
1996	1,877	480	25.6%	804	42.8%	928	49.4%
1997	1,936	437	22.6%	801	41.4%	894	46.2%
1998	2,024	541	26.7%	845	41.7%		
1999	2,035	377	18.5%				
Multi-Year Average			24.4%		42.2%		47.9%
CSRDE* Rates**			18.1%		38.1%		45.2%

* CSRDE: Consortium of Student Retention Data Exchange

** CSRDE rates were based on 95-98 cohorts

According to CSRDE's 2003 report, the average 4-year graduation rate for moderately-selective public institutions (2001 ACT Composite 21.0-22.4 or SAT Composite 990-1044) was 18.1% (IRR Report No.6). Mason's rate was higher than this national average index.

II. How Many Credit Hours Do Our Students Earn Upon Graduation?

Due to some historical oversight, IRR does not have student credit hours earned upon graduation readily available. As a result, this study tracked student credit hours earned (cumulative quality hours) the fall before they graduated. Results were presented in Table 2.

Table 2. Student Credit Hours Earned the Fall Before Graduation

Cohort	Cumulative Credit Hours The Fall Before Graduation										Total Graduated *
	below 90		90 - 119.99		120 - 129.99		130 - 139.99		140 or higher		
	N	%	N	%	N	%	N	%	N	%	
1992	29	2.9	565	56.2	196	19.5	112	11.1	104	10.3	1,006
1993	47	5.2	526	58.0	160	17.6	91	10.0	83	9.2	907
1994	40	4.3	537	58.1	155	16.8	111	12.0	81	8.8	924
1995	31	3.3	568	60.2	168	17.8	99	10.5	77	8.2	943
1996	34	3.6	579	61.2	154	16.3	103	10.9	76	8.0	946
1997	26	3.2	502	61.7	169	20.8	87	10.7	30	3.7	814
Multi-Yr Average	207	3.7	3,277	59.2	1,002	18.1	603	10.9	451	8.1	5,540

* These numbers include EVERYONE who graduated. As a result, they are slightly higher than the six-year graduation number since the latter includes only those who graduated within 6 years.

According to Table 2, by the fall before graduation, at least 40% of the full-time freshmen already earned 120 credits hours or more. About 59% had earned between 90-119 credit hours by then. If those students continue to take full-time load in their last year, then over 95% our graduates would have graduated with more than 120 credit hours.

III. What Was Average Time-to-Degree for First-time, Full-time, Degree-seeking Students?

The average time-to-degree (T2D) is 4.3 years as presented in Table 3. Table 3 also reveals that the average T2D for the university overall had been getting shorter, by about .4 years from 1992 to 1997. This shortening trends might be due to the reality that students were graduating faster. It might also be due to the fact that for the 1997 cohort, they still don't have 10 years to finish their baccalaureate degrees yet, as was the case for the 1992 cohorts.

Table 3. Average T2D by Group of Students with Different Cum. Credit Hours the Fall Before Graduation

Cohort	Average Time-to-Degree					Cohort Average
	Cumulative Credit Hours Earned the Fall Before Graduation					
	below 90	90 - 119.9	120 - 129.9	130 - 139.9	140 or higher	
1992	5.0	4.1	4.8	4.9	5.9	4.5
1993	4.4	4.1	4.7	5.2	5.5	4.5
1994	4.1	4.1	4.8	4.9	5.6	4.4
1995	4.0	4.0	4.7	5.0	5.3	4.3
1996	4.0	4.0	4.5	4.9	5.0	4.2
1997	3.6	3.9	4.4	4.5	4.4	4.1
Multi-Yr avg.	4.0	4.0	4.6	4.9	5.4	4.3

Short of finding out the percentages of our baccalaureate degree programs that require more than 120 credit hours for students to graduate, one speculation was made for this study: If a student changes his/her major during their matriculation, then they will need more credit hours to graduate. Based on that speculation, student change of majors and its relationship with credit hours earning was examined. Results are presented in Tables 4 and 5.

IV. Would Change of Major Lengthen Student Time-to-Degree?

Based on the information presented in Table 4, student change of major does seem to lengthen his/her T2D period. Taking 1992 Cohort for example: the average length of T2D for the cohort was 4.5 years. If a student never changed his/her major after matriculation, then the average T2D would be 4.1 years. If he/she changed his major once, then the T2D would be 4.6 years; changed twice, T2D would be 5.4 years, etc.. With each change of major, the student would lengthen his/her T2D by about half a year. It is worth noticing the time gaps between changing twice and changing 3 times (and four times).

Table 4. Summary of Student Change of Major and Time-to-Degree Elapse

Cohort	All Avg	Major Changing Status *				
		Didn't Change Major	Changed Major once	Changed Major 2x	Changed Major 3x	changed Major 4x
		Avg Yrs (T2D)	Avg Yrs (T2D)	Avg Yrs (T2D)	Avg Yrs (T2D)	Avg Yrs (T2D)
1992	4.5	4.1	4.6	5.4	6.3	7.0
1993	4.5	4.1	4.5	5.3	6.3	-
1994	4.4	4.2	4.5	5.0	5.2	6.7
1995	4.3	4.1	4.5	4.5	5.5	5.3
1996	4.2	4.1	4.4	4.5	4.9	4.7
1997	4.1	4.0	4.1	4.3	4.6	-

* This change does not count those who changed from Undeclared to a major.

If changing one's major lengthens T2D, would that help or harm the student's chance of graduation?

V. Would Change of Major Help or Harm Graduation Rates?

According to Table 5, students who changed their majors at least once seemed to have greater chance to obtain their degrees. Taking the cohort of 1996 for example: there was a total of 1953 students. Of the 1953 students, 1165 (59.7%) didn't change their majors and 622 changed their majors once. Of the 1165 students, 462 (39.7%) eventually graduated. In comparison, of the 622 students who changed their majors once, 387 (62%) graduated. Similar patterns persist throughout 1992 to 1996 cohorts.

Table 5. Graduate Rates for Students Changing or Without Changing of Their Majors

Cohort		Major Changing * Status											
		All		Didn't Change Major		Changed Major 1x		Changed Major 2x		Changed Major 3x		changed Major 4x	
		N	%	N	%	N	%	N	%	N	%	N	%
1992	Total	1772	100.0	993	56.0	596	33.6	152	8.6	28	1.6	3	0.2
	Graduated	1006	56.8	425	24.0	433	24.4	122	6.9	23	1.3	3	0.2
1993	Total	1727	100.0	1065	61.7	493	28.5	137	7.9	30	1.7	2	0.1
	Graduated	907	52.5	428	24.8	349	20.2	110	6.4	20	1.2	0	0.0
1994	Total	1820	100.0	1075	59.1	592	32.5	125	6.9	24	1.3	4	0.2
	Graduated	924	50.8	425	23.4	393	21.6	85	4.7	19	1.0	2	0.1
1995	Total	1924	100.0	1170	60.8	575	29.9	159	8.3	19	1.0	1	0.1
	Graduated	943	49.0	461	24.0	372	19.3	100	5.2	9	0.5	1	0.1
1996	Total	1953	100.0	1165	59.7	622	31.8	149	7.6	14	0.7	3	0.2
	Graduated	946	48.4	462	23.7	387	19.8	90	4.6	6	0.3	1	0.1
1997	Total	2016	100.0	1235	61.3	622	30.9	144	7.1	15	0.7	-	-
	Graduated	814	40.4	422	20.9	326	16.2	60	3.0	6	0.3	-	-
1998	Total	2109	100.0	1324	62.8	665	31.5	115	5.5	5	0.2	-	-
	Graduated	545	25.8	347	16.5	172	8.2	26	1.2	0	0.0	-	-
1999	Total	2130	100.0	1438	67.5	606	28.5	83	3.9	3	0.1	-	-
	Graduated	16	0.8	10	0.5	6	0.3	0	0.0	0	0.0	-	-
2000	Total	2167	100.0	1538	71.0	591	27.3	38	1.8	-	-	-	-
	Graduated	0	0.0	0	0.0	0	0.0	0	0.0	-	-	-	-
2001	Total	2146	100.0	1886	87.9	260	12.1	-	-	-	-	-	-
	Graduated	0	0.0	0	0.0	0	0.0	-	-	-	-	-	-

* This change does not include Undeclared choosing their majors.

Conclusions:

1. Even though Mason's 4-year graduation rate was around about 24%, it was higher than the national average of 18%. It would be a big challenge, if likely, for all moderately-selective public institutions to graduate 40% of their freshmen cohorts within four years.
2. In order to have more undergraduate freshmen graduate within four years, we will need the programs to require no more than 120 credit hours and student don't change their majors during their matriculation in Mason.
3. Student changing of majors might lengthen their time on campus, but the change might increase their chance of graduation.

Recommendations:

1. Further studies need to be done regarding the percent of Mason's baccalaureate degree programs that require more than 120 credits for students to graduate. We cannot graduate students in four years if the programs require more.
2. Future study on the time of student major change and its impact on graduation might help shed light on the length of time-to-degree lengthened by the change.