

Concordia University Wisconsin Graduation Rates Presentation

October 6, 2014

What are graduation rates? How are they calculated?

Each year the *US Department of Education* has every college and university define a **cohort** of first-time, full-time degree seeking students. This cohort can then be tracked as students progress through their college career. At CUW, the cohort we report on is our **traditional undergraduate students** who are first-time, full-time bachelor's degree seeking. We also measure **retention rates** from this same group of students. Retention is many times considered an operational measure of student satisfaction.

Six years after the establishment of the cohort, the Department of Education requires schools to report on the status of the cohort group. Students are then classified into the following categories:

1. Earned a bachelor's degree or higher in 4-years or less (**4-year graduation rate**)
2. Earned a bachelor's degree or higher in more than 4 years but less than 5 years
3. Earned a bachelor's degree or higher in more than 5 years but less than 6 years
4. Transferred out to an affiliated degree granting university as part of a collaborative **designed** transfer program
5. Did not attain a degree

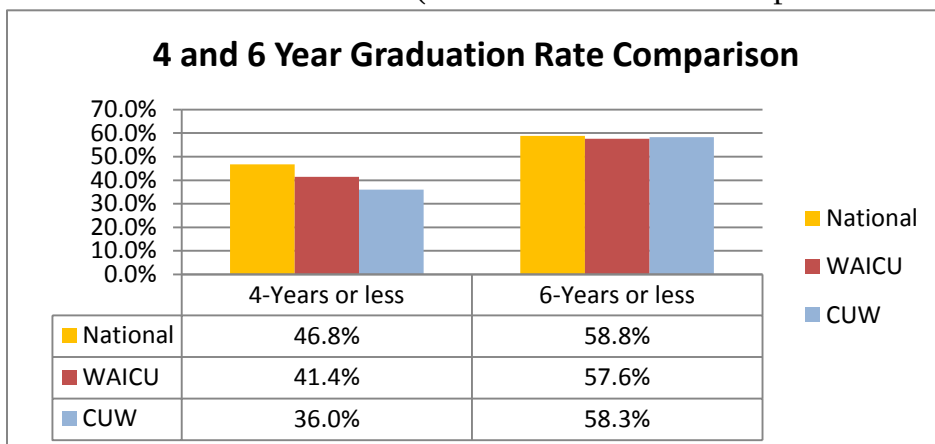
The most commonly used metric for assessing the efficacy of a university in successfully developing a student is the **six year graduation rate** which is defined as the percent of students graduating in 6-years or less – i.e. either in 4 years or 5 years or 6 years. The department of Education has recently started reporting eight year graduation rates. There has been some focus in higher education recently, especially due to increasing student costs, in trying to more effectively graduate students in less time. Consequently, **four year graduation rates** are being given additional attention. However, there has been no evidence of a national trend showing an increase in four year rates.

RETENTION AND PERSISTENCE PROCESS:

DEFINE COHORT → Measure retention (+1 Year) → Assess graduation success (+6 Years)

NATIONAL, WAICU AND CUW 4 AND 6 YEAR GRADUATION RATES

Combined 2010 to 2013 data. (National data based on 650 private universities size 1000-9999 students)

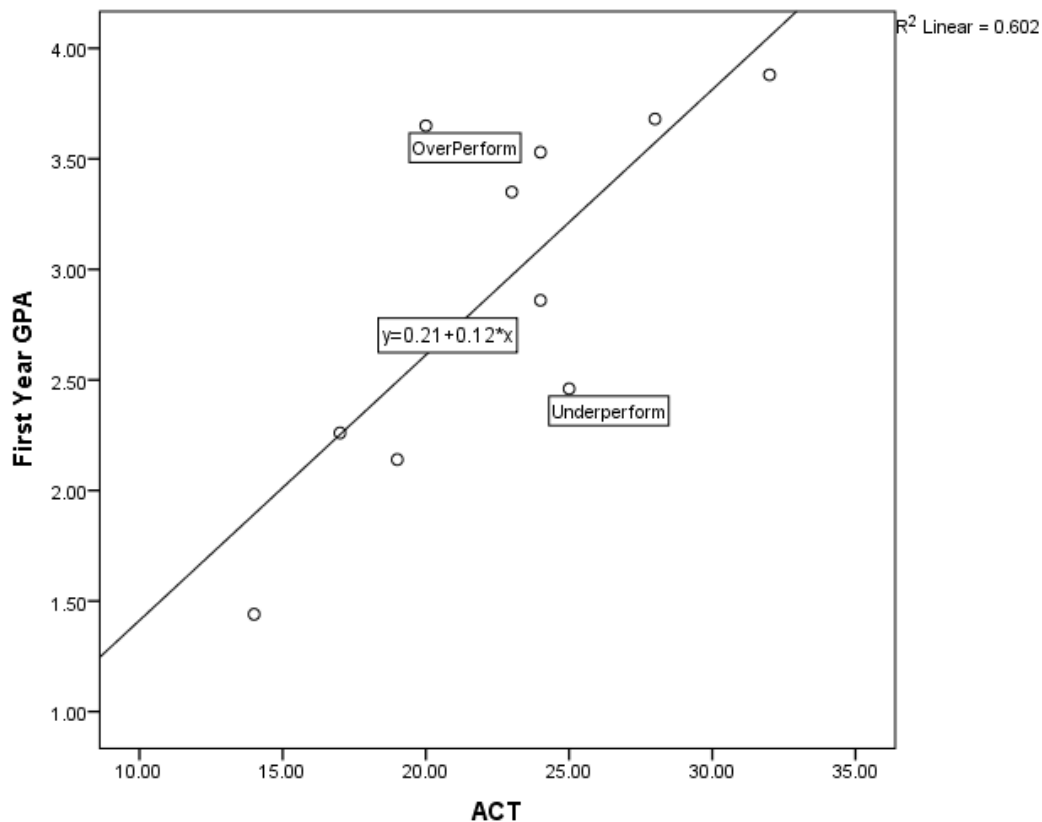


DEFINING CONTEXT

The Concept of Correlation – Statistical background

The statistical concept of correlation measures the degree that two measures are **linearly related**. Consequently if we know the value of one of the measures we can **predict** with varying degrees of success the value of the other. A common example of two variables being correlated are student ACT scores and first year college GPA's. We can predict how a student will perform in college based on their ACT scores because of this relationship. This allows schools to set admissions standards or put interventions into place.

HYPOTHETICAL RELATIONSHIP BETWEEN ACT SCORES AND FIRST YEAR COLLEGE GPA



The higher the ACT score, the more likely the prospective student will perform well in college. Note the diagonal line through the graph. This is a mathematically generated “best fit” line that gives us our best prediction of GPA from ACT scores. It gives us a **predicted value** based on the performance of **all students in our data model**. Also note how the points don't exactly fit the line. Points below the line are under-performing and points above the line are over-performing. If we added another predictor such as HSGPA along with ACT scores we can potentially increase the accuracy of our **predictions**. In our example, the biggest under-performer may have had a low HSGPA while the largest over-performer could have had a high HSGPA.

Just as we can predict college success by ACT scores and HSGPA's we can (very accurately) predict a universities 4 and 6 year graduation rates based on student financial need, school tuition and the academic level of the students attending the school measured by the ACT scores of incoming freshman.

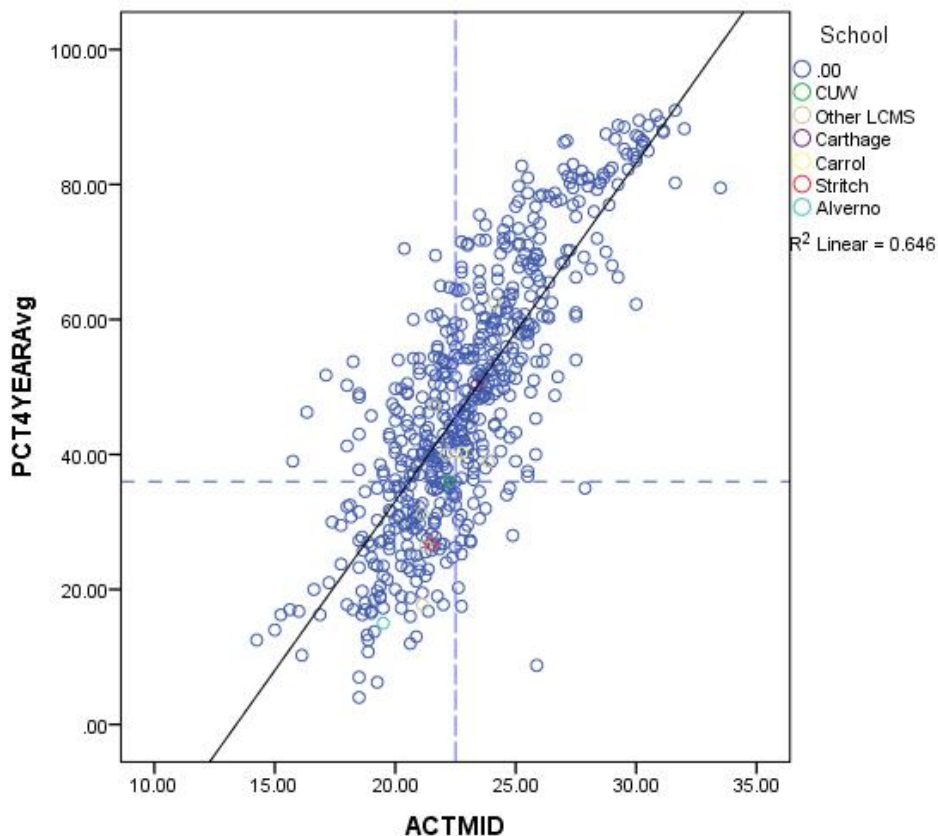
**PREDICITING 4-YEAR GRADUATIION RATE BY STUDENT ACADEMIC ABILITY
(Average ACT Scores of Incoming Freshman)**

4-Year GRAD Rate Predicted from ACT

	Med ACT	Predicted	Actual	Perform
CUW	22.25	44.4%	36.0%	-8.4%
Carrol	22.75	46.9%	40.3%	-6.6%
Carthage	23.38	49.9%	50.3%	0.4%
Cardinal Stritch	21.50	40.6%	26.8%	-13.9%
Alverno	19.50	30.6%	15.0%	-15.6%
NATIONAL Average	22.87		46.8%	

2004 to 2007 combined data

The average ACT of incoming CUW students in the 2004 to 2007 cohorts was 22.25. Based on this value, and the relationship shown below (650 private universities size 1000 to 9999), CUW has a predicted 4-year graduation rate of 44% of its students. We are **underperforming** by about 8% based on a prediction solely from student academic level. Note that CUW is located at the intersection of the two dashed lines in the graph below.



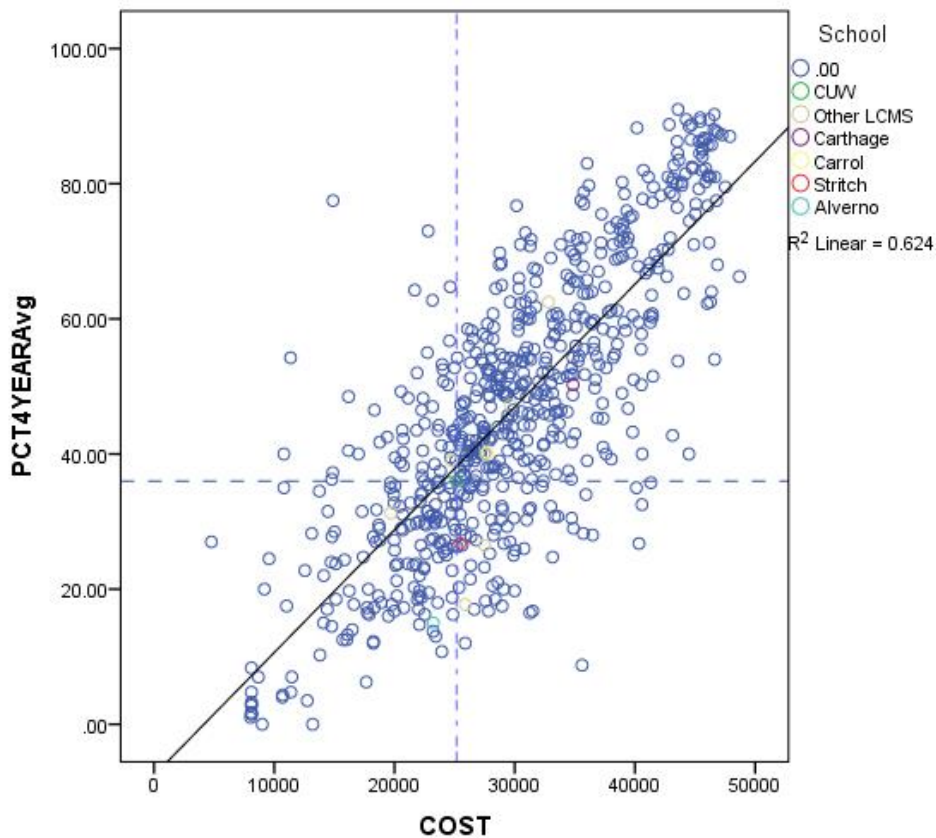
PREDICITING 4-YEAR GRADUATIION RATE BY STUDENT TUTION

4-Year GRAD Rate Predicted from COST

	COST	Predicted	Actual	Perform
CUW	\$25,160	38.2%	36.0%	-2.2%
Carrol	\$27,724	42.8%	40.3%	-2.6%
Carthage	\$34,850	55.8%	50.3%	-5.5%
Cardinal Stritch	\$25,450	38.7%	26.8%	-12.0%
Alverno	\$23,231	34.7%	15.0%	-19.7%
NATIONAL Average	\$28,449		46.8%	

r=.790

The cost for attending CUW in 2013-14 was \$25,160. The national average (again 650 private universities size 1000 to 9999) was \$28,449. In a model based on cost alone, CUW should be graduating 38.2% of its students in 4 years or less. We are performing just about as expected. Again note that CUW is located at the intersection of the two dashed lines.

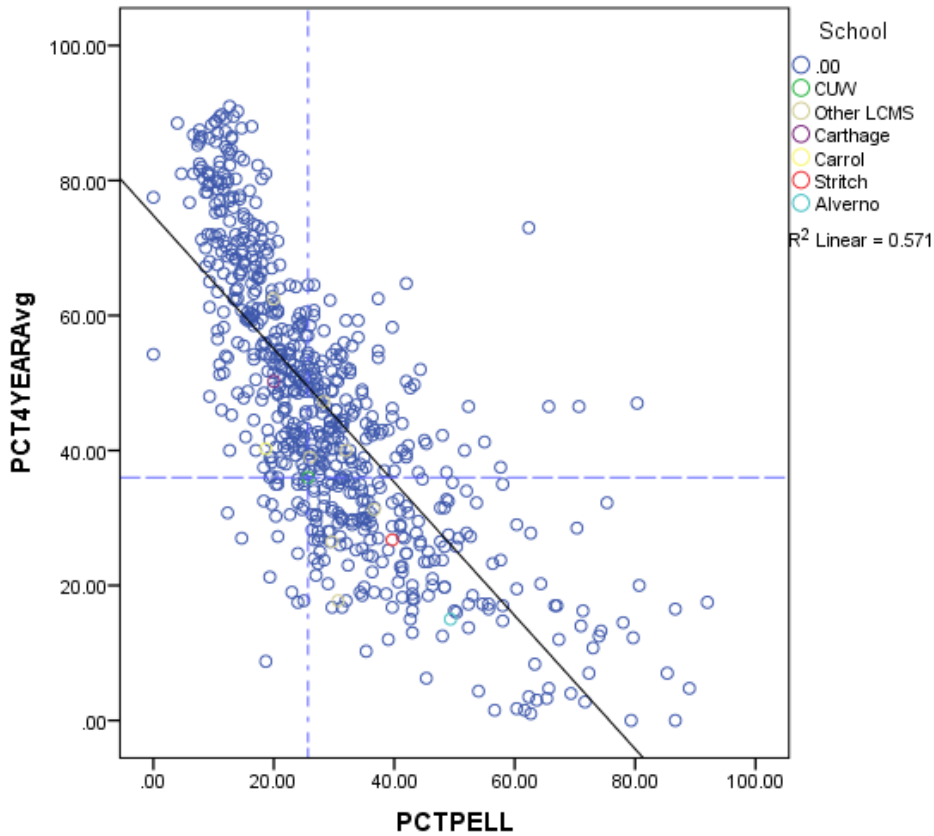


PREDICTING FOUR YEAR GRADUATION RATE BY STUDENT FINANCIAL NEED

4-Year GRAD Rate Predicted from PELL

	PELL %	Predicted	Actual	Perform
CUW	25.7%	49.4%	36.0%	-13.4%
Carrol	18.7%	56.4%	40.3%	-16.1%
Carthage	20.0%	55.1%	50.3%	-4.8%
Cardinal Stritch	39.7%	35.6%	26.8%	-8.9%
Alverno	49.3%	26.1%	15.0%	-11.1%
National Average	30.14%		46.8%	

25.7% of CUW students in the study received Pell grants. The national average is approximately 30%. Based solely on student need, CUW should be graduating about 49% of its students in 4-years or less. This is where we are underperforming the most – by approximately 13%.



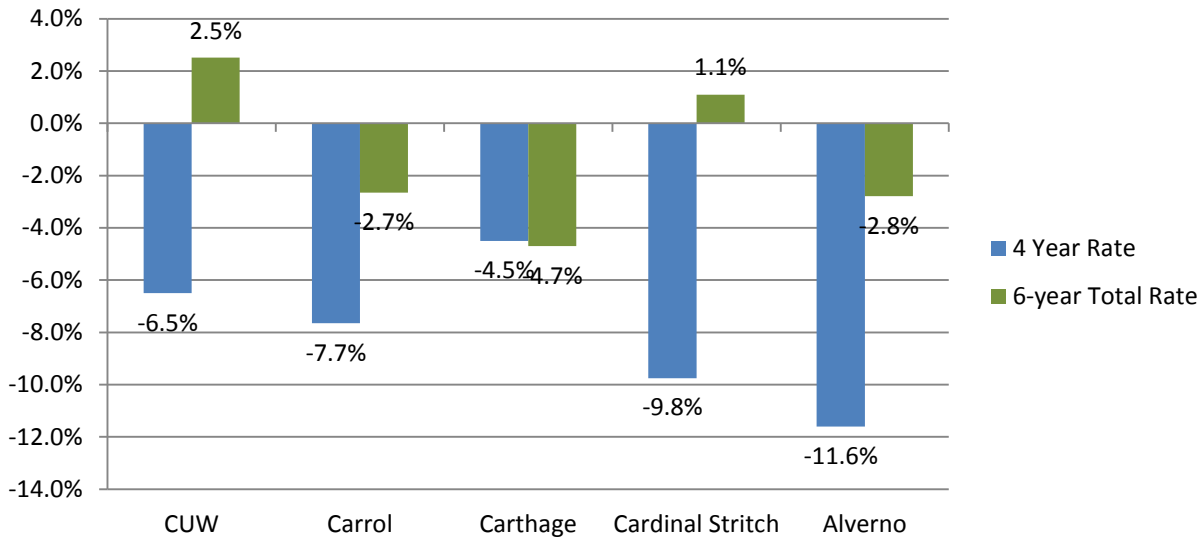
PUTTING IT ALL TOGETHER – PREDICTING GRADUATION RATE BASED ON STUDENT ACADEMIC ABILITY, LEVEL OF FINANCIAL NEED AND TUITION.

By combining the three values previously presented, we get our most accurate predicted graduation rate. The 4-year predicted rate for CUW in this model is 42.5% with an actual rate of 36.0%. The predicted 6-year rate is 55.7% with an actual rate of 58.3%. We are slightly over-achieving in 6-year graduation rates and under-achieving in 4-year rates.

	4-Year Graduation Rates (Combined 2010-2013)			6-year Graduation Rates (Combined 2010-2013)		
	Actual	Predicted*	Perform	Actual	Predicted*	Perform
CUW	36.0%	42.5%	-6.5%	58.3%	55.7%	2.5%
Carrol	40.3%	47.9%	-7.7%	57.5%	60.2%	-2.7%
Carthage	50.3%	54.8%	-4.5%	60.5%	65.2%	-4.7%
Cardinal Stritch	26.8%	36.5%	-9.8%	51.5%	50.4%	1.1%
Alverno	15.0%	26.6%	-11.6%	38.8%	41.5%	-2.8%
National Average	46.8%			58.8%		

* - Predicted from Student ACT, Pct of Students Receiving Pell Grants, and School Cost
Multiple R=.869

4 and 6 year Graduation Rates Relative to Expectation from Full Predictive Model



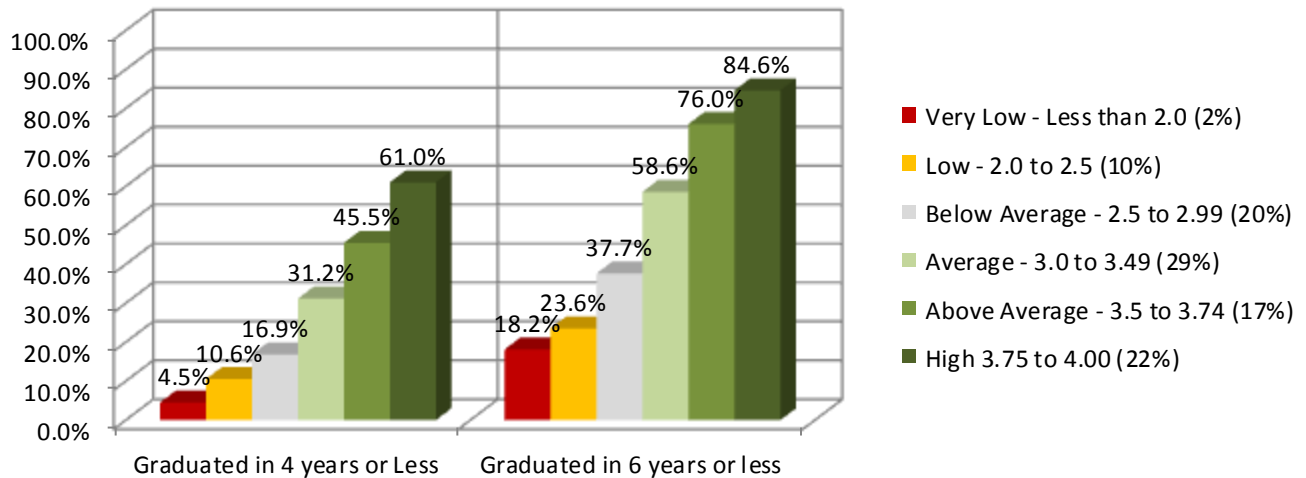
SUMMARY OF 4 AND 6 YEAR GRADUATION RATES FOR WAICU (2010 to 2013 Combined Data)

SCHOOL	4 YR RATE	RANK	6 YR RATE	RANK	RANK DIFF	SCHOOL	4 YR RATE	RANK	6 YR RATE	RANK	RANK DIFF
Beloit	68.3	1	77.3	2	1	MSOE	37.5	12	57.5	10	-2
Saint Norbert	67.3	2	74.0	4	2	CUW	36.0	13	58.3	8	-5
Lawrence	60.5	3	76.3	3	0	Edgewood	31.3	14	54.5	12	-2
Marquette	60.0	4	80.0	1	-3	Lakeland	30.8	15	45.8	18	3
Ripon	58.0	5	71.8	5	0	Viterbo	30.0	16	49.8	17	1
Carthage	50.3	6	60.5	7	1	Marian	29.0	17	51.0	16	-1
MIAD	47.3	7	57.8	9	2	Cardinal Stritch	26.8	18	51.5	15	-3
Northland	45.5	8	53.5	14	6	Silver Lake	25.3	19	39.3	20	1
Wisconsin Lutheran	43.3	9	60.8	6	-3	Mount Mary	21.8	20	39.8	19	-1
Carroll	40.3	10	57.5	10	0	Alverno	19.5	21	38.8	21	0
Northland	39.8	11	54.3	13	2						

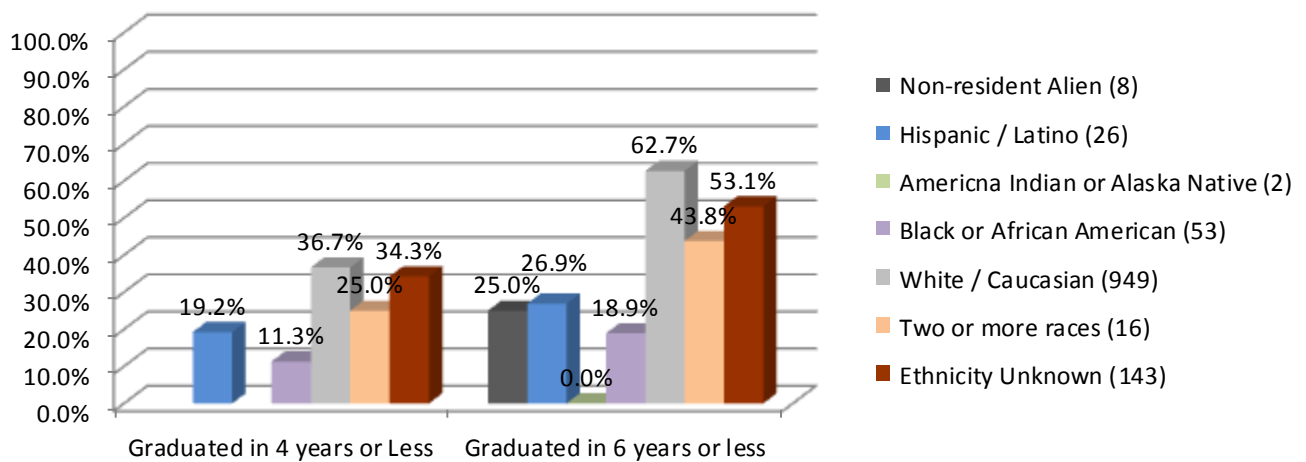
21 total schools in study.

CUW GRADUATION RATES BY KEY DEMOGRAPHICS

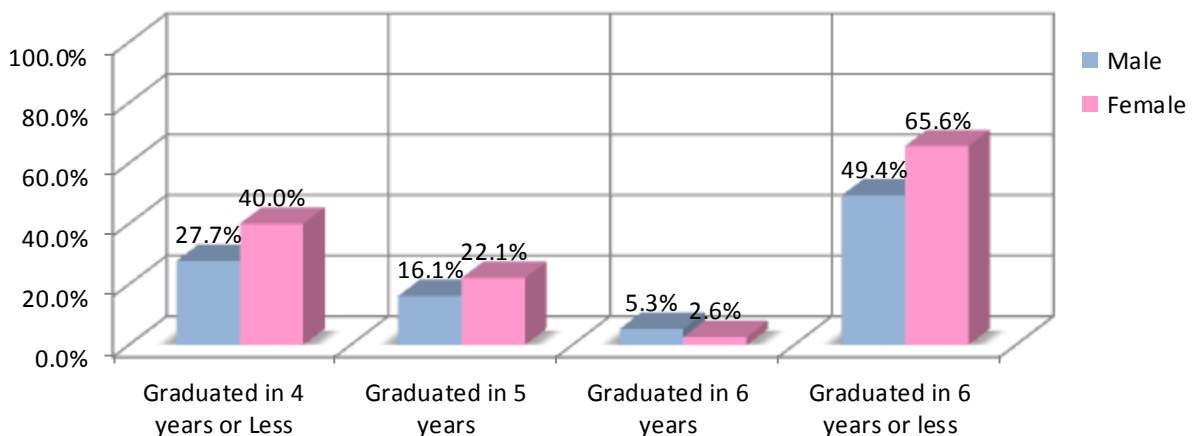
4-Year and Total Graduation Rates by HSGPA



4-Year and Total Graduation Rates by Ethnicity



Graduation Rates by Gender



TIME TO GRADUATION BY MAJOR AT GRADUATION (6 or more graduates)

Data Includes Only Graduating Students

MAJOR	Graduation Status				Total
	Graduated in 4 years or Less	Graduated in 5 years	Graduate in 6 years	Graduated in more than 6 years	
Biomedical Sciences	100.0%				6
Theological Languages	100.0%				6
Pre-Sem Pastoral	87.5%	12.5%			24
Mathematics-Sec Ed	87.5%	12.5%			8
Athletic Training	86.2%	6.9%	6.9%		29
Social Work	84.6%	15.4%			13
Mass Communication	83.3%	16.7%			6
Lay Ministry	81.0%	9.5%	9.5%		21
English	77.8%	22.2%			9
Nursing-Tradit Undergrad	76.7%	21.7%	1.7%		60
Business Communication	75.0%	25.0%			20
Exercise Physiology	71.4%	23.8%	4.8%		21
Justice & Public Policy	71.0%	12.9%	16.1%		31
Biology	69.2%	23.1%	7.7%		13
Radiologic Technology	69.2%	15.4%	15.4%		13
Finance	66.7%	27.8%	5.6%		18
Psychology	66.7%	11.1%	11.1%	11.1%	9
Interior Design	66.7%	33.3%			6
Management	64.7%	29.4%		5.9%	17
Accounting	61.5%	30.8%	7.7%		13
Marketing	50.0%	40.0%	10.0%		20
Comp Sci-Computer Science	50.0%	37.5%	12.5%		8
Graphic Design	50.0%	37.5%	12.5%		8
Science Broad Field - Sec Ed	50.0%	50.0%			8
General Business	46.7%	40.0%	13.3%		15
Elementary Education	46.4%	52.2%	1.4%		69
History	45.5%	54.5%			11
Individualized	45.5%	45.5%	9.1%		11
English-Sec Ed	42.9%	57.1%			7
Educational Studies	41.7%	50.0%	8.3%		12
Early Childhood Education	36.4%	59.1%		4.5%	22
Rehab-Sci-Regular	8.8%	64.7%	17.6%	8.8%	34
Physical Education K-12	4.3%	73.9%	21.7%		23
History-Sec Ed		83.3%	16.7%		6
TOTALS	59%	33%	7%	1%	

Total Graduation Rate by CUW First Major

FIRST CUW MAJOR	Yes	Total
English	100.0%	6
Biology-Sec Ed	83.3%	6
Science Broad Field - Sec Ed	83.3%	6
Social Studies Brd Fld-Sec Ed	83.3%	6
Rehab-Sci-Regular	82.4%	34
Accounting	76.2%	21
Elementary Education	75.5%	102
English-Sec Ed	75.0%	16
Pre-Sem Pastoral	72.1%	43
Choral Music K-12 Ed	71.4%	7
Early Childhood Education	68.3%	41
Business-No Major	66.7%	9
Secondary Education Program	66.7%	9
Art Education K-12	66.7%	6
History-Sec Ed	65.2%	23
Social Work	64.7%	17
Biology	62.5%	40
Finance	61.5%	13
Interior Design	61.1%	18
Physical Education K-12	60.5%	43
Radiologic Technology	59.4%	32
Mathematics-Sec Ed	58.3%	12
Exercise Physiology	57.9%	19
Communications-No Major	57.1%	7
Nursing-Tradit Undergrad	56.9%	123
Athletic Training	55.9%	111
Lay Ministry	52.0%	25
Justice & Public Policy	51.0%	49
Mass Communication	50.0%	10
Undeclared	49.4%	83
Computer Science	48.0%	25
Sec Ed-No Major	41.7%	12
Graphic Design	40.9%	22
General Business	40.8%	49
International Business	40.0%	15
Management	37.5%	16
History	37.5%	8
Art	36.4%	11
Marketing	36.0%	25
Psychology	29.2%	24

