

Achieving the Dream Data Team

Meeting: December 4, 2007

Achieving the Dream – Data Team

Agenda – December 4, 2007

1. Continued work and collaboration on Data Team Report for meeting with Core Team on December 12.
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Achieving the Dream Data Team Report Fall 2007

As stated in the Team Charter, the Achieving the Dream Data Team is “charged with overall information management and data analysis of the Achieving the Dream initiative at the college.”

Towards that goal, the team first met on September 18th with our national Achieving the Dream coaches, Jim Tschechtelin (Coach) and Terri Manning (Data Facilitator.) The team has then met weekly since Oct. 2, 2007. Team Leader Tom Fallon is also a member of the Achieving the Dream Core Team and has functioned as a liaison between the two groups, relaying requests for information to the data team and our analysis to the core team.

In our quest for a picture of NECC’s current baselines, we began by looking at data the College had already collected. This data includes but is not limited to The Community College Survey of Student Engagement (CCSSE), and NECC’s Key Performance Indicators (KPIs).

Community College Survey of Student Engagement (CCSSE)

Per their website, “CCSSE was established in 2001 as a project of the Community College Leadership Program at The University of Texas at Austin.”

CCSSE is a benchmark instrument. According to CCSSE, “benchmarks are groups of conceptually related items that address key areas of student engagement. CCSSE’s five benchmarks denote areas that educational research has shown to be important in quality educational practice. The benchmarks are Active and Collaborative Learning, Student Effort, Academic Challenge, Student-Faculty Interaction, and Support for Learners.

Every college has a score for each benchmark, computed by averaging the scores on survey items that comprise that benchmark. Benchmark scores are standardized so that the mean — the average of all participating students — always is 50 and the standard deviation is 25. The most valuable use of benchmarks is to see an individual college’s deviation from the mean, and the standardized score provides an easy way to assess whether an individual college is performing above or below the mean (50) on each benchmark.”

Results from CCSSE reveal that Northern Essex has scored above the mean in three benchmark areas: Academic Challenge, Student-Faculty Interaction, and Support for Learners. We score below the mean in categories dealing with Active and Collaborative Learning and Student Commitment (see **Table 1**). The 2007 National Report is available at: <http://www.ccsse.org/>

Table 1.
CCSSE Benchmark Reports - Summary

<u>Benchmark</u>	<u>NECC</u>	<u>Comparison Group Statistics</u>		
			<u>MA Consortium</u>	<u>2007 CCSSE Participants</u>
Active and Collaborative Learning	46.1	Benchmark Score	48.2	50.0
		Score Difference	(2.2)	(3.9)
Student Effort	48.0	Benchmark Score	50.7	50.0
		Score Difference	(2.7)	(2.0)
Academic Challenge	50.8	Benchmark Score	51.4	50.0
		Score Difference	(0.5)	0.8
Student-Faculty Interaction	51.7	Benchmark Score	50.9	50.0
		Score Difference	0.8	1.7
Support for Learners	52.3	Benchmark Score	51.2	50.0
		Score Difference	1.1	2.3
		Number of Colleges	15	525

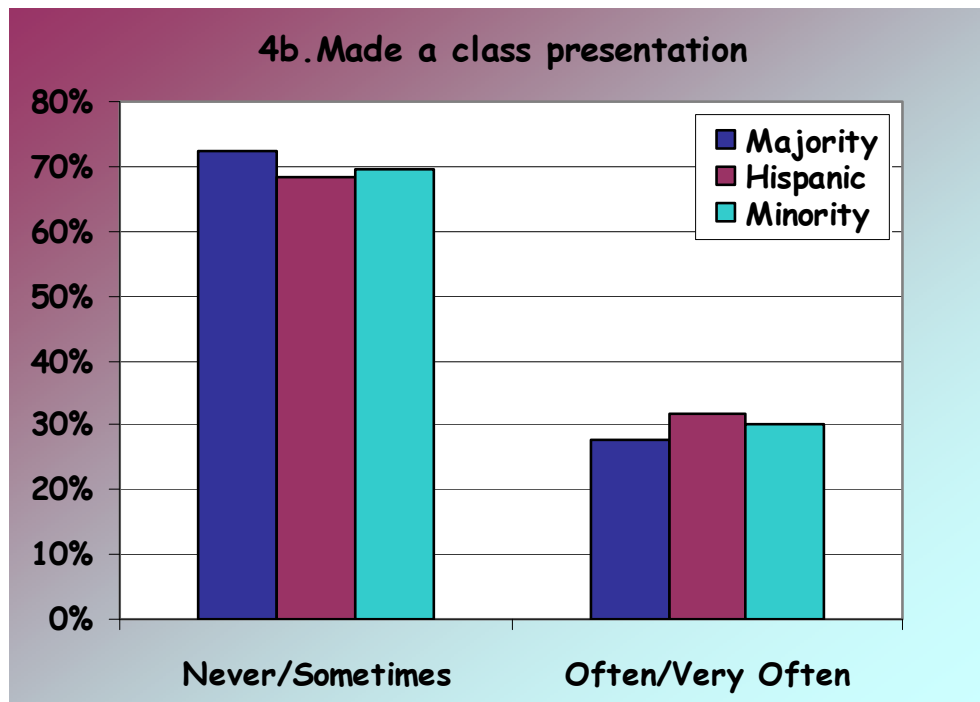
Each benchmark score was computed by averaging the scores on survey items that comprise that benchmark. To compensate for the disproportionately large numbers of full-time students in the sample, all means used in the creation of the benchmarks are weighted by full- and part-time status. Benchmark scores are standardized so that the weighted mean across all students is 50 and the standard deviation across all participating students is 25. Institutions' benchmark scores are computed by taking the weighted average of their students' standardized scores.

CCSSE also provides us with a very interesting question to keep in mind as we look at the data and compare ourselves to similar institutions. “How Good Is Good Enough? The purpose of ‘benchmarking’ is to compare performance of like institutions — and through that process, to identify opportunities for improvement and potential models of ‘best practice.’ But CCSSE and its member colleges must not shy away from the question of whether the performance reflected in survey results is good enough, either for individual institutions or for community colleges nationally. Answering that question often requires looking at data (means and frequencies) for individual survey items associated with the benchmarks.” For example, the data team looked more deeply at NECC student responses to the Active and Collaborative Learning question dealing with class presentations.

The data presented in **Figure 1** indicates that approximately 70% of our students never or only sometimes do class presentations. This is important because class presentations are one key indicator of active engagement in a course.

Figure 1.

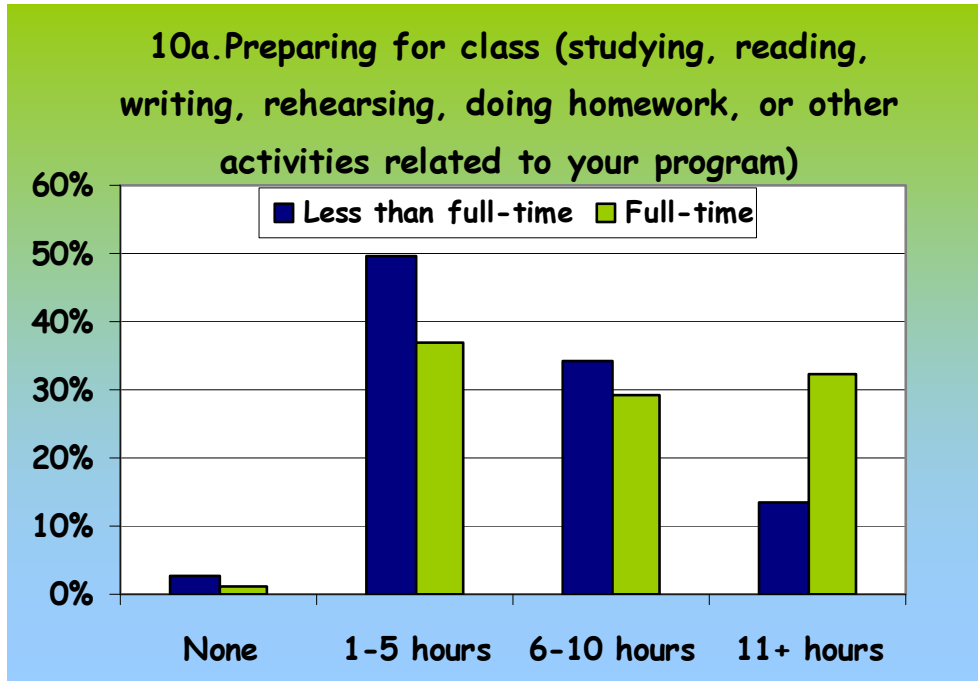
Question 4. In your experiences at this college during the current school year, about how often have you done each of the following?



We also looked at the Student Effort question dealing with hours spent preparing for class. **Figure 2** indicates that students spend a disturbingly small amount of time preparing for their classes.

Figure 2.

Question 10. About how many hours do you spend in a typical 7-day week doing each of the following?



Much of the CCSSE data is useful when we look at it through the prism of our Achieving the Dream cohorts. Achieving the Dream is about improving student success. If students are more engaged in their work and exhibit more commitment to their courses, their chances of success will increase.

Key Performance Indicators (KPIs)

As indicated by the Institutional Effectiveness Task Force’s website, “Institutional Effectiveness is a cyclical, ongoing process of continuous improvement. It enables a college to plan, make informed decisions, and allocate resources by systematically collecting, assessing, and acting on data relative to how well the institution is achieving its mission and purposes. The overarching purpose of the Institutional Effectiveness plan is to foster student success through continuous evaluation and improvement across six main themes: access, quality,

persistence, efficiency, diversity and culture/climate.” The Key Performance Indicators (KPIs) provide a way to accomplish that goal.

The data from the KPIs provides us with some basic information about the course completion rates for some of the courses identified as gatekeepers. We considered developmental and college-level math courses, Basic Writing and Composition I, Sociology, Psychology, ESL, and the Natural Sciences. We looked at both online and traditional courses. Last year’s complete report is available at:

<http://www.necc.mass.edu/irp/documents/InstitutionalEffectivenessFall2006.pdf>

In an attempt to determine where the College can make the biggest impact, we identified the courses with the highest enrollments and many of our target developmental and gateway courses are on the list (see **Table 2** below).

Table 2.

Top 20 Courses by Enrollment -- Fall 2006

Subject	Course Number	Course Title	# Enrolled
ENG	101	English Comp I	1,021
MAT	022	Basic Algebra II	901
PSY	101	Intro to Psychology	715
CIS	110	Computer Applications	521
SOC	101	Intro to Sociology	482
ENG	102	English Comp II	466
WRT	010	Basic Writing	406
BIO	121	Anatomy & Physiology I	394
REA	011	Basic Reading	272
REA	021	College Reading	262
MAT	120	College Algebra	255
ACC	101	Intro to Accounting I	244
MAT	021	Basic Algebra I	226
BUS	101	Intro to Business	222
BIO	122	Anatomy & Physiology II	181
BIO	103	Human Nutrition & Health	172
CIS	101	Computers for Beginners	151
PSY	201	Developmental Psychology I	150
SPN	111	Intro to Spanish I	149
HIS	121	World Civ I	148

Overall course completion rates for the gateway courses hover between 50 and 75% (see **Figure 3** and **Table 3**). The team then drilled down into the data on course completion rates, and some trends became obvious. Age is important. We considered students under age 25 as a separate cohort and discovered that the course completion rate for this group is considerably lower than for older students. Gender also is important. Men, generally, are less successful than women. The least successful cohort seems to be young Hispanic males. These trends hold across both online and traditional courses (for more detailed completion rate analysis, please refer to **Appendix A** at the end of this report).

Figure 3.

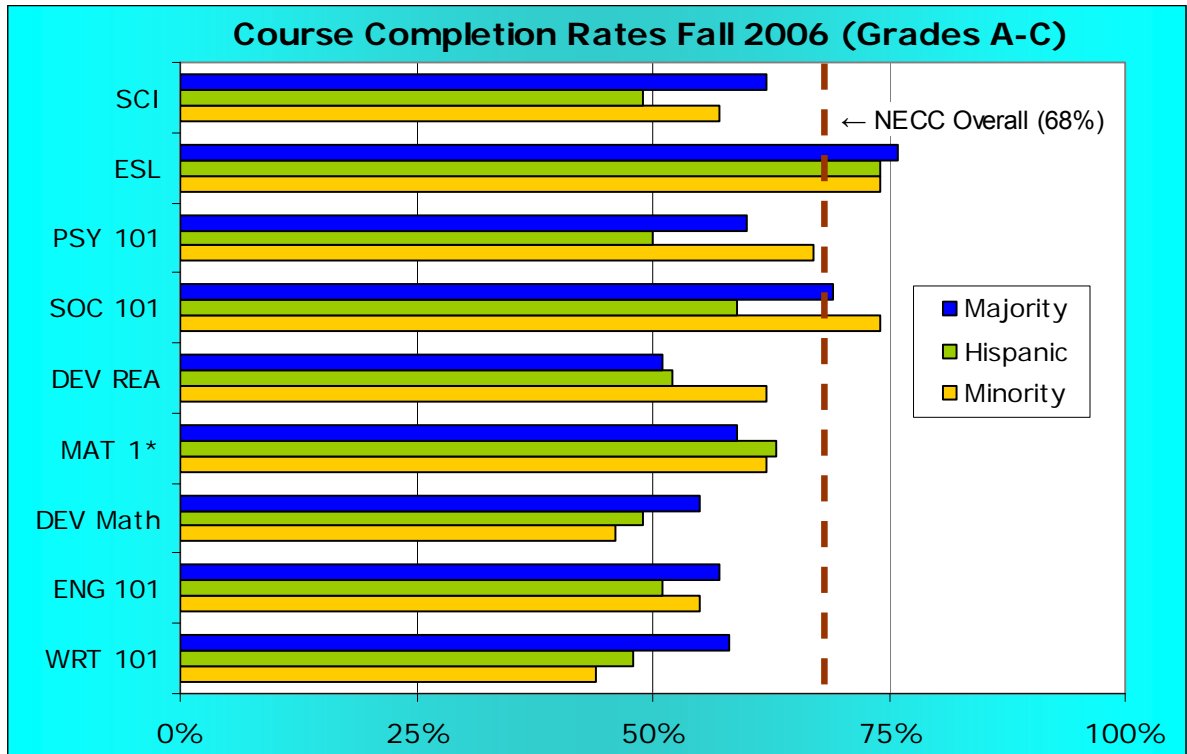


Table 3.**Fall 2006 Course Completion Rates****** Completion Rates <= 50% are noted in RED.**

	ALL	Majority	Hispanic	Minority	Female	Male	Received Aid	Age <=25	Age >25
Basic Writing - WRT 101	53%	58%	48%	44%	59%	45%	56%	49%	66%
Developmental Math	54%	55%	49%	46%	56%	51%	54%	49%	69%
English Comp I - ENG 101	56%	57%	51%	55%	56%	56%	55%	54%	70%
Developmental Reading	56%	51%	52%	62%	55%	47%	57%	50%	64%
College Math (100 Level)	60%	59%	63%	62%	66%	54%	64%	56%	77%
Psychology - PSY 101	62%	60%	50%	67%	60%	58%	58%	58%	74%
Natural Sciences	62%	62%	49%	57%	62%	58%	59%	55%	72%
Sociology - SOC 101	67%	69%	59%	74%	68%	67%	70%	65%	77%
English as a Second Language	76%	76%	74%	74%	75%	71%	79%	74%	74%

The data indicates a variation in course completion rates between the disciplines. Further, it indicates that the developmental and gateway courses have completion rates well below the NECC average of 68% in most instances. Hispanic and minority students generally have lower course completion rates than majority students. Younger and male students in both developmental and gateway courses have lower course completion rates than older and female students. These observations led the team to focus on developmental and gateway courses, and students who are younger, male, and/or Hispanic or minority.

Our observations of the data led us to wonder *why* some of these students did not succeed in developmental and gateway courses. We began to ask if students were placed into the appropriate courses for them. The team began to consider assessment scores and the placement of students into particular courses.

The Math placement seems complex. In MAT 022, high CPT scores in arithmetic and in Elementary Algebra are predictive of success. The medium and low scores are less predictive. The low-end cut score has raised some questions and is being reexamined.

We also looked at Reading assessment scores and compared scores to grades earned in gateway courses English Composition, Psychology and Sociology. The CPT reading scores do not seem to be predictive of success. Our analysis did not reveal any meaningful explanations. However, the committee will continue to explore the reading issue (both placement and ability) next semester.

We realize that NECC needs to consider both how students succeed in and progress out of developmental courses as well as how they succeed in the college-level courses they enter. The data from KPI #1 (Persistence: Academic Performance in Core Areas of Reading, Writing, and Mathematics), indicates the transition can be difficult.

Finally, our observations and analysis suggest that our primary target group should include students under age 25. That group can be further divided to consider male students, Hispanic students, and students who initially test into developmental and gateway courses.

Potential Target Groups

- ✓ Developmental students
- ✓ Younger students
- ✓ Male students
- ✓ Minority and/or Hispanic students

Major Themes/Success Indicators

- ✓ Improving course completion rates of developmental courses
- ✓ Improving completion of gateway courses, particularly ENG101 and MAT 022

Potential Strategies/Topics for Discussion

- ✓ Reconsidering the CPT cut off scores (particularly as they effect Basic Algebra II)
- ✓ Reexamining (soft) prerequisites or skill levels, particularly reading and writing
- ✓ Improving early identification of struggling students
- ✓ Reconsidering the College Success course (revisit the purpose, scope, target audience, and marketing; the need seems clear)
- ✓ Reconsider the question of college readiness and exactly what that term might mean. Consider such issues as academic readiness, commitment to work, a willingness to expend effort, clear expectations of what is involved in being a student

Data Team members include:

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Tom Fallon, Team Leader
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Jim Sullivan
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Appendix A

Fall 2006 Course Completion Rates (A - C) for Selected Courses - ALL Students

		Basic Writing				ENG101				Developmental Math						
		# Enrolled	% Complete	# Enrolled	% Complete	# Enrolled	% Complete	# Enrolled	% Complete	# Enrolled	% Complete	# Enrolled	% Complete			
Majority	Male	83	49%	<= 25	74	49%	326	57%	<= 25	304	55%	309	53%	<= 25	275	52%
				>25	9	56%			>25	22	77%			>25	34	62%
	Female	95	65%	<= 25	64	58%	403	57%	<= 25	328	54%	492	57%	<= 25	346	50%
				>25	31	81%			>25	75	71%			>25	146	71%
Hispanic	Male	54	43%	<= 25	47	43%	66	53%	<= 25	61	52%	82	44%	<= 25	73	44%
				>25	7	43%			>25	5	60%			>25	9	44%
	Female	95	51%	<= 25	71	51%	107	50%	<= 25	89	45%	182	51%	<= 25	129	43%
				>25	24	50%			>25	18	72%			>25	53	72%
Minority (Asian, Black, Native American)	Male	17	29%	<= 25	14	29%	15	53%	<= 25	11	55%	24	42%	<= 25	18	39%
				>25	3	33%			>25	4	50%			>25	6	50%
	Female	15	60%	<= 25	9	56%	27	56%	<= 25	21	52%	30	50%	<= 25	20	40%
				>25	6	67%			>25	6	67%			>25	10	70%
Total*	Male	179	45%	<= 25	156	44%	443	56%	<= 25	408	55%	460	51%	<= 25	404	50%
				>25	23	57%			>25	35	74%			>25	56	57%
	Female	227	59%	<= 25	161	54%	578	56%	<= 25	473	53%	748	56%	<= 25	527	49%
				>25	66	70%			>25	105	69%			>25	221	72%

		College Math				Reading				Sciences						
		# Enrolled	% Complete	# Enrolled	% Complete	# Enrolled	% Complete	# Enrolled	% Complete	# Enrolled	% Complete	# Enrolled	% Complete			
Majority	Male	295	53%	<= 25	269	52%	94	46%	<= 25	90	46%	313	57%	<= 25	243	51%
				>25	26	62%			>25	4	50%			>25	70	77%
	Female	313	64%	<= 25	225	58%	169	53%	<= 25	130	52%	791	63%	<= 25	459	55%
				>25	88	77%			>25	39	59%			>25	332	74%
Hispanic	Male	54	56%	<= 25	46	50%	45	53%	<= 25	40	55%	40	45%	<= 25	27	37%
				>25	8	88%			>25	5	40%			>25	13	62%
	Female	56	71%	<= 25	35	60%	128	52%	<= 25	97	49%	145	50%	<= 25	93	46%
				>25	21	90%			>25	31	58%			>25	52	58%
Minority (Asian, Black, Native American)	Male	16	63%	<= 25	11	55%	18	50%	<= 25	15	40%	38	47%	<= 25	25	40%
				>25	5	80%			>25	3	100%			>25	13	62%
	Female	19	63%	<= 25	13	62%	21	71%	<= 25	11	64%	72	63%	<= 25	28	57%
				>25	6	67%			>25	10	80%			>25	44	66%
Total*	Male	407	56%	<= 25	363	54%	186	47%	<= 25	169	44%	441	58%	<= 25	327	52%
				>25	44	68%			>25	17	71%			>25	114	75%
	Female	421	65%	<= 25	298	59%	348	55%	<= 25	264	53%	1,114	62%	<= 25	639	56%
				>25	123	80%			>25	84	63%			>25	475	71%

*Total includes students in Missing, Unknown & Non-resident Alien ethnic groups.

Fall 2006 Course Completion Rates (A - C) for Selected Courses - Full Time Students

		Basic Writing						ENG101						Developmental Math					
		# Enrolled	% Complete	<= 25	# Enrolled	% Complete	# Enrolled	% Complete	<= 25	# Enrolled	% Complete	# Enrolled	% Complete	<= 25	# Enrolled	% Complete			
Majority	Male	53	49%	<= 25	52	48%	252	57%	<= 25	248	57%	230	51%	<= 25	225	52%			
				>25	1	100%			>25	4	75%			>25	5	20%			
	Female	44	66%	<= 25	41	66%	267	58%	<= 25	254	58%	280	51%	<= 25	259	50%			
				>25	3	67%			>25	13	54%			>25	21	71%			
Hispanic	Male	21	33%	<= 25	19	32%	37	49%	<= 25	37	49%	48	40%	<= 25	46	41%			
				>25	2	50%			>25	0	-			>25	2	0%			
	Female	34	53%	<= 25	31	48%	51	53%	<= 25	49	51%	74	51%	<= 25	69	49%			
				>25	3	100%			>25	2	100%			>25	5	80%			
Minority (Asian, Black, Native American)	Male	15	27%	<= 25	13	23%	10	50%	<= 25	10	50%	19	42%	<= 25	17	41%			
				>25	2	50%			>25	0	-			>25	2	50%			
	Female	7	43%	<= 25	5	40%	17	47%	<= 25	15	47%	20	45%	<= 25	16	38%			
				>25	2	50%			>25	2	50%			>25	4	75%			
Total*	Male	104	42%	<= 25	98	41%	325	56%	<= 25	318	55%	326	48%	<= 25	316	48%			
				>25	6	67%			>25	7	86%			>25	10	20%			
	Female	97	57%	<= 25	88	55%	361	57%	<= 25	340	57%	402	53%	<= 25	369	51%			
				>25	9	78%			>25	21	57%			>25	33	76%			

		College Math						Reading						Sciences					
		# Enrolled	% Complete	<= 25	# Enrolled	% Complete	# Enrolled	% Complete	<= 25	# Enrolled	% Complete	# Enrolled	% Complete	<= 25	# Enrolled	% Complete			
Majority	Male	210	54%	<= 25	207	54%	75	41%	<= 25	75	41%	191	52%	<= 25	179	51%			
				>25	3	33%			>25	0	-			>25	12	67%			
	Female	198	61%	<= 25	178	61%	87	54%	<= 25	83	53%	334	53%	<= 25	293	52%			
				>25	20	65%			>25	4	75%			>25	41	61%			
Hispanic	Male	25	72%	<= 25	24	71%	19	42%	<= 25	18	44%	12	50%	<= 25	11	45%			
				>25	1	100%			>25	1	0%			>25	1	100%			
	Female	25	68%	<= 25	21	67%	39	59%	<= 25	34	56%	52	52%	<= 25	45	49%			
				>25	4	75%			>25	5	80%			>25	7	71%			
Minority (Asian, Black, Native American)	Male	12	75%	<= 25	9	67%	14	43%	<= 25	13	38%	18	39%	<= 25	15	40%			
				>25	3	100%			>25	1	100%			>25	3	33%			
	Female	11	64%	<= 25	9	67%	10	50%	<= 25	8	63%	25	68%	<= 25	15	60%			
				>25	2	50%			>25	2	0%			>25	10	80%			
Total*	Male	276	59%	<= 25	267	59%	123	39%	<= 25	120	38%	247	55%	<= 25	224	53%			
				>25	9	67%			>25	3	67%			>25	23	74%			
	Female	253	62%	<= 25	226	62%	156	58%	<= 25	142	56%	449	55%	<= 25	384	54%			
				>25	27	67%			>25	14	71%			>25	65	65%			

*Total includes students in Missing, Unknown & Non-resident Alien ethnic groups.

Fall 2006 Course Completion Rates (A - C) for Selected Courses - Part-Time Students

		Basic Writing						ENG101						Developmental Math					
		# Enrolled	% Complete	<= 25	>25	# Enrolled	% Complete	<= 25	>25	# Enrolled	% Complete	<= 25	>25	# Enrolled	% Complete	<= 25	>25		
Majority	Male	30	50%	22	50%	74	55%	56	48%	79	59%	50	54%	51	65%	23	43%		
	Female	51	65%	28	82%	136	55%	74	39%	212	63%	87	52%	29	69%	125	71%		
Hispanic	Male	33	48%	28	50%	29	59%	24	58%	34	50%	27	48%	61	49%	40	53%		
	Female	61	49%	5	40%	56	46%	5	60%	108	51%	7	57%	21	43%	60	35%		
Minority (Asian, Black, Native American)	Male	2	50%	1	100%	5	60%	1	100%	5	40%	1	0%	8	75%	4	75%		
	Female	8	75%	1	0%	10	70%	4	50%	10	60%	4	50%	4	50%	4	50%		
Total*	Male	75	49%	58	48%	118	58%	90	54%	134	58%	88	55%	130	60%	73	53%		
	Female	130	60%	17	53%	217	53%	28	71%	346	60%	46	65%	57	68%	158	46%		

		College Math						Reading						Sciences					
		# Enrolled	% Complete	<= 25	>25	# Enrolled	% Complete	<= 25	>25	# Enrolled	% Complete	<= 25	>25	# Enrolled	% Complete	<= 25	>25		
Majority	Male	85	52%	62	47%	19	63%	15	67%	122	66%	64	53%	115	68%	47	49%		
	Female	115	68%	23	65%	82	52%	4	50%	457	71%	58	79%	68	81%	166	62%		
Hispanic	Male	29	41%	22	27%	26	62%	22	64%	28	43%	16	31%	31	74%	14	50%		
	Female	31	74%	7	86%	89	48%	4	50%	93	49%	12	58%	17	94%	48	44%		
Minority (Asian, Black, Native American)	Male	4	25%	2	0%	4	75%	2	50%	20	55%	10	40%	8	63%	4	50%		
	Female	8	63%	2	50%	11	91%	2	100%	47	60%	10	70%	4	75%	13	54%		
Total*	Male	131	48%	96	41%	63	62%	49	59%	194	62%	103	50%	168	70%	72	51%		
	Female	168	70%	35	69%	192	54%	14	71%	665	67%	91	75%	96	83%	255	59%		

*Total includes students in Missing, Unknown & Non-resident Alien ethnic groups.

Fall 2006 Course Completion Rates (A - C) for Selected Courses - ALL Students, On-line versus Traditional Formats

		Science (BIO,ERS,SCI,PHS,CHM)						ENG101						Developmental Math					
		# Enrolled	% Complete	# Enrolled	% Complete	# Enrolled	% Complete	# Enrolled	% Complete	# Enrolled	% Complete	# Enrolled	% Complete	# Enrolled	% Complete				
on-line	Male	43	53%	<= 25	32	47%	18	44%	<= 25	16	44%	24	54%	<= 25	14	50%			
				>25	11	73%			>25	2	50%			>25	10	60%			
	Female	90	54%	<= 25	59	51%	43	49%	<= 25	31	35%	62	55%	<= 25	29	38%			
				>25	31	61%			>25	12	83%			>25	33	70%			
traditional	Male	398	59%	<= 25	295	53%	406	57%	<= 25	376	55%	436	50%	<= 25	390	50%			
				>25	103	75%			>25	30	73%			>25	46	57%			
	Female	1023	63%	<= 25	580	56%	517	56%	<= 25	425	54%	686	56%	<= 25	498	50%			
				>25	443	72%			>25	92	66%			>25	188	73%			

		College Math						PSY101						SOC101					
		# Enrolled	% Complete	# Enrolled	% Complete	# Enrolled	% Complete	# Enrolled	% Complete	# Enrolled	% Complete	# Enrolled	% Complete	# Enrolled	% Complete				
on-line	Male	28	46%	<= 25	24	46%	23	52%	<= 25	18	44%	20	50%	<= 25	16	50%			
				>25	4	50%			>25	5	80%			>25	4	50%			
	Female	50	46%	<= 25	27	26%	48	54%	<= 25	30	37%	60	65%	<= 25	36	61%			
				>25	23	70%			>25	18	83%			>25	24	71%			
traditional	Male	379	56%	<= 25	339	55%	250	58%	<= 25	223	57%	155	68%	<= 25	136	68%			
				>25	40	70%			>25	27	67%			>25	19	68%			
	Female	370	68%	<= 25	271	63%	394	61%	<= 25	318	59%	235	68%	<= 25	180	63%			
				>25	99	83%			>25	76	70%			>25	55	84%			