UNIVERSITY OF SOUTH CAROLINA

AIKEN

USCA Academic Tracking Report #7
Fall 2004 First Year Cohort Retention to Fall 2005
Conducted in Spring 2006

Prepared By:

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University Mission

Founded in 1961, the University of South Carolina Aiken (USCA) is a comprehensive liberal arts institution committed to active learning through excellence in teaching, faculty and student scholarship, research, creative activities and service. In this stimulating academic community, USCA challenges students to acquire and develop the skills, knowledge, and values necessary for success in a dynamic global environment.

The university offers degrees in the arts and sciences and in the professional disciplines of business, education, and nursing. All courses of study are grounded in a liberal arts and sciences core curriculum. USCA also encourages interdisciplinary studies and collaborative endeavors.

Emphasizing small classes and individual attention, USCA provides students with opportunities to maximize individual achievement in both academic and co-curricular settings. The institution challenges students to think critically and creatively, to communicate effectively, to learn independently, and to acquire depth of knowledge in chosen fields. The university values honesty, integrity, initiative, hard work, accomplishments, responsible citizenship, respect for diversity, and cross-cultural understanding.

USC Aiken attracts students of varying ages and diverse cultural backgrounds who have demonstrated the potential to succeed in a challenging academic environment. In addition to serving the Savannah River area, USCA actively seeks student enrollment from all parts of South Carolina as well as from other states and countries.

As a senior public institution of the University of South Carolina, USCA combines the advantages of a smaller institution with the resources of a major university system. Located in beautiful, historic Aiken, South Carolina, USCA is an institution of moderate size (2,500-5,000 students) that offers baccalaureate degrees in a number of disciplines, completion baccalaureate degrees at University of South Carolina regional campuses, and master's degrees in selected programs.

The USCA World Wide Web Home Page is: http://www.usca.edu
The USCA Office of Institutional Effectiveness World Wide Web Home Page is: http://ie.usca.edu

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Table of Contents

Executive Summary

This study investigates patterns of academic performance and institutional retention among the 2004 First Year (FY) cohort of full-time, first year students at the University of South Carolina Aiken (USCA). This study focuses on factors that impact the one year retention rate, a nationally accepted measure of institutional quality, and the study extends research and findings from earlier research on the entering 2002 FY Cohort and 2003 FY Cohort (Hosch, 2004; Hosch 2005b). The overarching findings of the present investigation indicate that weak academic performance in high school and low first semester collegiate GPAs are the factors most directly related to high levels of student attrition before the sophomore year. Students living in the older residential facility, Pacer Downs, also appeared to be retained at lower rates than those living in the new facility, Pacer Commons. Efforts directed toward improving the quality of student learning outcomes before and after matriculation could lead to higher retention rates. Major findings include:

➢ The one-year retention rate of the 2004 FY cohort was 60.4%, a decline of four percentage points from 2003 and almost eight points since 2002, marking the lowest retention rate of entering freshmen in over ten years.

➢ Variation increased in retention rates by race and by gender, and retention rates of white students and men continued to decline. Since 2002 the retention rate of white men has declined from 60.9% to 48.9%; for white women it has declined from 71.9% to 63.3%, and for African American or black men the retention rate has declined from 68.2% to 58.8%. Only for African American or black women has the retention rate remained constant at about 69%.

➢ Academic inputs, as measured by high school grades, class rank, and test scores, were again observed to correlate positively with student persistence, although the marked decline in the retention rate of white men, the demographic group with the statistically highest SAT scores, has weakened this correlation. Retention rates among students with weaker academic credentials remained reasonably constant, while retention rates of those with stronger credentials declined by about 10%. Students with high SAT scores exhibited extremely low retention rates (~5%), when first semester academic performance was weak, suggesting that unmet expectations for performance and lost financial aid contribute significantly to attrition.

➢ First semester grade point average (Sem GPA) was again found to be the most prominent factor related to persistence to the second year; high performing students were retained at lower rates among the 2004 FY cohort compared to the previous year:
  • For the 188 entering students who earned a Fall 2004 semester GPA over 3.0, the retention rate to the second year was 76.6%, down over 10 percentage points since 2002.
  • For the 211 entering students earning a Fall 2004 GPA between 2.0 and 3.0, the one-year retention rate was 65.7%, down about ten percentage points since 2002.
  • Among the 192 students with a Fall 2004 GPA below 2.0, the one-year retention rate was 39.1%, about the same as it was for the previous two years.

➢ Earning even just one grade of D, F, or W decreased the chance of a student returning to USCA the following year by more than 20 percentage points. Similarly, earning even just one course grade of A increased the chance of returning to USCA by about 15 percentage points. Such findings continue to reinforce the crucial message that retention is an indicator or result of academic success rather than an end to itself.

➢ Retention patterns by enrollment in specific Fall 2004 courses did not differ from the overall retention rates at statistically significant levels. Retention rates of students taking ASUP 101 exhibited a second year of decline from 74.4% among the 2002 FY cohort, to 68.8% among the 2003 FY cohort, to 66.7% for the 2004 FY cohort. It is important to note that this course was last offered in Fall 2004 and has since been transformed into AFYS 101 First Year Seminar, beginning in Fall 2005.

➢ Second semester GPA and cumulative GPA reflected students' performance in the first semester. Over a quarter (28.8%) of the students in the cohort earned below a 2.0 semester GPA in the spring semester and a similar proportion also had a cumulative GPA below 2.0.

➢ Place of residence was a significant factor in retention of the 2004 FY cohort. The one-year retention rate for students living in the new facility, Pacer Commons, was 75.6%; the retention rate for those living in Pacer Downs was 24 percentage points lower at 51.7%, and for those living off campus, the retention rate was just slightly higher at 56.4%. While academic inputs account for 5-10 percentage points of this difference, when students' entering credentials are controlled for, there is still 15 to 20 percentage point difference in retention rates by place of residence, suggesting that factors beyond academic performance affected student persistence among the 2004 cohort.

➢ Logistic regression formulas to predict retention of the 2004 FY cohort did not yield useful results with data available before the completion of their first semester. A formula was developed that has 72% accuracy using first semester GPA, but further research is needed to improve this tool and integrate information available before students complete a semester with weak academic performance.
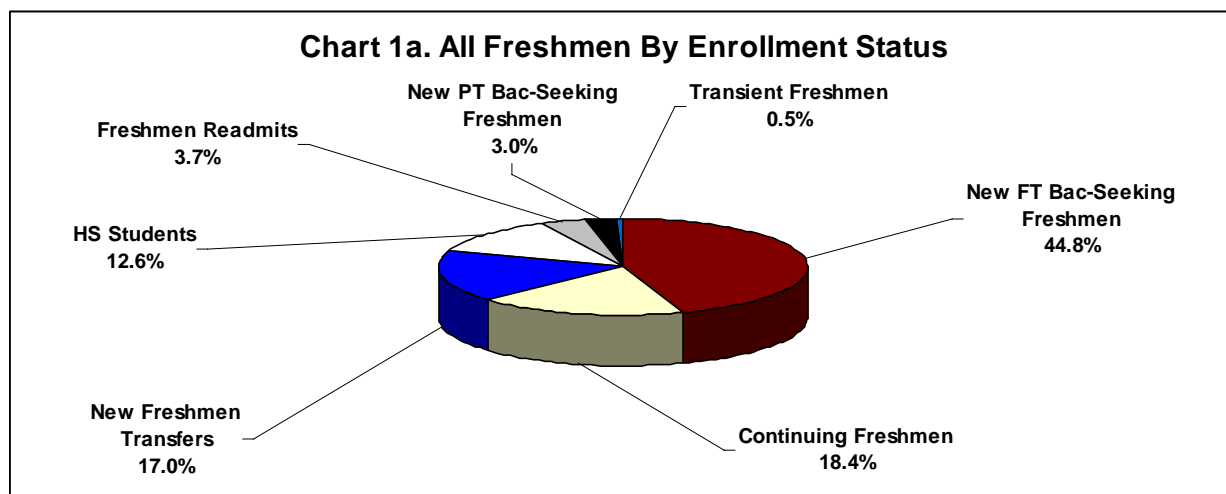
Methodology and Population for Analysis

The 581 students included in this current analysis comprise all first-year, baccalaureate degree-seeking freshmen entering USCA in Fall 2004 who carried a full-time load (12 hours or more) at the time of the data "freeze" on October 29, 2004. This group of students comprises the 2004 FY cohort. This data set was verified directly with the USC Office of Institutional Planning and Analysis on the Columbia campus and through the USC Data Warehouse.[1] While this group of students represents only 44.8% of USCA students classified as freshmen (up from 43.9% in 2003 and 38% in 2002), it is the population tracked for institutional retention of first-year students and the population for which 6-year completion rates are typically reported. Demographic information for the group of students was harvested from the E02AIKN file on the CMS mainframe and matched using MS Access 2003 with grade data from the unofficial totals files for the Fall 2004, Spring 2005, and Fall 2005 semesters. Students who were not registered for courses in a semester at USCA following a semester for which they were registered were considered not to have been retained by the institution.

Table 1. All Freshmen by Enrollment Status (Fall 2004)

	New Freshmen			New Freshmen Transfers			Freshmen Readmits			Continuing Freshmen			Transient Freshmen			H.S. Students	Total
	FT	PT	All	FT	PT	All	FT	PT	All	FT	PT	All	FT	PT	All	All	
Associate*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Baccalaureate	581	39	620	157	63	220	29	19	48	112	127	169	--	--	--	--	1056
Non-Degree	--	--	--	--	1	1	--	--	--	2	68	70	2	4	6	164	241
Total	581	39	620	157	64	221	29	19	48	114	195	239	2	4	6	164	1,297

Data Source: USC IPA Office Table Generator

Chart 1a. All Freshmen By Enrollment Status

- Transient Freshmen 0.5%
- New PT Bac-Seeking Freshmen 3.0%
- Freshmen Readmits 3.7%
- HS Students 12.6%
- New FT Bac-Seeking Freshmen 44.8%
- New Freshmen Transfers 17.0%
- Continuing Freshmen 18.4%

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[1] This resource is online at http://kudzu.ipr.sc.edu/dataware/tablegen/ and is publicly accessible.

Chart 1b. All Freshmen By Enrollment Status Fall 2002-04
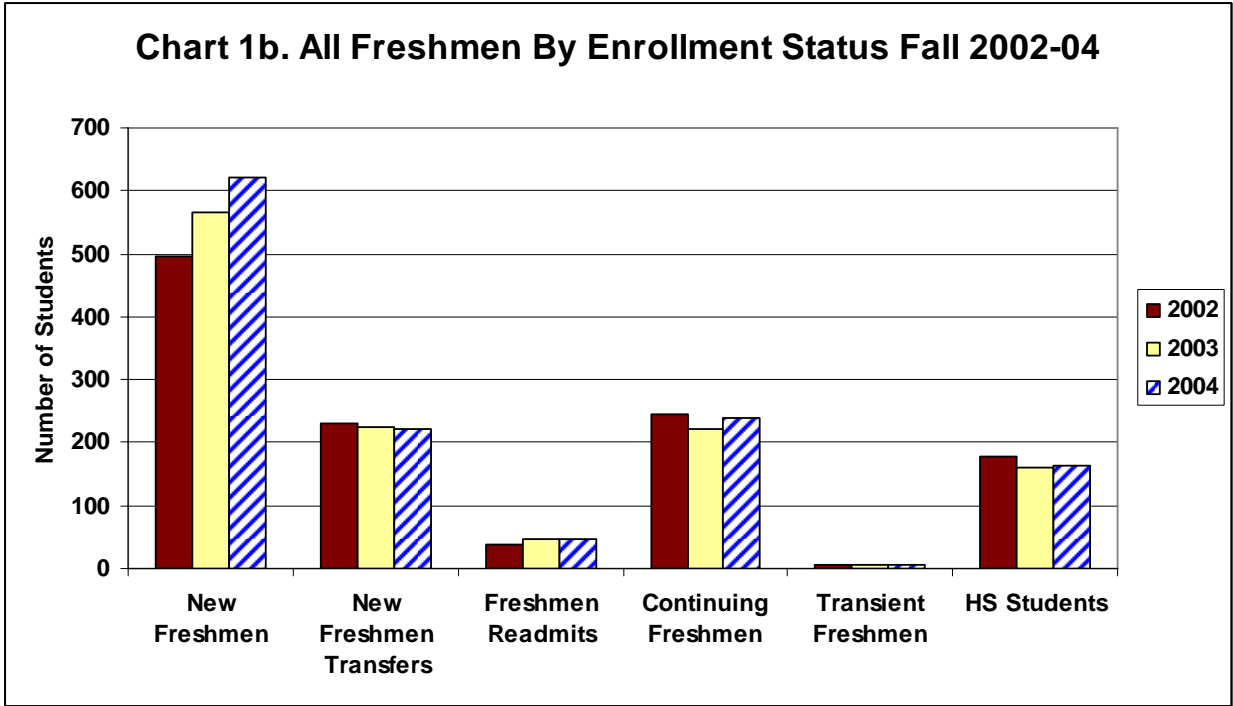
It is significant that the number of new freshmen enrolled at USCA has increased by 24% since 2002. Changes in enrollment appear to have an inverse relationship to retention rates, so that when the size of the entering first year cohort increases, the retention rate tends to decline. Conversely, when the size of the entering class declines, the retention rate increases.

Chart 1c. FY Cohort Size and Retention Rate Over Time
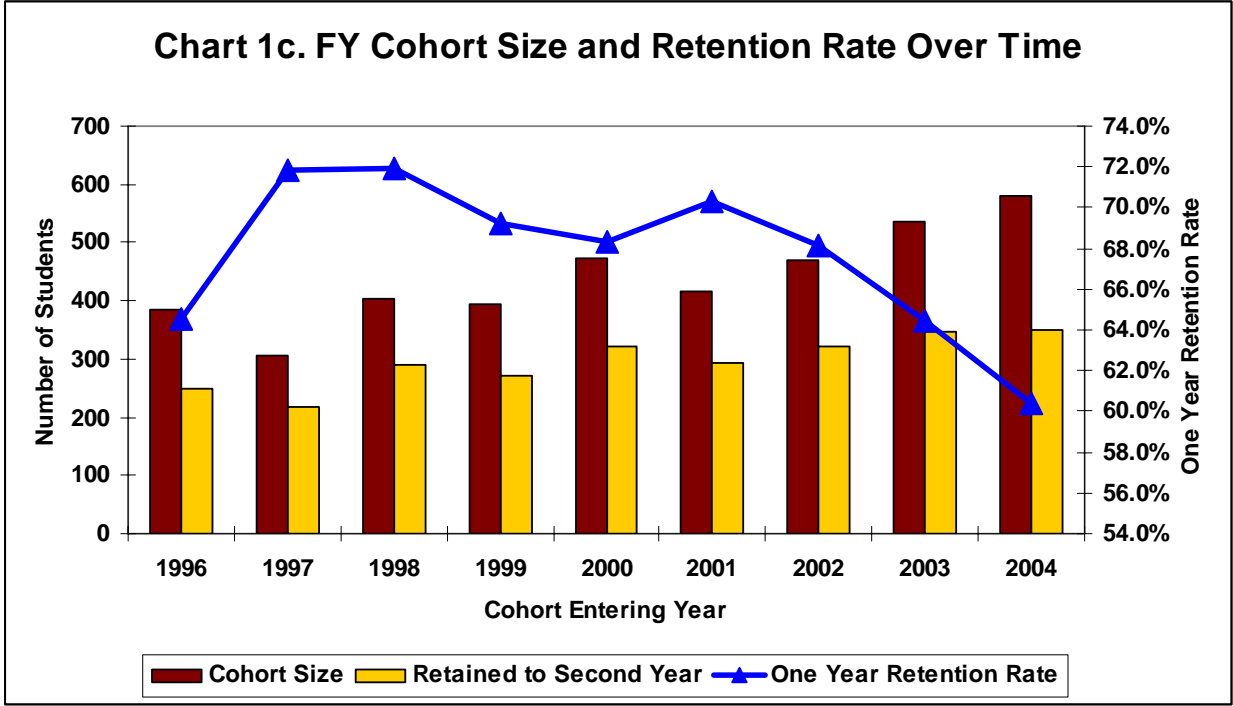
Demographic Profile

Enrollment of full-time first year students increased to 581 in 2004, up from 537 in Fall 2003, for a rise in enrollment of 8.2% for the full-time entering class. The proportion of women matriculating as full-time first year students at USCA in the Fall of 2004 was 66.6%, a negligible drop from 67.0% in Fall 2003.

The vast majority of the Fall 2003 cohort was made up of traditional age students, entering college directly from high school. As of the beginning of September 2003, a total of 524 students were ages 18 or 19; three students were ages 15 or 16; and 43 students were age 17. Four students were 20; seven were between 21 and 29; no full-time degree-seeking freshmen were over age 23. The mean age was 18.0 years old, down from 18.5 years old in 2003. The ongoing decrease in mean student age in the entering full-time freshmen class is likely a result of increasing tuition and the ineligibility of older students for state merit scholarships.

Chart 2. Enrollment in FY Cohort By Gender

Number of Students (Women / Men):

Year	Women	Men
2002	304	167
2003	360	177
2004	387	194

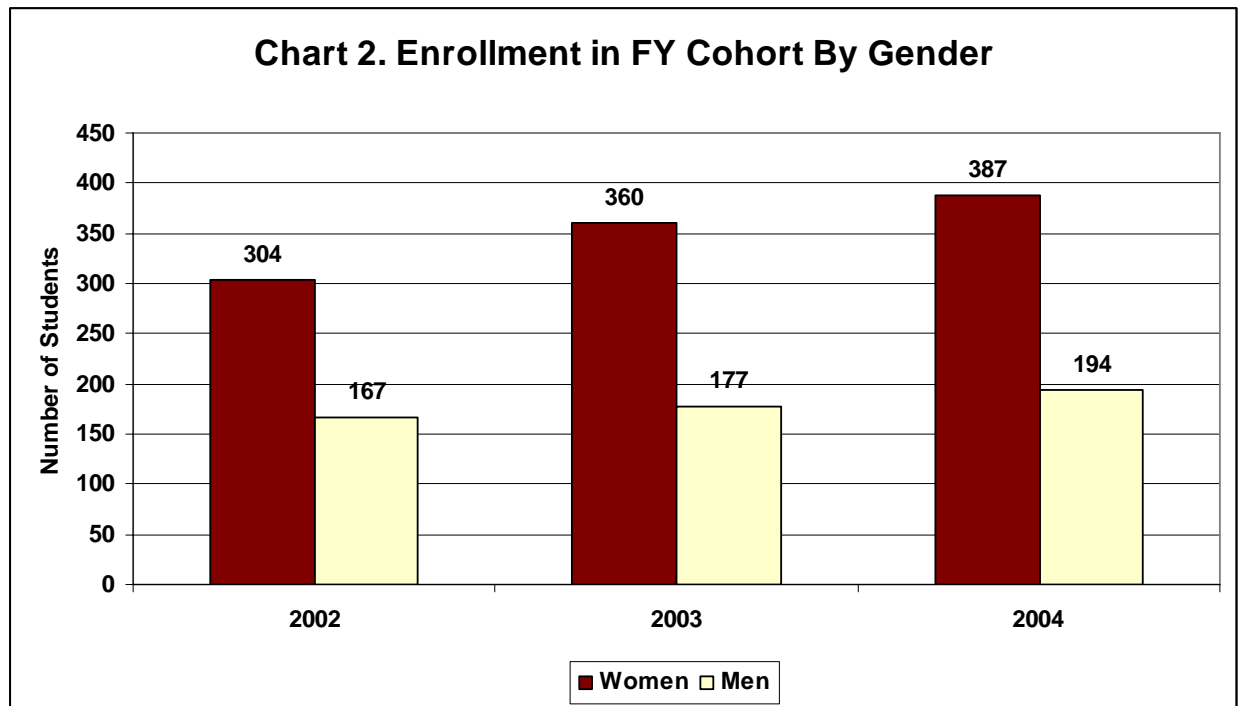In 2004 there was a decline of ten percentage points in the proportion of white, Non-Hispanic students in the entering freshmen class from 71.3% in 2003 to 61.6% in 2004. While the number of white men increased slightly from 130 in 2003 to 137 in 2004, the number of white women declined from 253 in 2003 to 221 in 2004. By contrast, the proportion of the 2004 entering class comprised of Black or African American students was 29.8%, up from 22.9% in 2003; almost all of this increase was among African American women.

All other races or ethnicities comprised just 4.5% of the entering class in 2004, although this proportion is up from 3.7% in 2003. Because the proportion of these ethnicities is relatively small, they are not a primary focus of this study.

Table 2. FY Cohort Enrollment by Race or Ethnicity and Gender

	Fall 2002			Fall 2003			Fall 2004		
	Female	Male	All	Female	Male	All	Female	Male	All
White	203	128	331	253	130	383	221	137	358
Amer. Indian	2	0	2	1	1	2	2		2
Afr. Amer or Black	78	22	100	91	32	123	139	34	173
Asian	2	4	6	3	3	6	2	4	6
Hispanic	3	4	7	5	4	9	8	7	15
No Report	16	9	25	5	6	11	14	10	24
Other	0	0	0	2	1	3	1	2	3
Cohort Total	304	167	471	360	177	537	387	194	581

The vast majority (91.7%) of the entering class in Fall 2004 indicated that their primary residence was located in South Carolina; this represents a 1.2% decline of in-state students from Fall 2003, when 92.9% of the cohort originated in South Carolina. The remainder of the entering class was from Georgia (3.6%, up from 1.9% in 2003), thirteen other U.S. states (2.7%, down from 3.7% in 2003) and six foreign countries (1.5%, up from 1.1% in 2003).

Table 3. Geographic Origin of First Year Cohort (2002-2004)

State	Fall 2002		Fall 2003		Fall 2004	
	N	%	N	%	N	%
California	2	0.4%	1	0.2%	--	--
Colorado	--	--	1	0.2%	1	0.2%
Connecticut	1	0.2%	--	--	--	--
Florida	--	--	2	0.4%	2	0.3%
Georgia	12	2.5%	10	1.9%	21	3.6%
Illinois	1	0.2%	1	0.2%	--	--
Indiana	1	0.2%	--	--	1	0.2%
Kansas	1	0.2%	--	--	--	--
Massachusetts	--	--	1	0.2%	1	0.2%
Maryland	2	0.4%	2	0.4%	1	0.2%
Minnesota	--	--	1	0.2%		--
Missouri	--	--	--	--	1	0.2%
North Carolina	1	0.2%	1	0.2%	1	0.2%
New Hampshire	--	--	--	--	1	0.2%
New Jersey	2	0.4%	3	0.6%	--	--
New York	--	--	1	0.2%	--	--
Ohio	--	--	1	0.2%	--	--
Oregon	2	0.4%	--	--	1	0.2%
Pennsylvania	2	0.4%	2	0.4%	--	--
Rhode Island	--	--	--	--	1	0.2%
South Carolina	424	90.0%	499	92.9%	533	91.7%
Tennessee	--	--	2	0.4%	1	0.2%
Texas	5	1.1%	--	--	1	0.2%
Virginia	1	0.2%	1	0.2%	2	0.3%
West Virginia	1	0.2%	--	--	--	--
Wisconsin	1	0.2%	--	--	--	--
Foreign Countries	12	2.5%	6	1.1%	9	1.5%
Unknown	--	--	2	0.4%	3	0.5%
Total	471	100.0%	537	100.0%	581	100.0%

Overall One Year Retention Rates

The one year retention rate of students in the 2004 FY cohort remaining at USCA was 60.4%, down from 64.4% for the 2003 cohort, and from 68.2% for the 2002 cohort. This represents the fourth straight year of decline since 2001, when the retention rate was 70.3% and a decline of almost twelve percentage points from the highest observed retention rate of 72.0% for the 1998 cohort.

For students in the 2004 FY cohort who remained in the USC System, the one year retention rate was 68.7%. While the system retention rate represents the lowest level of in-system retention since 1995, the gap of 8.3% is the largest observed since 1993. Data from the National Student Clearinghouse seem to indicate that the vast majority of these students transfer to USC Columbia.

Table 4. One-Year Retention Rate of FY Cohort Fall 1993-2004

Cohort Year	N	Remaining at USCA	Remaining in USC System	Working Peer Group (CSRDE)
1993	300	67.3%	70.3%	--
1994	321	63.2%	68.5%	--
1995	347	72.3%	74.4%	70.0%
1996	384	64.6%	67.7%	69.1%
1997	305	71.8%	77.4%	70.2%
1998	403	72.0%	75.3%	70.8%
1999	393	69.2%	73.5%	71.2%
2000	473	68.3%	72.3%	72.3%
2001	417	70.3%	75.5%	72.7%
2002	471	68.2%	72.2%	73.7%
2003	537	64.4%	70.2%	73.2%
2004	581	60.4%	68.7%	--

Chart 3.One Year Retention Rates of Full-Time First Year Students 1993-2004
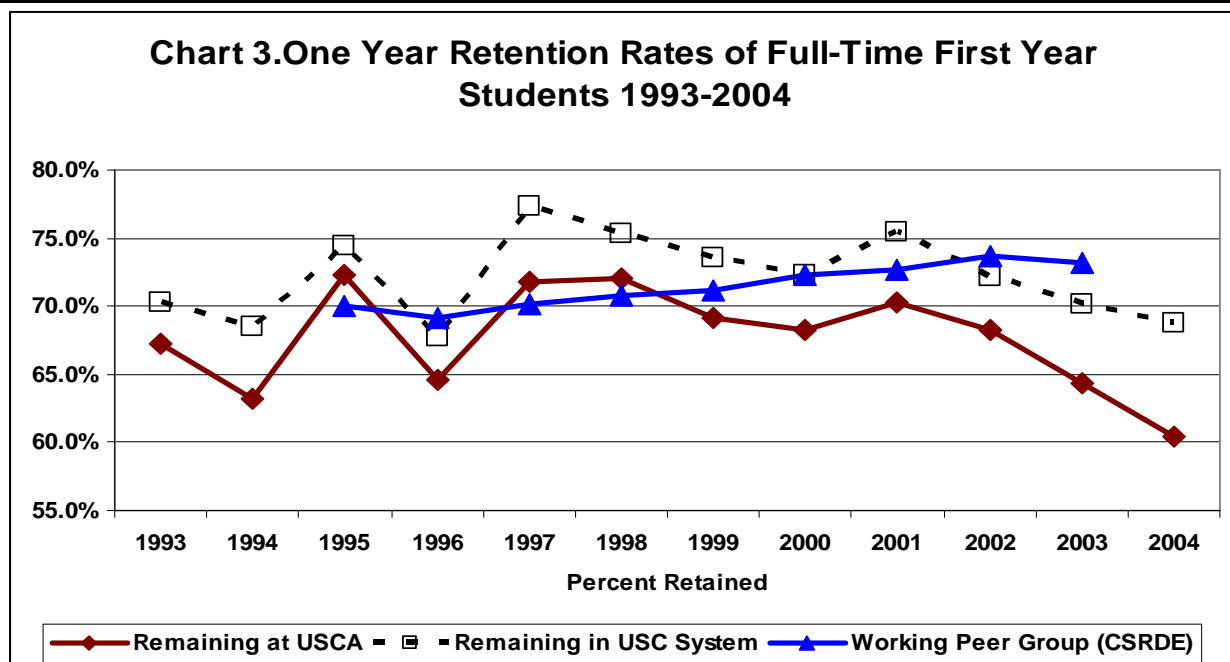
Table 5. Retention Rates By Gender and Race

	2002 FY Cohort			2003 FY Cohort			2004 FY Cohort		
	1st Fall N	2nd Fall N	Ret. %	1st Fall N	2nd Fall N	Ret. %	1st Fall N	2nd Fall N	Ret. %
All Men	**167**	**105**	**62.9%**	**177**	**107**	**60.5%**	**194**	**98**	**50.5%**
White	128	78	60.9%	130	77	59.2%	137	67	48.9%
Amer. Indian	0	0		1	1	100.0%	0	0	
Afr. Amer. or Black	22	15	68.2%	32	22	68.8%	34	20	58.8%
Asian, Pacific Isl.	4	4	100.0%	3	3	100.0%	4	2	50.0%
Hispanic	4	2	50.0%	4	2	50.0%	7	3	42.9%
No Response	9	6	66.7%	6	1	16.7%	10	4	40.0%
Other	0	0		1	1	100.0%	2	2	100.0%
All Women	**304**	**216**	**71.1%**	**360**	**239**	**66.4%**	**387**	**253**	**65.4%**
White	203	146	71.9%	253	165	65.2%	221	140	63.3%
Amer. Indian	2	1	50.0%	1	1	100.0%	2	1	50.0%
Afr. Amer. or Black	78	54	69.2%	91	62	68.1%	139	97	69.8%
Asian, Pacific Isl.	2	2	100.0%	3	3	100.0%	2		0.0%
Hispanic	3	2	66.7%	5	4	80.0%	8	3	37.5%
No Response	16	11	68.8%	5	3	60.0%	14	11	78.6%
Other	0	0		2	1	50.0%	1	1	100.0%
Grand Total	**471**	**321**	**68.2%**	**537**	**347**	**64.6%**	**581**	**351**	**60.4%**

Retention rates dropped sharply for men from 60.5% for the 2003 FY cohort to 50.5% for the 2004 FY cohort. The size of this decline was roughly the same for white men, for whom the retention rate dropped from 59.2% to 48.9%, and for African American or Black men, for whom the retention rate dropped from 68.8% to 58.8%. For women, the retention rate dropped slightly from 66.4% for the 2003 FY cohort to 65.4% for the 2004 FY cohort, but this overall average masks differences observed by race. For white women, the retention rate dropped about two percentage points from 65.2% to 63.3%, while for African American or Black women, the retention rate increased slightly from 68.1% to 69.8%, although this rate is not significantly different from the 69.2% retention rate of this group in 2002.

A marked drop in the retention rates of non-resident students was observed among the 2004 FY cohort. While the retention rate of resident students decreased from 63.8% to 62.0%, the retention rate of out-of-state students decreased from 75% for the 2003 FY cohort to just 44% for the 2004 FY cohort.
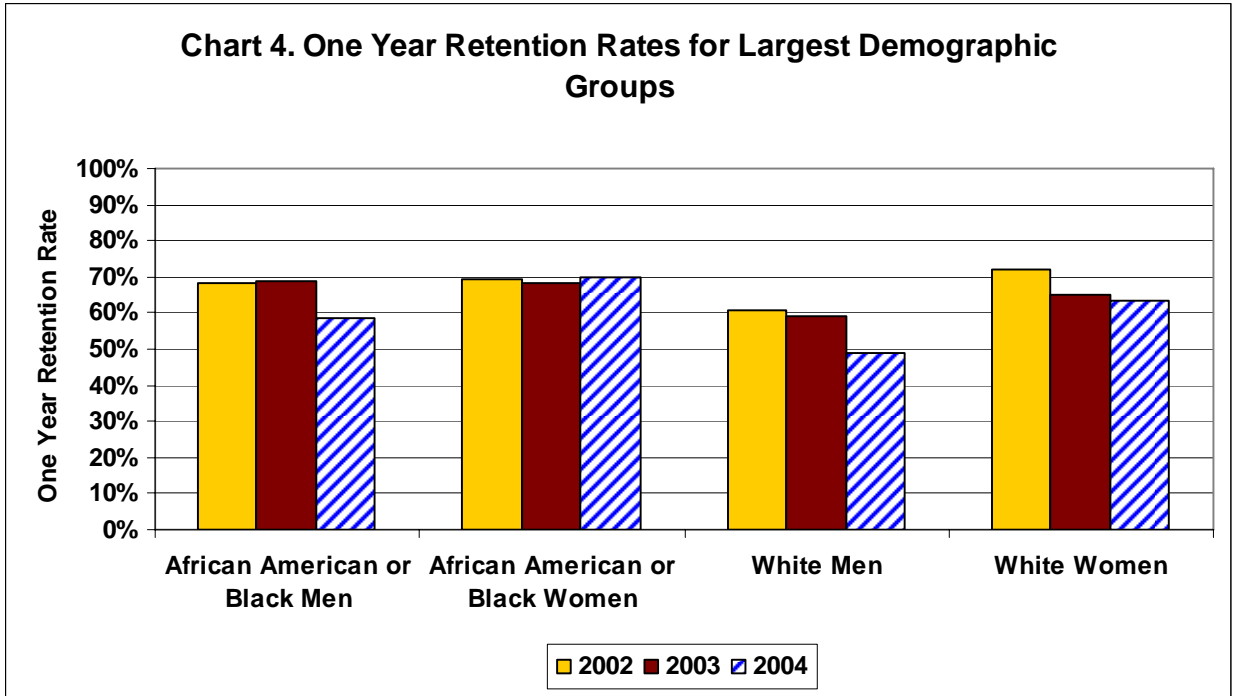
Chart 4. One Year Retention Rates for Largest Demographic Groups

Table 6. One Year Retention Rates by State Residency (2002-2004)

	Fall 2002			Fall 2003			Fall 2004		
	1st Fall N	2nd Fall N	Retention %	1st Fall N	2nd Fall N	Retention %	1st Fall N	2nd Fall N	Retention %
SC Residents	428	291	68.0%	497	317	63.8%	531	329	62.0%
Non-Residents	43	30	69.7%	40	30	75.0%	50	22	44.0%
All	471	321	68.2%	537	347	64.6%	581	351	60.4%

The overall drop in the one year retention rate is significant because of the observed relationship between a cohort's one year retention rate and the subsequent graduation rate of these students six years later. That is, when more students in a cohort persist into the second year, more students in that cohort receive degrees within six years of entering as full-time freshmen. For instance, the sharp upturn in graduation rates for the 1997 entering cohort of freshmen depicted in Chart 5 corresponds to a similar spike in this cohort's one-year retention rate.[2]

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[2] The significantly higher retention rate in 1997 is likely related to the state-mandated removal of remedial courses from the USCA curriculum, which prompted a substantial number of accepted freshmen to take several hours of remedial courses through Aiken Technical College. As a result, these students with relatively weaker entering academic profiles were not counted as entering full-time students at USCA, and neither their retention nor graduation rates are tracked for reporting to the U.S. Department of Education, the South Carolina Commission on Higher Education, nor national publications such as *U.S. News and World Report*.

Chart 5. One Year Retention Rates and Six Year Graduation Rates, 1993-2004 FY Cohorts (Actual and Projected)
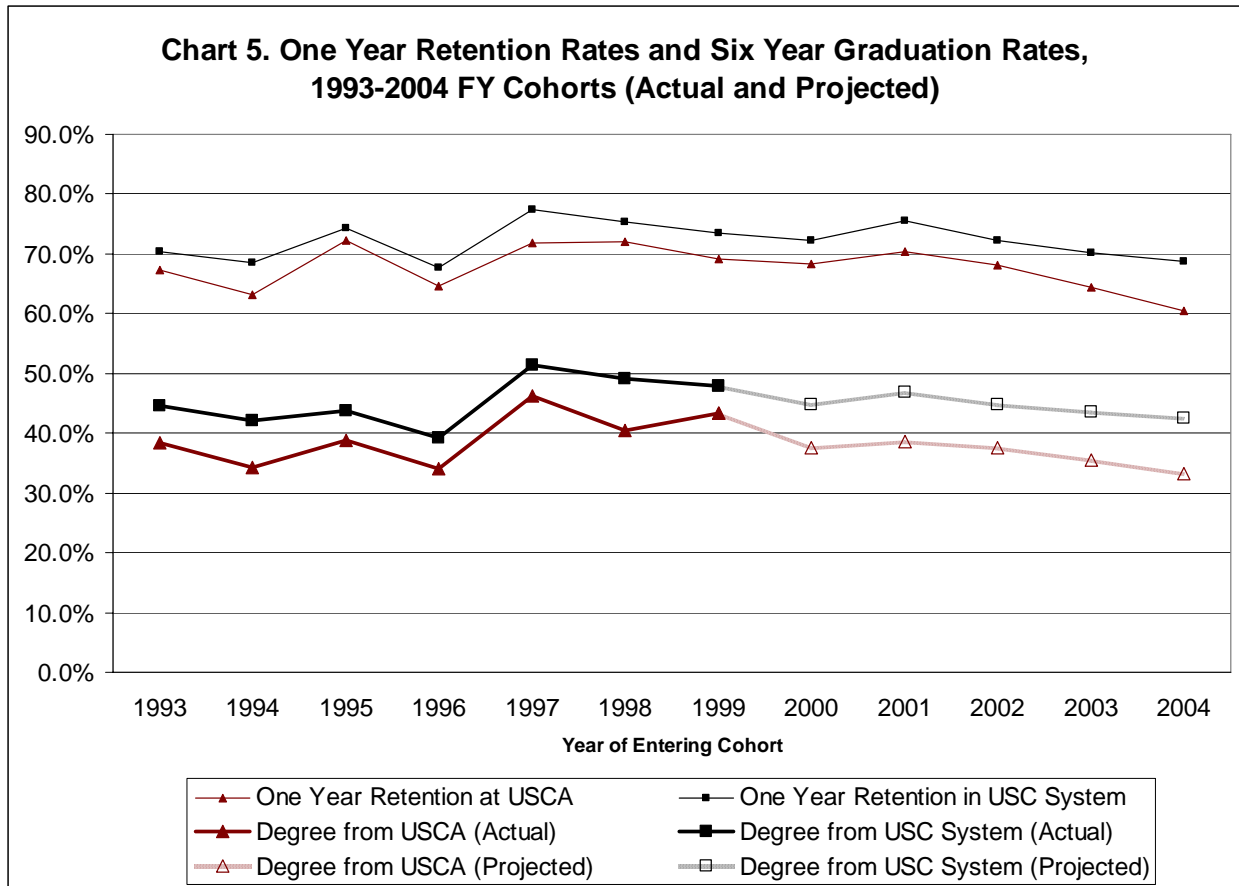
If all other factors were to remain constant, this pattern suggests that a gradual decline in the six-year graduation rates will be observed to mirror the decline in first-year retention rates through 2004 (see Chart 5). Given the relationship between one year retention rates and six year graduation rates since 1993 and assuming a yield rate that matches historical patterns, the six year graduation rate for the next five years could be expected to range between about 38.5% and 35.5%. Improving the one year retention rate can be considered both a short-term and long-term investment, since later graduation rates will likely improve along with the retention rate.

It is worth noting, however, that while the retention rate for the 1999 FY cohort went down by 0.9% from the previous year, the six-year graduation rates increased by two percent from 41.3% for the 1998 cohort to 43.3% for the 1999 cohort. This upturn in graduation rates may occur because all other factors do not, in fact, remain constant. Students in the 1999 cohort actually exhibited a higher academic profile than the class immediately before them, and these academic credentials have been shown to be somewhat more indicative of graduation from the same institution over a period of six years than just the one year retention rate (Astin & Oseguera, 2002). This predicted graduation rate formula has been applied in a preliminary study to USCA students, suggesting that academic inputs can greatly assist in determining graduation rates beyond using just the one year retention rate (Hosch, forthcoming). Nevertheless, observed trends at USCA suggest that these inputs are less predictive of the more relatively short term behavior of returning to college for a second year.

Entering Academic Profile and Retention

The 2004 FY cohort had about the same academic profile as the 2003 FY cohort, although high school core calculated GPA was slightly higher. This similarity suggests that the lower retention rate of the 2004 cohort was due to factors other than the measured academic inputs. For the entire 2004 FY cohort, the mean math SAT score was 494 (Std. dev. = 77); the mean verbal SAT score was 486 (Std. dev. = 78), and the combined SAT score was 977 (Std. dev. = 139), representing a 2 point decline in the mean SAT score from the score of the class entering the previous year, for which the combined SAT score was 979. On average, students entering in 2003 were ranked in the top third (top 32%) of their graduating high school class with a high school core GPA of 2.87 (Std. Dev. = 0.48) and a mean collegiate predicted GPA of 2.68 (Std. Dev. = 0.42). By comparison, the high school performance and academic profile of the 2002 FY cohort was just slightly lower; on average students entering in 2003 were ranked in the top 34% of their graduating high school class, with a high school core GPA of 2.79 (Std. Dev. = 0.49) and a mean collegiate predicted GPA of 2.63 (Std. Dev. = 0.43).

Table 7. Academic Profile of 2004 FY Cohort

	N	Mean SAT Math Score	Mean SAT Verbal Score	Mean SAT Comb. Score	Mean ACT Comp. Score	Mean HS Rank (top %)	Mean HS Core GPA	Mean Pred. GPA
Entire 2004 FY Cohort	581	494	486	977	19.2	32%	2.87	2.68
Non-returners through Spring 2005	63	495	474	965	19.0	40%	2.72	2.55
Non-returners through Fall 2005	230	498	482	980	19.3	37%	2.75	2.59
All Persisters through Fall 2005	351	492	489	981	19.2	29%	2.94	2.75

Table 8. Academic Profile of 2004 FY Cohort Compared to Previous Cohort

	N	Mean SAT Math Score	Mean SAT Verbal Score	Mean SAT Comb. Score	Mean ACT Comp. Score	Mean HS Rank (top %)	Mean HS Overall GPA	Mean HS Core GPA	Mean Pred. GPA
2002 FY Cohort	471	499	492	991	18.6	33%	NA	2.87	2.70
2003 FY Cohort	537	492	487	979	19.2	34%	NA	2.79	2.63
2004 FY Cohort	581	494	486	977	19.2	32%	3.47	2.87	2.68

While findings from analyses of earlier cohorts have shown that the overall academic profile of entering students who did not persist into either their second or third semesters was lower than that of students who did return in the following fall term (Hosch, 2004; Hosch, 2005b), this effect was less pronounced for the 2004 cohort. Students in the 2004 FY cohort who persisted had a mean combined SAT score of 981 (492 Math, 489 Verbal) and a mean high school class rank in the top 29%, while those who left USCA had a mean combined SAT score of 980 (498 Math, 482 Verbal) and a mean high school class rank in the top 37%. The gap in high school performance between returners and non-returners remained about constant, with about an 8 percentage point difference in high school class rank, but the 30-40 point gap in SAT scores closed completely. In part, this is a result of higher retention of African American students, who on average enter with significantly lower SAT scores.

These data indicate a relationship between the probability of a student's return to USCA from Fall to Fall and the student's high school performance and college entrance exam scores, although this relationship is weaker than in previous years because of differences in academic inputs across demographic groups. Nevertheless, USCA's predicted GPA formula still represented the factor available prior to matriculation most closely linked to one year retention, though it should be highlighted that the predictive power of this formula is relatively low, accounting for just 27% of variance in first semester grade point averages. The 130 students admitted in 2004 (up from 117 in 2003) admitted with a predicted GPA above 3.00 had a retention rate of 76.2%, down about nine percentage points from the previous year. In most instances, retention rates of these students fell even below the levels observed among the 2002 FY cohort (see Chart 6). For the 226 students matriculating in 2004 with a predicted GPA of 2.50-2.99 (up from 175 in 2003), the retention rate was 57.1%, again about nine percentage points of the 66.2% retention rate of the same group in 2003. Below the threshold of 2.50 predicted GPA, retention rates for the 2004 FY cohort were observed to be low, as they have been from previous years. For the 118 students in the 2004 cohort with a predicted GPA in the 2.25-2.49 range (down from 125 in 2003), the retention rate was 57.6% (up from 55.2% in 2003), and for those with a predicted GPA below 2.25, the retention rate was just 52.0% (about the same as it was in 2003, when it was 51.3%).

Chart 6. One Year Retention Rate By Predicted GPA
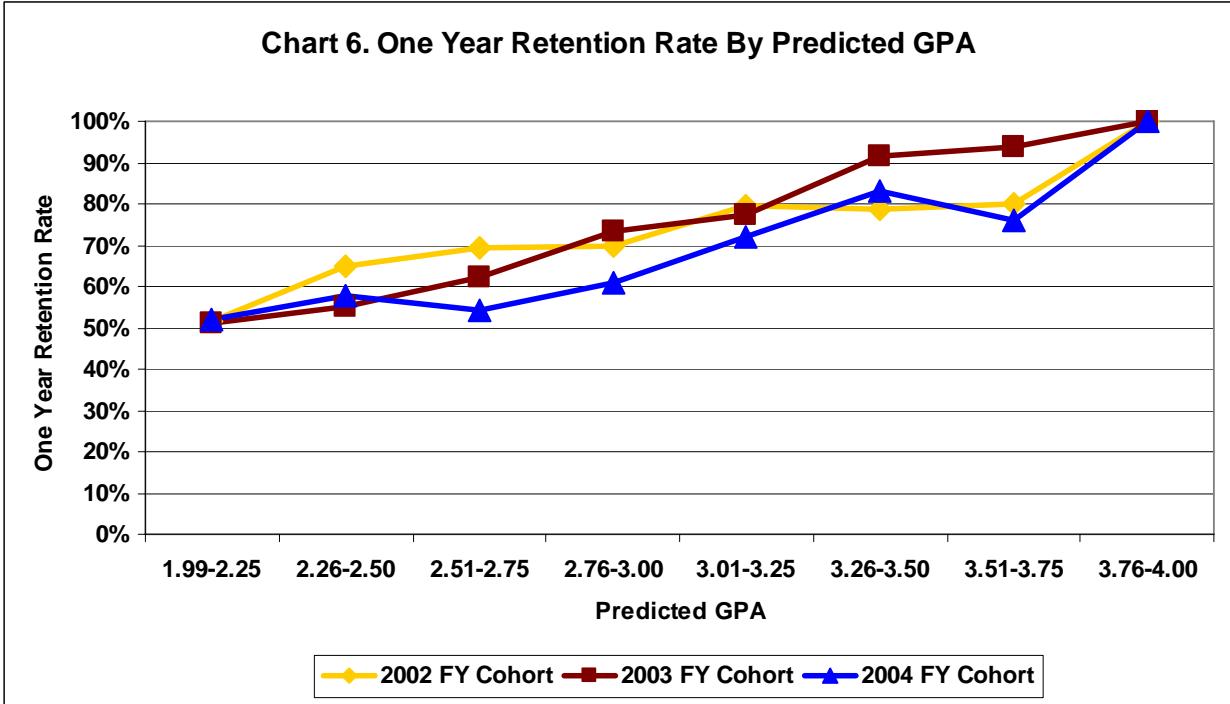
These findings indicate that more students with comparatively stronger academic records in the 2004 FY cohort departed USCA than did those in the 2003 FY cohort and in some cases also the 2002 cohort. Conversely, about the same proportion of comparatively weaker students remained at the university. A higher rate of attrition among students with apparently high qualifications could be cause for concern and points toward reasons for departure beyond an inability to perform adequate academic work.

Table 9. One Year Retention Rate by Predicted GPA* (2004 FY Cohort)

Predicted GPA	Fall 2004		Spring 2005			Fall 2005		
	N	Mean Sem GPA	N	Mean Sem GPA	Pct Retention	N	Mean Sem GPA	Pct Retention
1.99-2.25	100	1.77	89	1.66	89.0%	52	2.19	52.0%
2.26-2.50	118	2.01	102	2.18	86.4%	68	2.37	57.6%
2.51-2.75	124	2.29	109	2.28	87.9%	67	2.52	54.0%
2.76-3.00	102	2.48	90	2.67	88.2%	62	2.94	60.8%
3.01-3.25	71	2.91	65	2.92	91.5%	51	3.11	71.8%
3.26-3.50	35	3.42	35	3.37	100.0%	29	3.39	82.9%
3.51-3.75	21	3.42	21	3.16	100.0%	16	3.76	76.2%
3.76-4.00	3	3.97	3	3.63	100.0%	3	3.87	100.0%
(blank)	7	3.31	4	2.72	57.1%	3	2.58	42.9%
Cohort Total	581	2.38	518	2.42	89.2%	351	2.74	60.4%

* Includes the higher of Predicted GPA based on SAT or ACT scores.

As in previous years, the predicted GPA formula tended to overestimate actual performance of students in their first semester, and part of the magnitude of this gap is related to demographic factors (see Table 10). While the mean predicted GPA for the 2004 FY cohort as a whole was 2.68, the mean actual semester GPA in Fall 2004 of these students was 2.38. In 2003 this performance gap between predicted and actual GPA among white women was negligible at only -0.05 grade points, but in 2004 this gap had widened to -0.20 grade points. The gap remained reasonably constant among white men, with a gap of -0.23 grade points. A similar gap was observed among African American or black men, with a gap of -0.20, up significantly from a gap of -0.51 in 2003. Among African American or black women, however, the gap widened slightly from a gap between predicted and actual GPA of -0.51 in 2003 to -0.57 in 2004. The mean first semester GPA of all African American students increased from just below a "C" average (1.96 in 2003) to just above a "C" average (2.06 in 2004).

Table 10. Difference Between Predicted GPA and Fall 2004 GPA (2004 FY Cohort)

	N	Mean Predicted GPA	Mean Fall 2004 Semester GPA	Gap Betw Mean Predicted & Mean Actual GPA	One Year Retention Rate
Entire Cohort	581	2.68	2.38	-0.29	60.4%
Black or African American	173	2.55	2.06	-0.49	67.6%
White	358	2.73	2.51	-0.21	57.8%
All Men	194	2.60	2.41	-0.19	50.5%
Black or African American	34	2.36	2.16	-0.20	58.8%
White	137	2.63	2.41	-0.23	48.9%
All Women	387	2.71	2.37	-0.34	65.4%
Black or African American	139	2.60	2.03	-0.57	69.8%
White	221	2.78	2.58	-0.21	63.3%

Ongoing study of the performance of the current formula used to predict GPA, which is a linear combination of high school GPA in core classes and SAT scores, has indicated that the formula

accounts for about 28% of variation in first semester grade point average.[3] The fact that very few students are admitted to USCA with a predicted GPA below 2.0 yet about one third of the students in the freshman class earned a first semester GPA below 2.0 points toward some limitation of trying to predict collegiate success with just high school grades and the scores on one standardized test. Nevertheless, predicted GPA still predicts success at the university better than any single academic factor alone. Continued monitoring of the utility of the predicted GPA formula will be especially essential as students who take the SAT in March 2005 or later will be taking a revised test that includes modifications to the verbal section (called "critical reading" as of March 2005), a new writing section scored 200-800 as well as a subscore on a writing sample 2-12.

SAT Scores and Impact on Retention

Combined SAT scores appeared to continue to serve as a good predictor of academic performance but lost much of their predictive power for retention. The 62 students in the 2004 FY cohort who achieved a combined SAT score of less than 800 (or less than 17 on the ACT) had a mean fall GPA of just 1.72 and those who returned for spring earned a mean second semester GPA of 1.98, which is almost identical to the performance of this group of students in the 2003 FY cohort. One year retention for students with a combined SAT of less than 800 in the 2004 FY cohort was 61.3 %, up from 58.3% the previous year. Importantly, however, the semester GPA of 2004 FY cohort students in this group for their third semester actually declined to 1.72, while in the previous year, students with very low SAT scores who made it to their third semester earned a third semester GPA of 2.44. In a marked shift from previous years, students with a combined SAT score of 1100-1190 were retained at a rate of just 59.5% compared to 74.4% for the 2003 FY Cohort, although first semester GPA for students in this group was about the same at just under 3.0.

Table 11. One-Year Retention and Academic Performance by Combined SAT Score* (2004 FY Cohort)

SAT Score (Composite)	Fall 2004		Spring 2005			Fall 2005		
	N	Mean Sem GPA	N	Mean Sem GPA	Pct Retn	N	Mean Sem GPA	Pct Retn
Below 800	62	1.72	56	1.98	90.3%	38	1.72	61.3%
800-890	111	2.02	101	2.04	91.0%	62	2.02	55.9%
900-990	148	2.18	127	2.33	85.8%	90	2.18	60.8%
1000-1090	138	2.65	123	2.67	89.1%	85	2.65	61.6%
1100-1190	79	2.91	68	2.89	86.1%	47	2.91	59.5%
1200-1290	42	3.14	42	2.75	100.0%	29	3.14	69.0%
(blank)	1	3.56	1	3.44	100.0%	0	3.56	0.0%
Cohort Total	581	2.38	518	2.42	89.2%	351	2.38	60.4%

* Includes converted ACT Scores.

This significant drop in the retention of students in the 2004 FY cohort with higher SAT scores is in part reflective of the lower retention rates of white students and male students discussed in the previous section. When race and gender are taken into account, students with the highest SAT scores were retained at rates 15-20 percentage points higher than students with the lowest SAT

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[3] This formula is: Pr GPA = -0.40 + .751 (HS Core GPA) + 0.000975 (Math SAT Score + Verbal SAT Score)

scores. For instance, white men with a combined SAT score below 900 were retained at a rate of just 38.5% compared to a 56.8% retention rate for white men with SAT scores above 1100. Similarly, African American or Black women who earned below 900 on the SAT were retained at a rate of 64.0%, while those who earned over 1100 were retained at a rate of 100%. These demographic differences are in part indicative of students' percentile performance on the SAT within their demographic group and should reinforce the concept that SAT score alone, out of context of race, gender, and especially high school performance, is an uneven predictor of retention.

Table 11a. One-Year Retention and Academic Performance by Combined SAT Score* (2004 FY Cohort - White Men)

SAT Score (Composite)	Fall 2004		Spring 2005			Fall 2005		
	N	Mean Sem GPA	N	Mean Sem GPA	Pct Retn	N	Mean Sem GPA	Pct Retn
Below 800	2	1.48	2	1.80	100.0%	1	2.50	50.0%
800-890	11	2.10	10	1.98	90.9%	4	2.42	36.4%
900-990	31	2.01	25	2.20	80.6%	15	1.96	48.4%
1000-1090	48	2.39	37	2.41	77.1%	22	2.98	45.8%
1100-1190	30	2.79	28	2.78	93.3%	16	2.78	53.3%
1200-1290	14	2.84	14	2.73	100.0%	9	3.20	64.3%
(blank)	1	3.56	1	3.44	100.0%	0	--	0.0%
Cohort Total	137	2.41	117	2.46	85.4%	67	2.70	48.9%

* Includes converted ACT Scores.

Table 11b. One-Year Retention and Academic Performance by Combined SAT Score* (2004 FY Cohort - White Women)

SAT Score (Composite)	Fall 2004		Spring 2005			Fall 2005		
	N	Mean Sem GPA	N	Mean Sem GPA	Pct Retn	N	Mean Sem GPA	Pct Retn
Below 800	11	2.19	7	2.31	63.6%	5	3.35	45.5%
800-890	28	2.25	26	1.87	92.9%	16	2.45	57.1%
900-990	65	2.26	58	2.36	89.2%	40	2.61	61.5%
1000-1090	64	2.75	60	2.77	93.8%	45	2.91	70.3%
1100-1190	32	2.87	27	2.97	84.4%	19	3.14	59.4%
1200-1290	21	3.24	21	2.65	100.0%	15	3.67	71.4%
(blank)	--	--	--	--	--	--	--	--
Cohort Total	221	2.58	199	2.53	90.0%	140	2.90	63.3%

* Includes converted ACT Scores.

Table 11c. One-Year Retention and Academic Performance by Combined SAT Score* (2004 FY Cohort – African American or Black Men)

SAT Score (Composite)	Fall 2004		Spring 2005			Fall 2005		
	N	Mean Sem GPA	N	Mean Sem GPA	Pct Retn	N	Mean Sem GPA	Pct Retn
Below 800	8	1.80	8	1.60	100.0%	5	2.02	62.5%
800-890	11	2.04	11	2.12	100.0%	6	2.77	54.5%
900-990	6	2.43	4	2.80	66.7%	4	3.27	66.7%
1000-1090	4	1.85	4	1.84	100.0%	3	2.19	75.0%
1100-1190	5	2.90	3	1.82	60.0%	2	2.80	40.0%
1200-1290	--	--	--	--	--	--	--	--
(blank)	--	--	--	--	--	--	--	--
Cohort Total	34	2.16	30	2.00	88.2%	20	2.59	58.8%

* Includes converted ACT Scores.

Table 11d. One-Year Retention and Academic Performance by Combined SAT Score* (2004 FY Cohort – African American or Black Women)

SAT Score (Composite)	Fall 2004 N	Fall 2004 Mean Sem GPA	Spring 2005 N	Spring 2005 Mean Sem GPA	Spring 2005 Pct Retn	Fall 2005 N	Fall 2005 Mean Sem GPA	Fall 2005 Pct Retn
Below 800	37	1.58	35	2.01	94.6%	24	2.41	64.9%
800-890	52	1.91	47	2.18	90.4%	33	2.43	63.5%
900-990	34	2.15	30	2.31	88.2%	26	2.56	76.5%
1000-1090	9	2.99	9	3.09	100.0%	7	3.47	77.8%
1100-1190	5	3.33	5	3.23	100.0%	5	3.12	100.0%
1200-1290	2	3.88	2	3.72	100.0%	2	3.71	100.0%
(blank)	--	--	--	--	--	--	--	--
Cohort Total	139	2.03	128	2.29	92.1%	97	2.60	69.8%

* Includes converted ACT Scores.

What is particularly telling, however, is that first semester academic performance is still significantly tied to student persistence. Significant differences in attrition are observed across levels of SAT scores when disaggregated by first semester GPA. Students with higher SAT scores but weak college academic performance exhibit very low levels of retention, while students with low SAT scores and weak academic performance are retained at much higher rates (see Table 11e), perhaps emphasizing the role of student expectations in college persistence.

Table 11e. One-Year Retention and Academic Performance by Combined SAT Score* and First Semester GPA (2004 FY Cohort)

Combined SAT	1st Sem GPA	Fall 2004 N	Fall 2004 Sem GPA	Spring 2005 N	Spring 2005 Sem GPA	Spring 2005 Pct Retn	Fall 2005 N	Fall 2005 Sem GPA	Fall 2005 Pct Retn
Below 800	0.00-1.99	39	1.24	34	1.78	87.2%	22	2.31	56.4%
	2.00-2.99	19	2.41	18	2.18	94.7%	13	2.52	68.4%
	3.00-4.00	4	3.18	4	2.85	100.0%	3	3.17	75.0%
Below 800 Total		**62**	**1.72**	**56**	**1.98**	**90.3%**	**38**	**2.46**	**61.3%**
800-890	0.00-1.99	47	1.20	41	1.56	87.2%	21	1.94	44.7%
	2.00-2.99	48	2.46	46	2.20	95.8%	30	2.67	62.5%
	3.00-4.00	14	3.29	14	2.85	100.0%	11	2.86	78.6%
	W	2		0		0.0%	0		0.0%
800-890 Total		**111**	**2.02**	**101**	**2.04**	**91.0%**	**62**	**2.45**	**55.9%**
900-990	0.00-1.99	55	1.18	40	1.78	72.7%	27	2.00	49.1%
	2.00-2.99	54	2.42	51	2.14	94.4%	35	2.31	64.8%
	3.00-4.00	37	3.32	36	3.12	97.3%	28	3.19	75.7%
	W	2		0		0.0%	0		0.0%
900-990 Total		**148**	**2.18**	**127**	**2.33**	**85.8%**	**90**	**2.49**	**60.8%**
1000-1090	0.00-1.99	26	1.11	17	1.74	65.4%	4	2.69	15.4%
	2.00-2.99	55	2.62	52	2.47	94.5%	40	2.55	72.7%
	3.00-4.00	57	3.37	54	3.10	94.7%	41	3.33	71.9%
1000-1090 Total		**138**	**2.65**	**123**	**2.67**	**89.1%**	**85**	**2.95**	**61.6%**
1100-1190	0.00-1.99	12	1.32	10	1.99	83.3%	0		0.0%
	2.00-2.99	20	2.59	18	2.45	90.0%	11	2.85	55.0%
	3.00-4.00	45	3.47	40	3.28	88.9%	36	3.02	80.0%
	W	2		0		0.0%	0		0.0%
1100-1190 Total		**79**	**2.91**	**68**	**2.89**	**86.1%**	**47**	**2.98**	**59.5%**
1200+	0.00-1.99	7	1.18	7	0.62	100.0%	1	1.33	14.3%
	2.00-2.99	5	2.54	5	1.91	100.0%	3	2.59	60.0%
	3.00-4.00	30	3.71	30	3.32	100.0%	25	3.74	83.3%
1200+ Total		**42**	**3.14**	**42**	**2.75**	**100.0%**	**29**	**3.54**	**69.0%**
(blank)	3.00-4.00	1	3.56	1	3.44	100.0%	0		0.0%
Grand Total		**581**	**2.38**	**518**	**2.42**	**89.2%**	**351**	**2.74**	**60.4%**

Thus, among students with high SAT scores, a tremendous gap was observed in the retention rates of students with high academic performance and those with low academic performance. Indeed, while the retention rate of students with SAT scores of 1100 or higher who earned a first semester GPA of 3.0 or better was 81.3%, the retention of students with SAT scores of 1100 or higher who earned a first semester GPA below 2.0 was just 5.3% -- a gap of more than 75 percentage points. Conversely, students with SAT scores below 800 who earned a first semester GPA of 3.0 or higher were retained at a rate of 75.0%, but those students with SAT similarly low SAT scores who earned a first semester GPA below 2.0 were retained at a rate of 56.4% -- a gap of less than 20 percentage points. Such findings suggest that low retention rates result when student performance does not meet expectations as well as the costs resulting from the loss of scholarship funds when weak academic performance occurs in the first year of college.

Similar to findings from research on previous FY cohorts, readily discernible retention patterns do not emerge from scores on the verbal and math sections of the SAT when examined separately. Significant decline in retention rates of students with particularly high math or verbal SAT scores is attributable to the effects of academic performance noted above.

Table 12. Retention Rates By Math SAT Score (2004 FY Cohort)

| Math SAT | Fall 2004 | | Spring 2005 | | | Fall 2005 | | |
	N	Mean Sem GPA	N	Mean Sem GPA	Pct Retention	N	Mean Sem GPA	Pct Retention
Below 350	10	1.88	9	90.0%	2.27	8	2.50	80.0%
350-390	35	1.92	30	85.7%	2.11	19	2.38	54.3%
400-440	94	2.06	88	93.6%	2.19	63	2.54	67.0%
450-490	116	2.42	102	87.9%	2.41	74	2.59	63.8%
500-540	127	2.41	109	85.8%	2.63	73	2.78	57.5%
550-590	83	2.83	73	88.0%	2.65	48	3.20	57.8%
600-640	38	3.12	36	94.7%	2.91	25	3.18	65.8%
650-690	9	2.30	8	88.9%	2.39	5	2.88	55.6%
700-740	2	3.42	2	100.0%	2.90	1	3.25	50.0%
(blank)	67	2.07	61	91.0%	2.04	35	2.63	52.2%
Grand Total	581	2.38	518	89.2%	2.42	351	2.74	60.4%

Table 13. Retention Rates By Verbal SAT Score (2004 FY Cohort)

| Verbal SAT | Fall 2004 | | Spring 2005 | | | Fall 2005 | | |
	N	Mean Sem GPA	N	Mean Sem GPA	Pct Retention	N	Mean Sem GPA	Pct Retention
Below 350	9	1.36	6	66.7%	1.67	5	2.38	55.6%
350-390	57	2.10	51	89.5%	2.16	35	2.40	61.4%
400-440	90	1.96	78	86.7%	2.20	47	2.53	52.2%
450-490	130	2.32	118	90.8%	2.39	85	2.60	65.4%
500-540	111	2.72	98	88.3%	2.72	71	2.85	64.0%
550-590	72	2.72	62	86.1%	2.73	42	2.91	58.3%
600-640	30	3.01	29	96.7%	2.86	20	3.40	66.7%
650-690	12	3.20	12	100.0%	2.69	9	3.80	75.0%
Over 700	3	2.64	3	100.0%	2.33	2	3.97	66.7%
(blank)	67	2.07	61	91.0%	2.04	35	2.63	52.2%
Cohort Total	581	2.38	518	89.2%	2.42	351	2.74	60.4%

High School Performance and Impact on Retention

Both high school class rank and high school core GPA represent significant factors for students' academic performance in college and the rate at which they are retained to a second year at USCA. Nevertheless, marked declines in retention rates of about 10 to 20 percentage points were observed in the higher high school ranks when compared to retention rates of earlier cohorts. Given the strong correlation between high school class rank and high school core GPA, patterns of retention by each variable appear similar. These findings are consistent with more comprehensive research that indicates the quality of high school preparation is the single most important factor related to success in college (Adelman, 2006).

Table 14. Retention Rates By High School Class Rank (2004 FY Cohort)

HS Class Rank	Fall 2004		Spring 2005			Fall 2005		
	N	Mean Sem GPA	N	Mean Sem GPA	Pct Retention	N	Mean Sem GPA	Pct Retention
top 5%	34	3.28	33	3.22	97.1%	28	3.45	82.4%
top 6-10%	54	2.67	48	3.00	88.9%	38	3.12	70.4%
top 11-20%	106	2.71	98	2.71	92.5%	76	2.95	71.7%
top 21-30%	110	2.35	101	2.42	91.8%	64	2.67	58.2%
top 31-40%	69	2.07	61	2.33	88.4%	37	2.62	53.6%
top 41-50%	63	2.17	55	2.25	87.3%	36	2.41	57.1%
top 51-60%	61	2.06	56	1.93	91.8%	35	2.43	57.4%
top 61-70%	31	1.71	26	1.46	83.9%	11	1.50	35.5%
top 71-80%	17	2.01	14	1.89	82.4%	9	2.14	52.9%
top 81-99%	7	1.78	4	1.44	57.1%	3	1.70	42.9%
(blank)	29	2.70	22	2.27	75.9%	14	2.94	48.3%
Cohort Total	581	2.38	518	2.42	89.2%	351	2.74	60.4%

Chart 7. One Year Retention By HS Class Rank
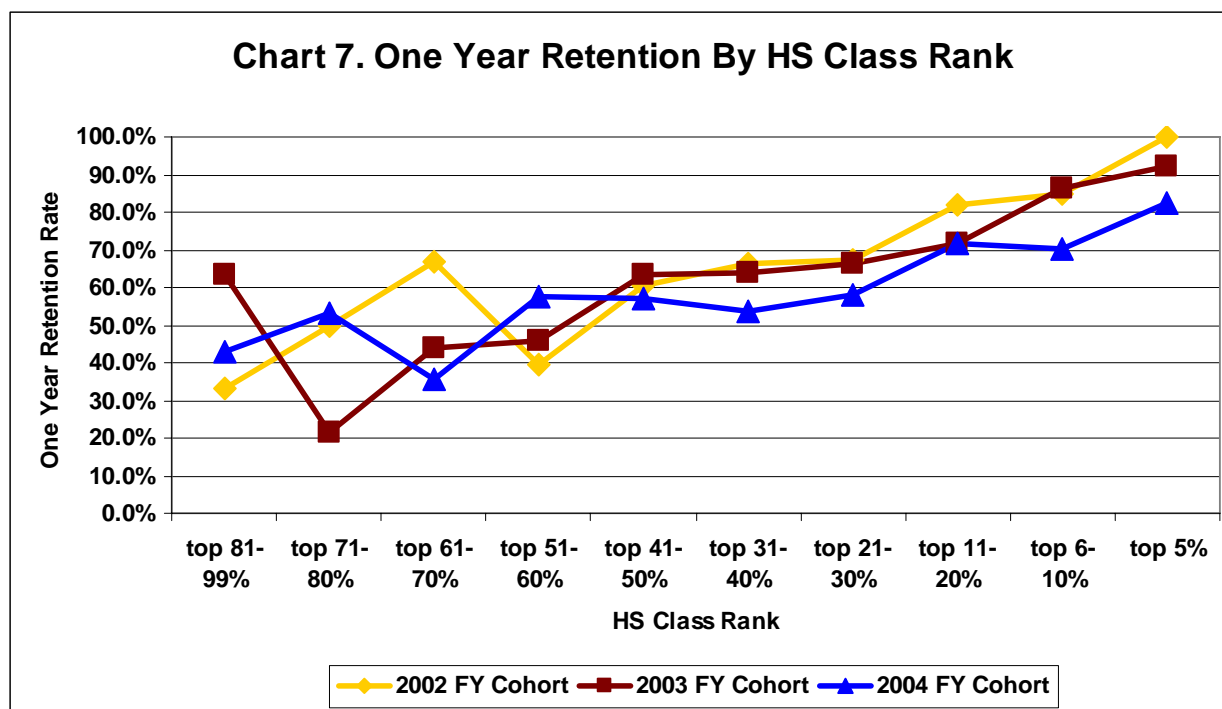
Table 15. Retention Rates By High School Core GPA (2004 FY Cohort)

HS Core GPA	Fall 2004 N	Mean Sem GPA	Spring 2005 N	Mean Sem GPA	Pct Retention	Fall 2005 N	Mean Sem GPA	Pct Retention
Below 2.25	46	1.85	39	1.84	84.8%	23	2.14	50.0%
2.25-2.49	96	1.99	85	1.81	88.5%	53	2.23	55.2%
2.50-2.74	109	2.06	96	2.19	88.1%	59	2.43	54.1%
2.75-2.99	94	2.30	82	2.36	87.2%	54	2.66	57.4%
3.00-3.24	96	2.57	84	2.59	87.5%	58	2.93	60.4%
3.25-3.49	65	2.75	62	2.92	95.4%	45	3.03	69.2%
3.50-3.74	37	3.04	35	3.15	94.6%	27	3.42	73.0%
3.75-4.00	32	3.46	32	3.36	100.0%	29	3.50	90.6%
(blank)	6	3.27	3	2.48	50.0%	3	2.58	50.0%
Grand Total	581	2.38	518	2.42	89.2%	351	2.74	60.4%

Retention rates among groups of students graduating from Aiken High School and South Aiken High School rebounded from low levels in 2003 to 71.4% and 71.9% respectively in 2004. But retention rates for students from four other top feeder high schools slipped about ten percent. Retention rates of students graduating from North Augusta High School declined from 64.7% to 56.6%; for students graduating from Midland Valley High School retention rates declined from 78.1% to 66.7%; for students graduating from Strom Thurmond HS retention rates declined from 69.6% to 52.4%; and for students graduating from Silver Bluff HS, retention rates declined from 62.5% to 55.0%.

Table 16. Retention and Academic Performance By High School

	Fall 02 FY Cohort N	Mean Pr GPA	Mean 1st Sem GPA	1-Yr Retn Pct	Fall 03 FY Cohort N	Mean Pr GPA	Mean 1st Sem GPA	1-Yr Retn Pct	Fall 04 FY Cohort N	Mean Pr GPA	Mean 1st Sem GPA	1-Yr Retn Pct
North Augusta	37	2.72	2.40	54.1%	51	2.60	2.51	64.7%	53	2.67	2.45	56.6%
South Aiken	48	2.62	2.53	72.9%	59	2.56	2.58	59.3%	49	2.63	2.76	71.4%
Aiken	37	2.72	2.77	75.7%	41	2.50	2.45	58.5%	32	2.59	2.26	71.9%
Midland Valley	38	2.91	2.93	78.9%	32	2.67	2.68	78.1%	27	2.79	2.62	66.7%
Strom Thurmond	18	2.68	2.67	77.8%	23	2.73	2.65	69.6%	21	2.69	2.35	52.4%
Silver Bluff	21	2.78	2.85	85.7%	32	2.60	2.43	62.5%	20	2.79	2.74	55.0%
Wade Hampton	<5	--	--	--	<5	--	--	--	17	2.61	2.79	88.2%
Lexington	10	2.76	2.52	60.0%	<5	--	--	--	16	2.50	2.46	56.3%
Allendale Fairfax	<5	--	--	--	<5	--	--	--	14	2.38	1.66	42.9%
White Knoll	<5	--	--	--	6	2.71	1.85	66.7%	14	2.63	2.00	50.0%
Batesburg-Leesv.	<5	--	--	--	11	2.61	2.94	63.6%	11	2.82	2.84	72.7%
Saluda	<5	--	--	--	<5	--	--	--	11	3.11	2.35	54.5%
Barnwell	11	2.44	2.19	54.5%	<5	--	--	--	10	2.50	2.03	60.0%
Gilbert	8	2.56	2.92	75.0%	10	2.63	2.52	70.0%	9	2.69	2.90	55.6%
Summerville	5	2.38	2.22	40.0%	5	2.47	2.86	40.0%	9	2.54	2.95	66.7%
Timberland	<5	--	--	--	<5	--	--	--	9	2.42	2.08	66.7%
Williston Elko	<5	--	--	--	<5	--	--	--	9	2.65	2.31	77.8%
Greenwood	<5	--	--	--	<5	--	--	--	7	2.77	2.18	71.4%
Pelion	5	2.88	2.38	60.0%	13	2.78	2.75	61.5%	7	2.73	2.31	57.1%
Blackville-Hilda	7	2.69	1.81	71.4%	<5	--	--	--	6	2.88	2.71	100.0%
Foreign	8	2.49	2.61	62.5%	<5	--	--	--	6	2.62	3.41	66.7%
Greenbrier	<5	--	--	--	<5	--	--	--	6	2.44	1.68	33.3%
SC Home School	<5	--	--	--	5	3.31	3.49	80.0%	6	3.26	2.73	66.7%
Wagener-Salley	12	2.79	2.23	75.0%	<5	--	--	--	6	3.16	2.97	66.7%

Retention by Intended Major

Consistent with previous research on the 2002 and 2003 FY cohorts, findings from this study reveal no consistent patterns of student retention related to intended academic major upon entry to college. Nevertheless, three majors – Secondary Education, Engineering, and Math & Computer Science – registered retention rates in the mid- to low-40% range. The retention rate of students intending to major in Exercise Science also declined significantly from 70.0% among the 2003 FY cohort to 53.1% among the 2004 FY cohort. These relatively low retention rates cannot be accounted for by changes in academic inputs alone (indeed, in some cases the mean predicted GPA of these students rose while the retention rates fell and vice versa), suggesting that other factors may be in operation.

Table 17. One Year Retention By Major

| Intended Major	2002 FY Cohort			2003 FY Cohort			2004 FY Cohort		
	N	Pred. GPA	Pct Retn	N	Pred. GPA	Pct Retn	N	Pred. GPA	Pct Retn
Biology	46	2.91	73.9%	31	2.63	64.5%	46	2.73	63.0%
Business	69	2.63	68.1%	76	2.79	52.6%	90	2.57	57.8%
Chemistry	2	3.24	0.0%	4	2.51	75.0%	7	2.62	71.4%
Communications	14	2.61	64.3%	16	3.01	56.3%	14	2.78	64.3%
Education, Early Child.	19	2.79	89.5%	22	2.51	63.6%	23	2.55	69.6%
Education, Elementary	36	2.65	75.0%	26	2.48	65.4%	17	2.50	64.7%
Education, Secondary*	27	2.67	70.4%	25	2.78	76.0%	22	2.59	40.9%
Engineering	27	3.44	51.9%	25	2.74	64.0%	22	2.82	40.9%
English	4	2.86	50.0%	6	2.68	83.3%	3	2.61	100.0%
Exercise Science	17	2.35	64.7%	30	3.04	70.0%	49	2.66	53.1%
Fine Arts	12	2.51	58.3%	22	2.45	68.2%	16	2.72	62.5%
History	4	2.79	75.0%	4	2.65	75.0%	4	2.58	100.0%
Math & Computer Sci.	13	2.72	69.2%	7	2.64	85.7%	11	2.74	45.5%
Nursing (4-yr)**	51	2.99	64.7%	93	2.68	75.3%	97	2.76	68.0%
Political Science	8	2.55	50.0%	9	2.66	55.6%	9	2.86	66.7%
Pre-Pharmacy	4	2.58	50.0%	13	2.37	76.9%	16	2.86	75.0%
Psychology	19	2.78	68.4%	20	2.86	50.0%	24	2.69	62.5%
Sociology	13	2.64	53.8%	17	2.59	64.7%	32	2.56	62.5%
Undecided	86	2.48	73.3%	91	2.69	58.2%	79	2.68	55.7%
Grand Total	471	2.72	68.2%	537	2.58	64.6%	581	2.68	60.4%

* Includes fewer than three special education and/or music education majors each year.
** Includes one student in the 2003 and 2004 cohorts coded with a RN-completion major (051).

First Semester Academic Performance and Retention

Consistent with previous research, retention rates were significantly higher for students who earned high first semester GPAs, although students earning higher GPAs were retained at lower rates than in previous years. For the 2004 FY cohort, retention rates began to decline sharply when first semester GPA was below 2.5 and dropped significantly again when semester GPAs were below 1.0. The number of A's earned in first courses as well as number of D's, F's, and W's earned in first semester courses were again observed to be significant factors related to the one semester and one year retention rate.
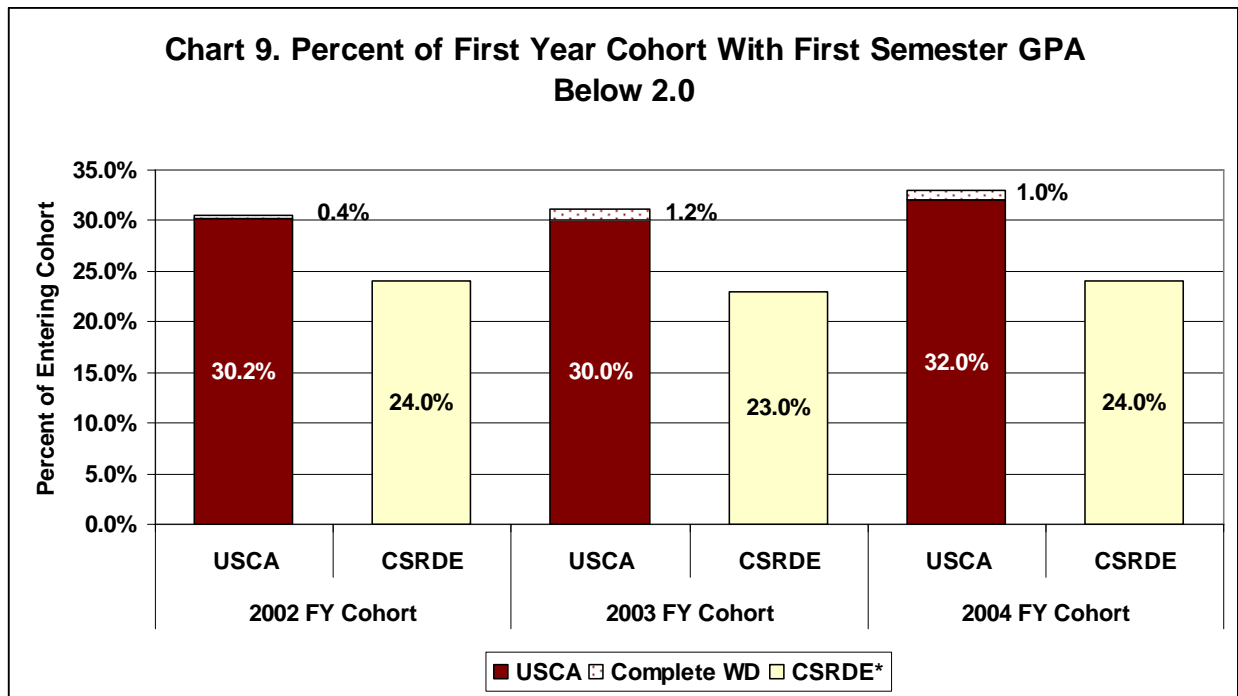
Consistent with previous research (Hosch, 2005b), retention to the second semester is a curve that resembles a logarithmic function of first semester GPA, and retention to the second year more resembles a linear relationship to first semester GPA, regardless of performance in second semester course work (in fact second semester mean GPAs typically do not exhibit significant differences for groups of students in a given first semester GPA range).

Chart 8. One Semester and One Year Retention By First Semester GPA
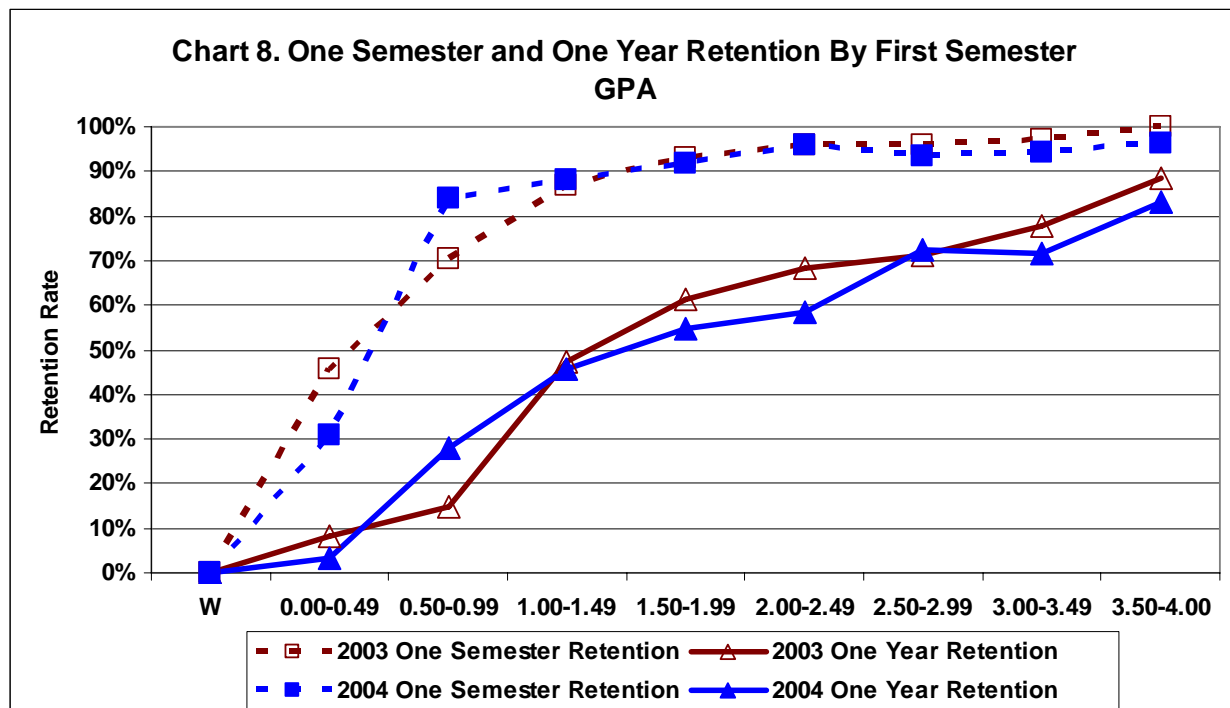
Overall, the proportion of the first year cohort earning a first semester GPA below 2.0 or withdrawing in the first semester has been increasing. In 2002, this proportion of students at USCA who were academically unsuccessful was 30.6%, 6.6 percentage points higher than students at comparable institutions. By comparison, in 2004 32.0% of first year students at USCA were academically unsuccessful, 8 percentage points higher than students at comparable institutions.

Table 18. Students Earning Below 2.0 GPA in the First Semester

Cohort Year		USCA				CSRDE Public Baccalaureate Institutions		
	N	1st Sem GPA < 2.0	Pct 1st Sem Complete WD	Total Unsuccessful	One Year Retention Rate	Mean N	1st Sem GPA < 2.0	One Year Retention Rate
2002	471	30.2%	0.4%	30.6%	68.2%	534	24.0%	67.0%
2003	537	30.0%	1.2%	31.2%	64.4%	592	23.0%	69.0%
2004	581	32.0%	1.0%	33.0%	60.4%	612	24.0%	69.0%

Chart 9. Percent of First Year Cohort With First Semester GPA Below 2.0

* Complete withdrawals are not included in CSRDE reporting.

The mean first semester GPA for the 2004 FY cohort was 2.38 (Std. Dev. = 0.99), down only slightly from the performance of the 2003 FY cohort, for which the first semester GPA was 2.41 (Std. Dev. = 1.01). While in 2003 168 students, or just under a third (31.2%) of the class earned below a 2.0 GPA or did not complete the term, this proportion increased in 2004, with 192 first year students (33.0% of the cohort) earning a first semester GPA below 2.0 or not completing the semester. The increase in academically unsuccessful students may account for some but not all of the decrease in the one year retention rate, but in any case, it should be of some concern that the proportion of students who are unable to achieve a "C" average is higher than similar institutions and constitutes about a third of the entering class (King, 2004).

On the high end of the spectrum, 188 students (32.3%) in the 2004 FY cohort earned a first semester of 3.0 or higher compared to 178 students (33.1%) in the 2003 FY cohort. It is important to observe that while semester GPA represents the best available measure of academic performance, it also is greatly indicative of adjustment to college, decision-making skills,

amount of time spent on academic work, and other factors that may influence the grades students earn in their courses.

Table 19. One Year Retention By First Semester GPA

1st Sem GPA	2002 FY Cohort			2003 FY Cohort			2004 FY Cohort		
	N	Pct of Cohort	Pct Retn	N	Pct of Cohort	Pct Retn	N	Pct of Cohort	Pct Retn
Complete WD	2	0.4%	0.0%	7	1.3%	0.0%	6	1.0%	0.0%
0.00-0.49	19	4.0%	10.5%	24	4.5%	8.3%	29	5.0%	3.4%
0.50-0.99	19	4.0%	26.3%	27	5.0%	14.8%	25	4.3%	28.0%
1.00-1.49	34	7.2%	41.2%	53	9.9%	47.2%	59	10.2%	45.8%
1.50-1.99	70	14.9%	48.6%	57	10.6%	61.4%	73	12.6%	54.8%
2.00-2.49	73	15.5%	75.3%	95	17.7%	68.4%	96	16.5%	58.3%
2.50-2.99	95	20.2%	75.8%	93	17.3%	71.0%	105	18.1%	72.4%
3.00-3.49	80	17.0%	86.3%	103	19.2%	77.7%	106	18.2%	71.7%
3.50-4.00	79	16.8%	88.6%	78	14.5%	88.5%	82	14.1%	82.9%
Cohort Total	471	100.0%	68.2%	537	100.0%	64.1%	581	100.0%	60.4%

Chart 10. One Year Retention by First Semester GPA
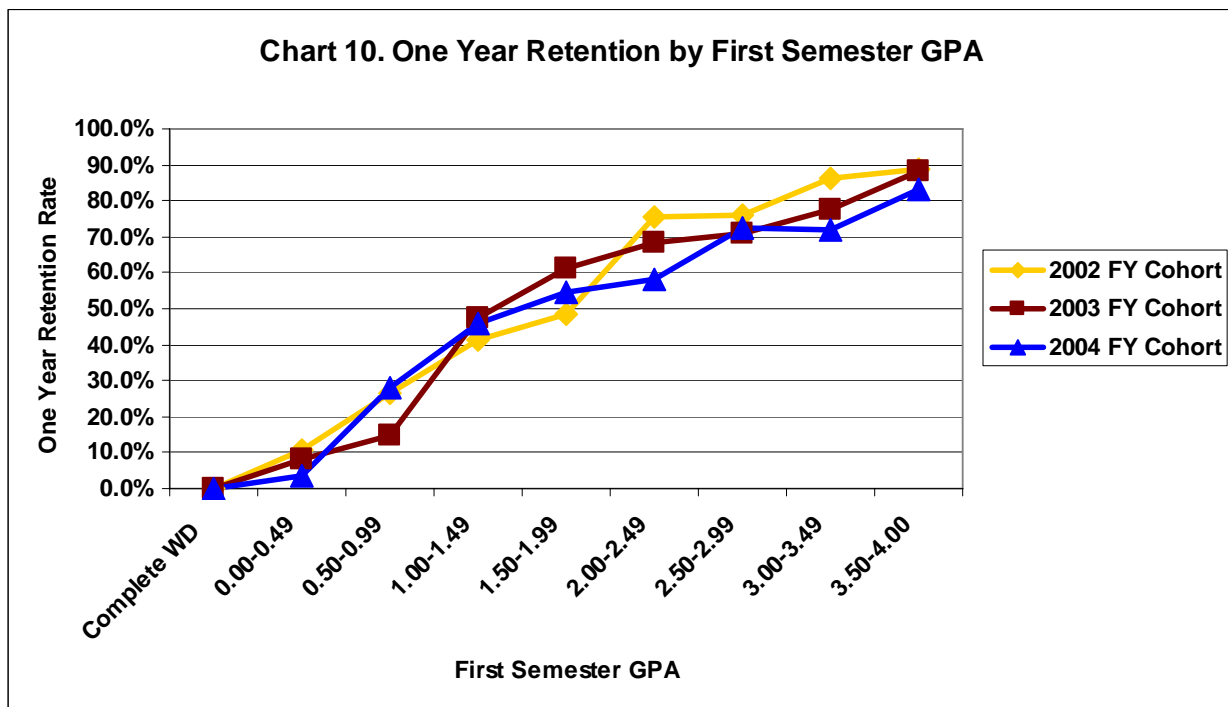
Academic performance as measured by first semester GPA was again the most prominent single predictor of student persistence among entering freshmen. For the 188 students who earned at least a 3.0 first semester GPA, the one year retention rate was 76.6%, although this level of retention is down from the 83.7% of these students in the 2003 FY cohort. By contrast, the 59 students who earned a first semester GPA below 1.0 or withdrew were retained at a rate of less than 15.0%, and the 132 students whose first semester GPA was between 1.0 and 1.99 had a retention rate of 50.8%. The six students in the 2004 FY cohort who withdrew entirely during the first semester did not return within three semesters. Further, as observed in previous years, mean semester GPA was observed to decline slightly over the first three semesters among higher

performing students, and most of the apparent increase in academic performance among initially low-performing groups may be attributed to attrition rather than significant improvement in course grades. These findings reinforce results from previous research (Hosch 2004; Hosch 2005b) and point clearly toward the critical role of academic success in the first semester as an indicator or student persistence to the second year.

Also consistent with findings from previous research, the level of academic performance within first semester GPA ranges of 0.50 for students in these groups was generally indicative of academic performance in the following two terms, with only modest improvements in semester GPA (0.25-0.50 grade points) observed each semester among retained students in the lower GPA ranges. At the upper end, high performing students averaged about 0.20-0.25 grade points lower in their second and third semesters than in their first semester.

Table 20. Semester GPAs of Retained Students By First Semester GPA through Subsequent Semesters (2004 FY Cohort)

First Semester GPA	(N)	Semester GPA		
		Fall 2004	Spring 2005	Fall 2005
0.00-0.49	1	0.44	2.50	1.83
0.50-0.99	7	0.86	1.74	1.91
1.00-1.49	27	1.26	1.81	1.93
1.50-1.99	40	1.72	2.04	2.26
2.00-2.49	56	2.25	2.21	2.29
2.50-2.99	76	2.78	2.57	2.72
3.00-3.49	76	3.22	3.07	3.02
3.50-4.00	68	3.72	3.41	3.53
Grand Total	351	2.69	2.65	2.74

First Semester Course Grades by Demographic Factors and Retention

Patterns of academic performance and persistence to a second year varied by race or ethnicity, and these patterns were again consistent with findings from previous research (see Tables 21a through 21e). Black or African American students in the cohort were more likely to persist in the face of low grades than were white students with grades in the same range. Among white students, failing to earn a first semester GPA over 2.0 significantly impacted the decision to return. The average one-year retention rate of all white students in the 2004 FY cohort earning a first semester GPA below 2.0 was 24.7% (for the 2002 FY cohort the retention rate for this group was 29.3% and for the 2003 FY cohort it was 30.9%), and for the 33 white students who earned a first semester GPA below 1.0 only two of them (6.6%) returned to complete their third semester. The retention rate for white students earning over 2.0, however, was 70.1% (for the 2002 FY cohort the retention rate for this group was 80.6% and for the 2003 FY cohort it was 73.7%).

By contrast, African American or black students earning a first semester GPA between 1.0 and 1.99 had a one year retention rate of 70.0% (compared to 65.2% for the same group the previous year), although much like white students, only four (21.1%) African American or Black students who earned first semester GPAs below 1.0 returned for a second year. The retention rates of African American or black students are generally higher than those of whites at every GPA

range, which accounts for why the overall retention rate of African American or black students is higher that the retention rate for white students. This difference is masked to some extent because a significant number of black or African American students earned low first semester grades (81 out of 173 earned a first semester GPA below 2.0 and the mean Fall 2004 semester GPA for all African Americans was 2.06, up a tenth of a grade point from 2003). This low level of academic performance among significant numbers of African American or black students, however, may foreshadow lower graduation rates among this racial or ethnic group and likely places them at risk of dropping out of USCA before earning a bachelor's degree. Conversely, these data suggest that a sustained effort that improves the academic performance of African American or Black students could very significantly improve the University's overall one-year retention rate.

Table 21a. One Year Retention and Academic Profile of All Students

First Semester GPA	N	Pct of Total	Mean SAT	Mean HS Rank	Mean Pred. GPA	One Year Retn
W	6	1.0%	967	37%	2.63	0.0%
0.00-0.49	29	5.0%	969	36%	2.59	3.4%
0.50-0.99	25	4.3%	897	41%	2.41	28.0%
1.00-1.49	59	10.2%	870	43%	2.34	45.8%
1.50-1.99	73	12.6%	941	39%	2.49	54.8%
2.00-2.49	96	16.5%	930	37%	2.53	58.3%
2.50-2.99	105	18.1%	982	30%	2.70	72.4%
3.00-3.49	106	18.2%	1021	29%	2.83	71.7%
3.50-4.00	82	14.1%	1106	16%	3.16	82.9%
Total	581	100.0%	977	32%	2.68	60.4%

Table 21b. One Year Retention and Academic Profile of White Students

First Semester GPA	N	Pct of Total	Mean SAT	Mean HS Rank	Mean Pred. GPA	One Year Retn
W	3	0.8%	1053	33%	2.74	0.0%
0.00-0.49	21	5.9%	1020	38%	2.61	4.8%
0.50-0.99	9	2.5%	1014	55%	2.41	11.1%
1.00-1.49	25	7.0%	937	50%	2.36	28.0%
1.50-1.99	39	10.9%	991	46%	2.50	38.5%
2.00-2.49	52	14.5%	967	38%	2.55	55.8%
2.50-2.99	73	20.4%	1016	31%	2.73	69.9%
3.00-3.49	79	22.1%	1038	30%	2.83	70.9%
3.50-4.00	57	15.9%	1118	16%	3.16	82.5%
Total	358	100.0%	1022	33%	2.73	57.8%

Table 21c. One Year Retention and Academic Profile of African American or Black Students

First Semester GPA	N	Pct of Total	Mean SAT	Mean HS Rank	Mean Pred. GPA	One Year Retn
W	2	1.2%	890	29%	2.67	0.0%
0.00-0.49	7	4.0%	814	29%	2.55	0.0%
0.50-0.99	12	6.9%	839	30%	2.42	33.3%
1.00-1.49	30	17.3%	811	38%	2.31	60.0%
1.50-1.99	30	17.3%	861	29%	2.46	80.0%
2.00-2.49	38	22.0%	874	33%	2.48	60.5%
2.50-2.99	24	13.9%	900	29%	2.64	83.3%
3.00-3.49	17	9.8%	918	24%	2.79	88.2%
3.50-4.00	13	7.5%	1044	13%	3.16	100.0%
Total	173	100.0%	877	30%	2.55	67.6%

Table 21d. One Year Retention and Academic Profile of Male Students

First Semester GPA	N	Pct of Total	Mean SAT	Mean HS Rank	Mean Pred. GPA	One Year Retn
W	1	0.5%	1150	15%	3.16	0.0%
0.00-0.49	12	6.2%	996	49%	2.40	0.0%
0.50-0.99	8	4.1%	993	45%	2.44	12.5%
1.00-1.49	14	7.2%	896	51%	2.21	35.7%
1.50-1.99	26	13.4%	1019	46%	2.49	38.5%
2.00-2.49	29	14.9%	980	47%	2.46	44.8%
2.50-2.99	31	16.0%	1012	40%	2.59	67.7%
3.00-3.49	45	23.2%	1031	37%	2.68	64.4%
3.50-4.00	28	14.4%	1142	22%	3.06	67.9%
Total	194	100.0%	1021	40%	2.60	50.5%

Table 21e. One Year Retention and Academic Profile of Female Students

First Semester GPA	N	Pct of Total	Mean SAT	Mean HS Rank	Mean Pred. GPA	One Year Retn
W	5	1.3%	930	41%	2.52	0.0%
0.00-0.49	17	4.4%	951	26%	2.73	5.9%
0.50-0.99	17	4.4%	852	40%	2.39	35.3%
1.00-1.49	45	11.6%	862	40%	2.38	48.9%
1.50-1.99	47	12.1%	897	35%	2.48	63.8%
2.00-2.49	67	17.3%	908	32%	2.57	64.2%
2.50-2.99	74	19.1%	969	26%	2.75	74.3%
3.00-3.49	61	15.8%	1013	23%	2.93	77.0%
3.50-4.00	54	14.0%	1088	13%	3.21	90.7%
Total	387	100.0%	954	29%	2.71	65.4%

Retention of male students among the 2004 FY cohort appears somewhat inconsistent with previous research because of the attenuated effect of academic performance on retention among this group. For male students earning a first semester GPA of 2.50 and above, retention rates were statistically indistinguishable at between 64.4% and 67.9%. By contrast, for female students

earning a first semester GPA of 2.50-2.99, the retention rate was 74.3%; for those earning a first semester GPA of 3.00-3.49, the retention rate was 77.0%, and for those earning a first semester GPA of 3.50-4.00, the retention rate was 90.7%.

Chart 11. Retention of White and African American or Black Students by First Semester GPA

Chart 12. Retention of Men and Women by First Semester GPA
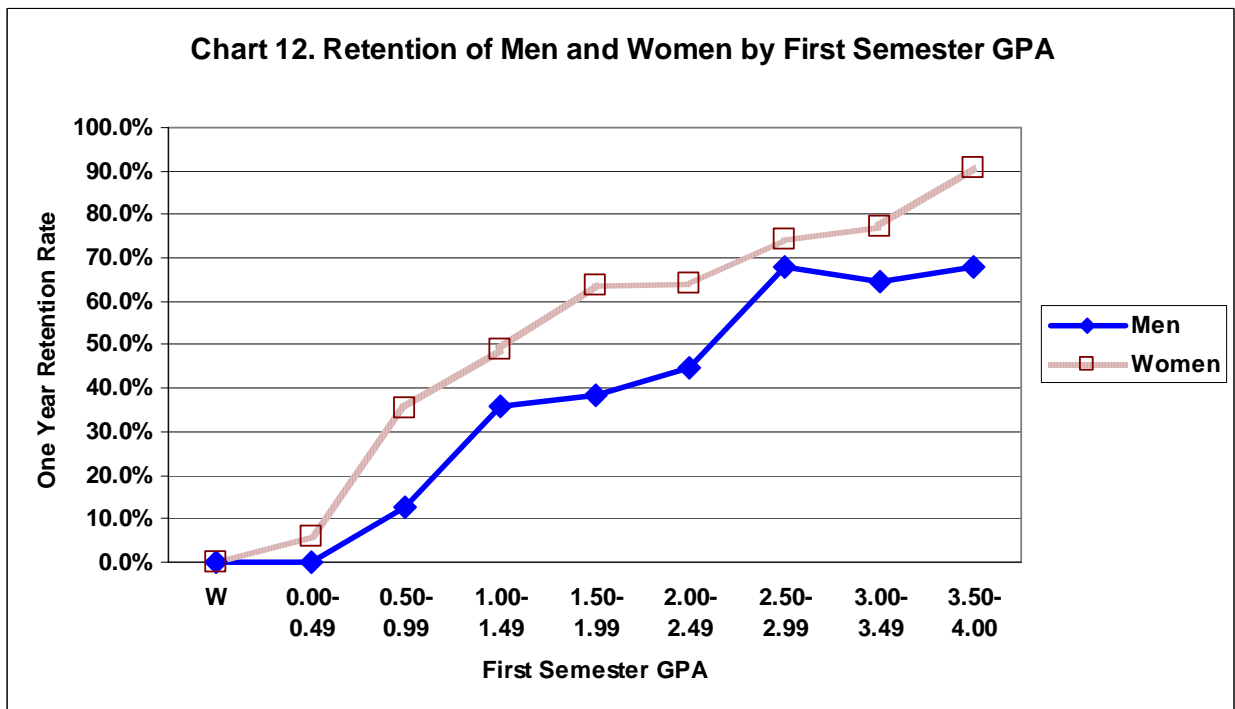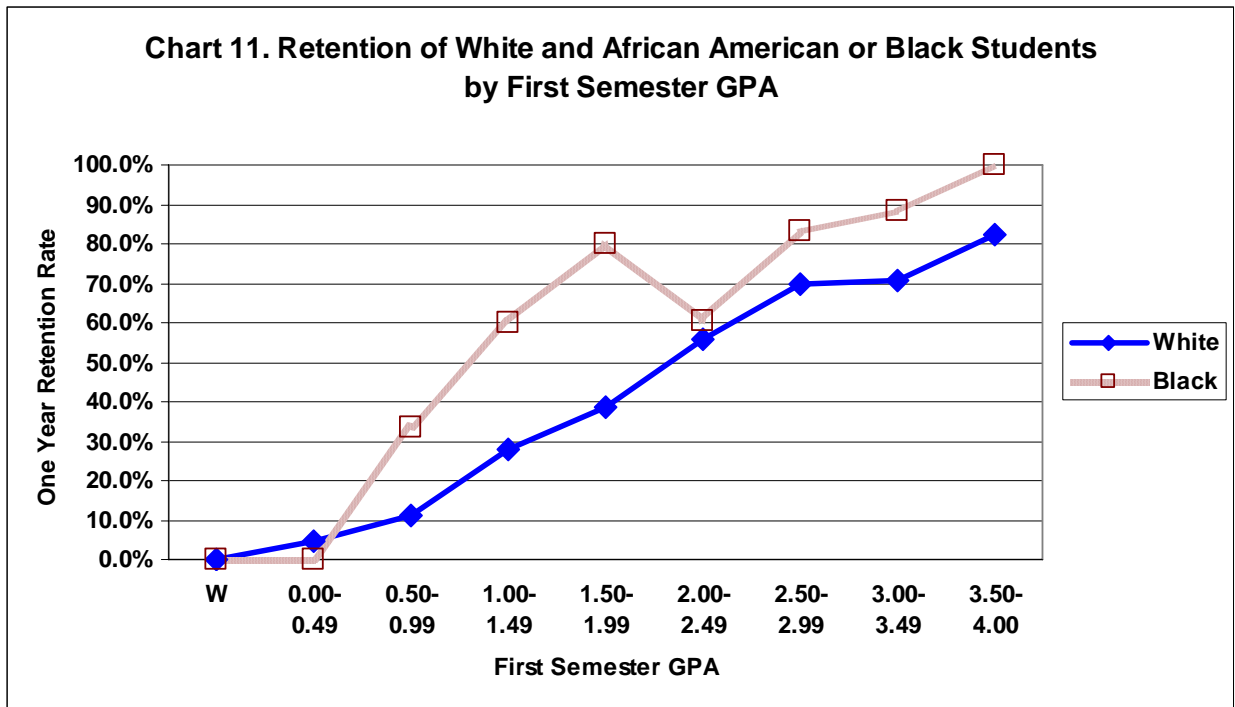
First Semester Course Grades and Retention Patterns

In addition to the linear relationship observed between first semester GPA and student persistence, some impact of single course grades was observed. For instance, earning a grade of A in just one or two courses resulted in significantly higher retention rates, while earning no grades of A resulted in much lower retention rates. For instance, students who earned just one course grade of A (n=128) had a one-year retention rate of 68.0%, which was down slightly from 71.5% in 2003, but still well above the cohort average of 60.4%. Importantly, students who earned two A's or more was 76.6%. The real issue that may impact retention, then, is the fact that 53% of the 2004 FY cohort earned no A's at all in their first semester, while just 25% earned two A's or more.

Again as observed in previous studies, the retention rate was substantially lower for students who earned grades of D, F, or W in their first semester. For students who completed their first semester with no major blemishes on their transcripts, the one-year retention rate was 79.1% -- about the same as the 80.2% retention rate for this group in 2003, but still more than seven percentage points lower than in 2002 for the same group of students. As might be expected, retention rates were substantially lower for students who earned several D's, F's or W's; indeed, the students who earned two or more of these marks had a one-year retention rate of 44.0%, and this figure drops to below 35% for three or more D's, F's, or W's. Alarmingly, the number of students in this category increased from 107 in 2003 to 209 in 2004, and this significant increase undoubtedly contributed to the lower retention rate among the 2004 FY cohort. These findings again indicate that improving academic success, especially by assisting students failing one or more courses, could help raise retention rates, especially because more than six out of ten (60.4%) of the 2004 FY cohort earned at least one D, F, or W in a first semester class.

Indeed, earning even just one grade of D, F, or W increases the chance of not returning to USC Aiken the following year by more than 20 percentage points. Similarly, earning even just one course grade of A increases the chance of returning to USCA by about 15 percentage points. Students who experience academic difficulties to the point that they earn under a "C" in several classes may become discouraged by their lack of success and make the decision not to return to USCA. Such findings continue to reinforce the crucial message that retention is an indicator or result of academic success, and university efforts should be directed toward the improvement of student learning; improved retention rates will be an indicator of the success of such efforts.

Table 22. One Year Retention by Number of A's Earned in First Semester Courses

Number of A's	N	Pct of Total	Mean SAT	Mean HS Rank	Mean Pred. GPA	One Year Retn
Zero A's	308	53.0%	941	37%	2.52	49.7%
One A	128	22.0%	981	33%	2.69	68.0%
Two A's	81	13.9%	1008	28%	2.86	70.4%
Three A's	33	5.7%	1066	16%	3.07	87.9%
Four A's	19	3.3%	1132	14%	3.27	78.9%
Five A's	11	1.9%	1161	12%	3.36	81.8%
Six A's	1	0.2%	1180	5%	3.30	100.0%
Cohort Total	581	100.0%	977	32%	2.68	60.4%

Table 23. One Year Retention by Number of D's, F's, and W's Earned in First Semester Courses

Number of A's	N	Pct of Total	Mean SAT	Mean HS Rank	Mean Pred. GPA	One Year Retn
Zero D's, F's, or W's	230	39.6%	1035	24%	2.91	79.1%
One D, F, or W	142	24.4%	976	34%	2.63	54.2%
Two D's, F's, and W's	79	13.6%	914	38%	2.49	60.8%
Three D's, F's, and W's	57	9.8%	928	45%	2.37	47.4%
Four D's, F's, and W's	44	7.6%	876	39%	2.42	34.1%
Five D's, F's, and W's	27	4.6%	927	34%	2.56	7.4%
Six D's, F's, and W's	2	0.3%	1120	52%	2.57	0.0%
Grand Total	581	100.0%	977	32%	2.68	60.4%

Table 24. Number of Students Retained and Lost by Number of D's, F's, and W's Earned in First Semester Courses

Students	Number of D's F's & W's							Total
	0	1	2	3	4	5	6	
Not Retained	48	65	31	30	29	25	2	230
Retained	182	77	48	27	15	2	0	351
Total	230	142	79	57	44	27	2	581

Chart 13. Retention by First Semester Course Grades
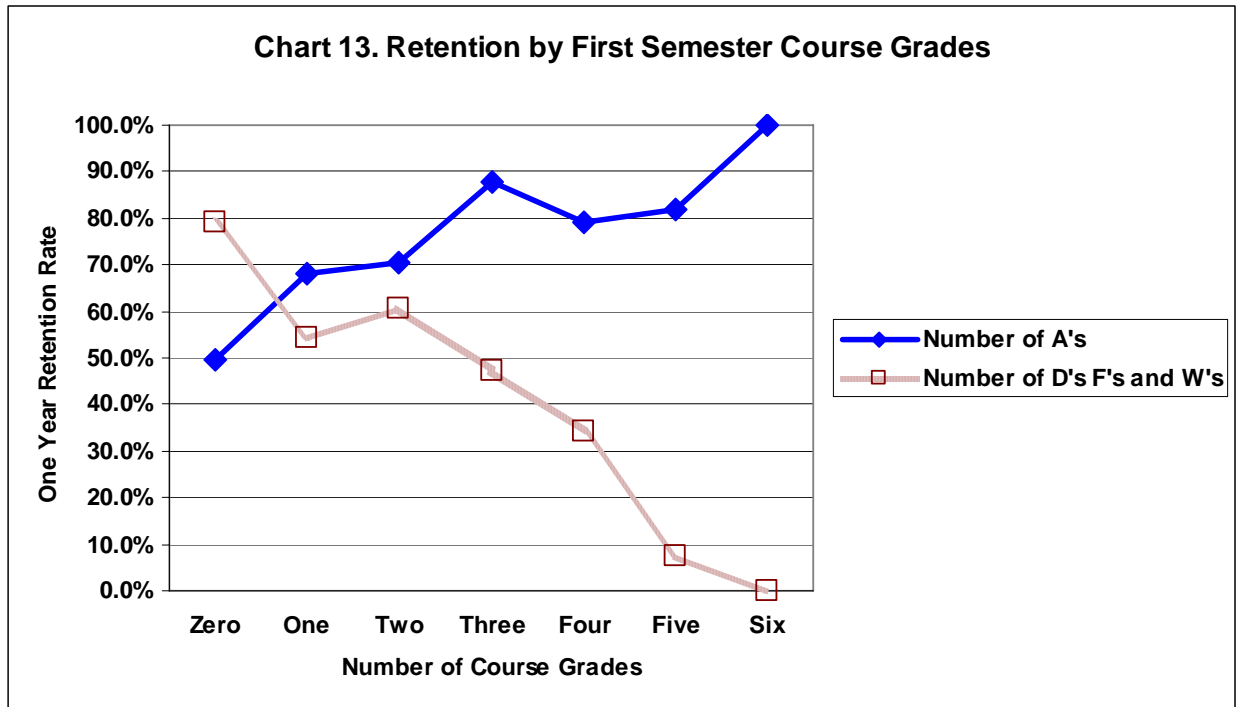
Performance in Specific First Semester Courses and Retention

Retention patterns by enrollment in specific Fall 2004 courses did not differ from the overall retention rates at statistically significant levels. The course with the highest retention rate was ABIO 232 with an enrollment of 72 students from the 2004 FY cohort and a retention rate of 70.8%. Students taking this course have historically exhibited a high retention rate, which may be indicative of student commitment (many in the course are Nursing majors). Nevertheless, a chi-square test for significance indicates that even this 10% difference is just barely beyond the generally accepted threshold for statistical significance (p=0.053). Students taking ABIO 101 were retained at a rate of 70.2%, also about 10 percentage points above the retention rate for the cohort, again a result just outside of a statistically significant outcome (p=0.061). Retention rates of students taking ASUP 101 exhibited a second year of decline from 74.4% among the 2002 FY cohort to 68.8% among the 2003 FY cohort to 66.7% for the 2004 FY cohort.

Table 25. One Year Retention by Enrollment First Semester Courses with Highest Enrollments

Course	2002 FY Cohort Retn	2003 FY Cohort Retn	2004 FY Cohort						
			Fall 2004 N	% of Total	Mean SAT	Mean HS Rank	Mean Pr GPA	Fall 2005 N	Pct Retn
AEGL101	66.3%	62.8%	499	85.9%	967	34%	2.65	303	60.7%
AMTH108	66.9%	60.8%	280	48.2%	940	31%	2.64	171	61.1%
APSY101	67.4%	67.3%	235	40.4%	973	31%	2.71	154	65.5%
ASCY101	68.0%	62.7%	187	32.2%	962	33%	2.63	111	59.4%
AHST101	62.5%	63.2%	131	22.5%	984	30%	2.71	83	63.4%
ATHE161	73.4%	60.2%	96	16.5%	960	34%	2.61	57	59.4%
ACHM101	77.8%	79.6%	85	14.6%	973	28%	2.72	56	65.9%
ABIO101	63.3%	65.7%	84	14.5%	970	26%	2.81	59	70.2%
ASUP101	74.4%	68.8%	81	13.9%	954	35%	2.64	54	66.7%
ABIO232	78.9%	72.0%	72	12.4%	988	27%	2.76	51	70.8%
Cohort Total		64.4%	581	--	977	32%	2.68	351	60.4%

Chart 14. Retention Rates of Students Taking ASUP 101
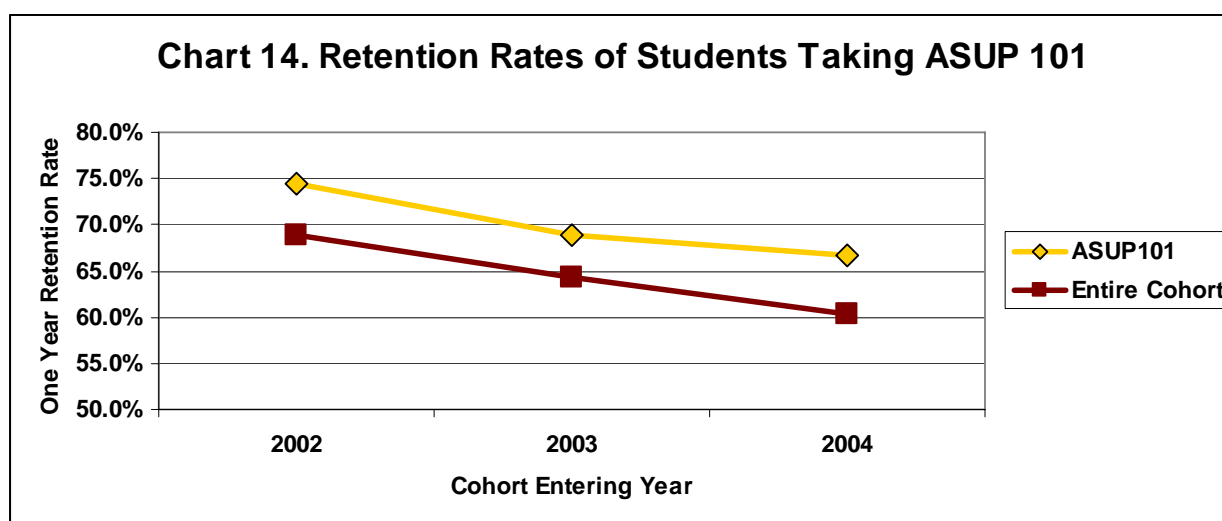
Second Semester Academic Performance and One Year Retention

As has been shown in previous research, student performance in their second semester is largely reflective of performance in their first semester. Students who were successful in the first semester tended also to be successful in the second semester. In contrast to previous years, overall grade point averages for groups of students increased slightly rather than showing a typical decline of about 0.1 grade points. However, this apparent increase is largely a result of attrition of low performers rather than markedly improved academic performance in course work.

A total of 518 students from the 2004 FY cohort (89.2% of the original group) began their second semester at USCA in Spring 2005; fifteen students withdrew completely before the end of the term in addition to the five who completely withdrew during the Fall 2004 semester, for a total of 20 complete withdrawals from the university (3.4% of the cohort, up from 2.8% in 2003). In contrast to previous years when none or just one of these students had returned to USCA in the following Fall, four of the withdrawals returned in Fall 2005. Nevertheless, the overall retention of this group is just 5.1%, suggesting that for the most part, once students from the entering full-time first year cohort withdraw from USCA, they do not return within the next year. The mean second semester GPA for students in the cohort was 2.42, up just slightly from 2.38 for the first semester. Just over a quarter of the remaining students (28.8%) again earned a semester GPA below 2.0, although this figure was down slightly from 32.2% for the 2003 cohort. Retention rates of the 86 students with a second semester GPA below 1.5 were markedly low at just 36.0%, while students with a second semester GPA between 1.5 and 1.99 were retained at more than twice that rate to the next Fall, with a retention rate of 73.9%. For students earning a second semester GPA above 2.0, the retention rate to Fall 2004 was only slightly higher at 75.6%, down from the 83.0% retention rate for the same group in the previous year. Retention rates of students with a second semester GPA above 3.5 returning for a third semester were markedly lower at 82.4%, down from 89.6% for the 2003 FY cohort.

Table 26. Retention by Second Semester GPA

Spring 2005 Semester GPA	Fall 2004		Spring 2005		Fall 2005		One Year Retention
	N	Sem GPA	N	Sem GPA	N	Sem GPA	
(none)	78	1.46	15	--	4	2.52	5.1%
Below 1.0	41	1.47	41	0.35	6	1.47	14.6%
1.00-1.49	45	1.77	45	1.18	25	1.98	55.6%
1.50-1.99	60	2.01	60	1.74	46	1.94	76.7%
2.00-2.49	95	2.30	95	2.22	63	2.45	66.3%
2.50-2.99	88	2.59	88	2.73	65	2.79	73.9%
3.00-3.49	100	3.11	100	3.22	81	3.08	81.0%
3.50-4.00	74	3.35	74	3.71	61	3.57	82.4%
Cohort Total	581	2.38	518	2.42	351	2.74	60.4%

Retention by cumulative GPA is affected in part by the policy on academic suspension, which bars students earning markedly low GPAs from returning immediately for a subsequent semester. Thus, retention rates of students with cumulative GPAs below 1.0 were 0.0%. Students with cumulative GPAs in the 1.00-1.99 range, however, were retained at a rate of 55.0%, just five and half percentage points below the retention rate for the cohort as a whole. Those earning a cumulative GPA over 3.0 were retained at a markedly higher rate of 84.5%.

It is again important to observe that on average, academic performance for groups of students has not been observed to improve over the first three semesters, and some slight apparent increases tend to result more from attrition of low-performing students rather than improvement in the academic performance of a majority of students in a particular GPA range.

Table 27. One Year Retention By Spring 2005 Cumulative GPA

	Fall 2004		Spring 2005		Fall 2005		
	N	Mean Sem GPA	N	Mean Sem GPA	N	Mean Sem GPA	Retn Pct
0.00-0.49	8	0.25	8	0.12	0		0.0%
0.50-0.99	18	0.88	18	0.41	0		0.0%
1.00-1.49	50	1.41	50	1.13	27	1.84	54.0%
1.50-1.99	70	1.80	70	1.63	39	1.93	55.7%
2.00-2.49	98	2.22	98	2.17	71	2.40	72.4%
2.50-2.99	106	2.72	106	2.66	69	2.75	65.1%
3.00-3.49	110	3.22	110	3.22	93	3.10	84.5%
3.50-4.00	58	3.72	58	3.67	49	3.66	84.5%
No Spring 04 Sem GPA	63	1.42	0	--	3	2.94	4.8%
Cohort Total	581	2.38	518	2.42	351	2.74	60.4%

Retention and Place of Residence

One additional factor in the USCA experience for the 2004 FY cohort was the addition of a second residential facility, Pacer Commons. Like the older residence hall, Pacer Downs, Pacer Commons features apartment style living, and the building housed 156 members of the 2004 FY cohort. An additional 143 first year students lived in Pacer Downs, and the remaining 282 lived off-campus.

Previous research (Hosch 2005a) indicated significant differences in academic performance by place of residence, and retention patterns appear also to be significantly related to where students lived. For instance, the muted effect of SAT scores in explaining retention appears directly related to where students lived (see Table 28). But the overarching retention rates for students by place of residence are telling even when not taking academic inputs or student performance into account. The one year retention rate for students living in Pacer Commons was 75.6%; the retention rate for those living in Pacer Downs was fourteen percentage points lower at 51.7%, and for those living off campus, the retention rate was 56.4%.

Chart 15. One Year Retention Rate By Place of Residence
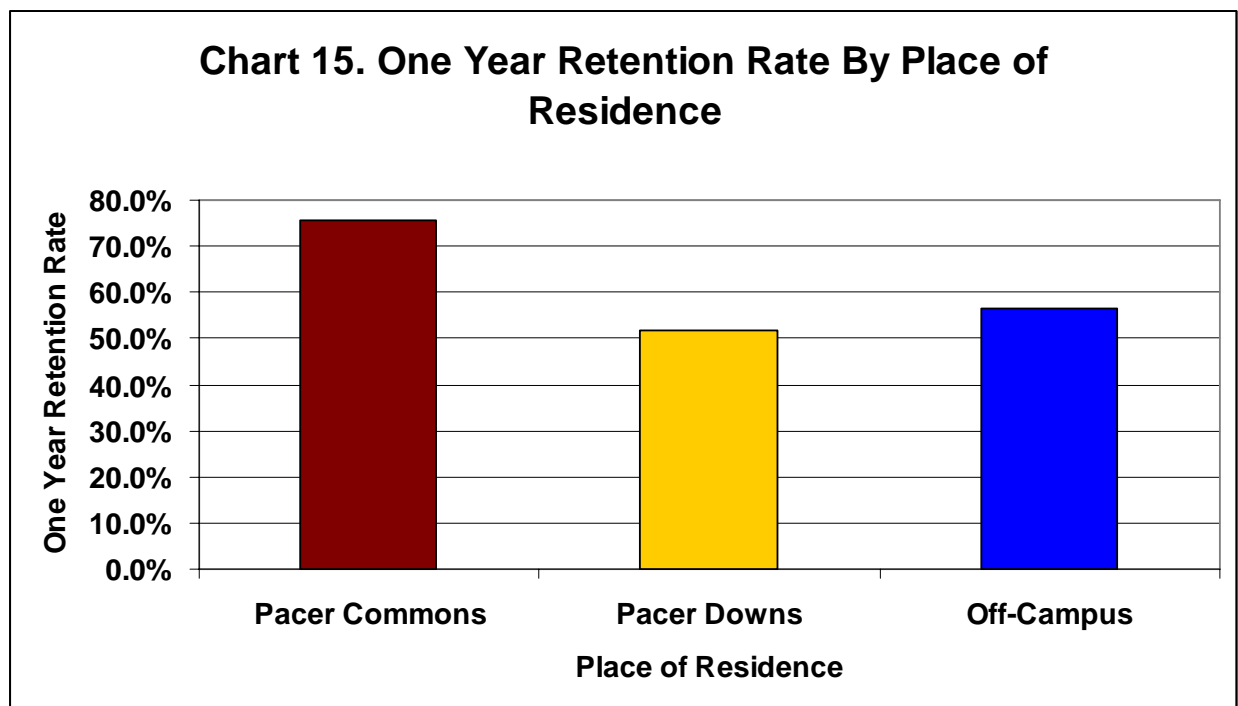
At first inspection, since academic inputs of students living at Pacer Downs appear lower than those living at Pacer Commons, some of the lower retention rates may be related to lower SAT scores, lower class rank and lower SAT scores. However, this was not true for students living off-campus who had the highest mean SAT score of the three groups at 1,020, compared to 945 for students who lived in Pacer Commons and 926 for those in Pacer Downs. Nevertheless, when controlling for academic inputs, these retention effects are still apparent across various segments of the first year class. Most significantly, higher SAT scores among Pacer Downs residents were generally indicative of lower retention rates, with a one year retention rate of just 40.5% for students with combined SAT scores over 1,000.

Table 28. Academic Profile and One Year Retention Rates By Place of Residence

RESHALL	Fall 04 (N)	SAT	HS Rank	Pred. GPA	1st Sem GPA	2nd Sem GPA	3rd Sem GPA	One Year Retn
Pacer Commons	156	945	28%	2.71	2.40	2.58	2.75	75.6%
Pacer Downs	143	926	36%	2.56	2.17	2.10	2.64	51.7%
Off-Campus	282	1020	33%	2.73	2.49	2.51	2.79	56.4%
Cohort Total	581	977	32%	2.69	2.38	2.42	2.74	60.4%

Chart 16. One Year Retention Rate By Place of Residence and SAT Score

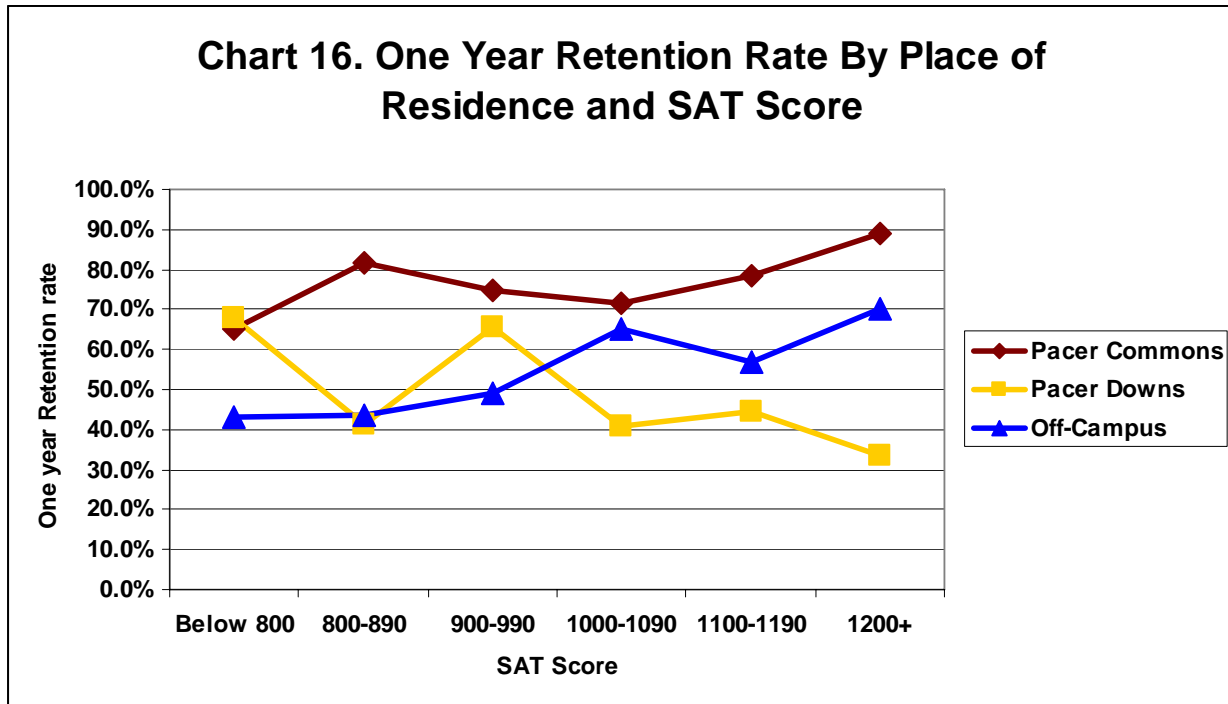**Table 29. One Year Retention Rates By Place of Residence and SAT Scores**

Residence	SAT Scores	Fall 2004 N	Fall 2004 Sem GPA	Spring 2005 N	Spring 2005 Sem GPA	Fall 2005 N	Fall 2005 Sem GPA	Retn
Pacer Commons	Below 800	23	1.72	23	2.25	15	2.22	65.2%
	800-890	38	2.20	36	2.51	31	2.64	81.6%
	900-990	44	2.42	43	2.49	33	2.74	75.0%
	1000-1090	28	2.64	27	2.74	20	2.81	71.4%
	1100-1190	14	3.02	14	3.10	11	3.29	78.6%
	1200+	9	3.11	9	2.90	8	3.24	88.9%
Pacer Commons Total		156	2.40	152	2.58	118	2.75	75.6%
Pacer Downs	Below 800	25	1.82	24	1.72	17	2.54	68.0%
	800-890	41	1.99	39	1.83	17	2.45	41.5%
	900-990	35	2.25	31	2.53	23	2.60	65.7%
	1000-1090	27	2.43	26	2.35	11	2.94	40.7%
	1100-1190	9	2.80	8	2.39	4	2.63	44.4%
	1200+	6	2.18	6	1.79	2	3.95	33.3%
Pacer Downs Total		143	2.17	134	2.10	74	2.64	51.7%
Off-Campus	Below 800	14	1.56	9	2.00	6	2.82	42.9%
	800-890	32	1.84	26	1.69	14	2.06	43.8%
	900-990	69	1.99	53	2.06	34	2.18	49.3%
	1000-1090	83	2.72	70	2.76	54	3.00	65.1%
	1100-1190	56	2.89	46	2.92	32	2.91	57.1%
	1200+	27	3.37	27	2.92	19	3.62	70.4%
	(blank)	1	3.56	1	3.44	0		0.0%
Off-Campus Total		282	2.49	232	2.51	159	2.79	56.4%
Grand Total		581	2.38	518	2.42	351	2.74	60.4%

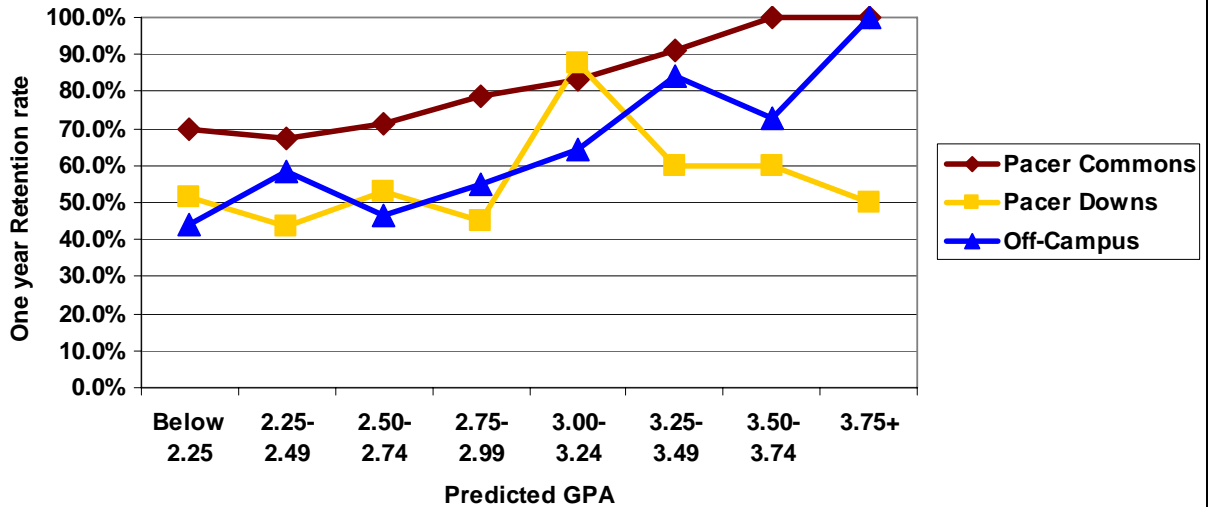**Chart 17. One Year Retention Rate By Place of Residence and Predicted GPA**

Table 30. One Year Retention Rates By Place of Residence and Predicted GPA

Residence	SAT Scores	Fall 2004		Spring 2005		Fall 2005		
		N	Sem GPA	N	Sem GPA	N	Sem GPA	Retn
Pacer Commons	Below 2.25	20	1.96	20	1.90	14	2.38	70.0%
	2.25-2.49	40	1.91	37	2.28	27	2.47	67.5%
	2.50-2.74	28	2.30	27	2.32	20	2.24	71.4%
	2.75-2.99	33	2.51	33	2.92	26	2.90	78.8%
	3.00-3.24	18	2.94	18	2.90	15	3.29	83.3%
	3.25-3.49	11	3.32	11	3.29	10	3.27	90.9%
	3.50-3.74	5	3.59	5	3.73	5	3.81	100.0%
	3.75+	1	4.00	1	3.90	1	3.67	100.0%
Pacer Commons Total		156	2.40	152	2.58	118	2.75	75.6%
Pacer Downs	Below 2.25	39	1.83	37	1.65	20	2.25	51.3%
	2.25-2.49	30	1.84	27	2.05	13	2.38	43.3%
	2.50-2.74	34	2.35	32	2.09	18	2.60	52.9%
	2.75-2.99	20	2.15	18	2.18	9	2.96	45.0%
	3.00-3.24	8	2.84	8	3.02	7	3.09	87.5%
	3.25-3.49	5	3.13	5	3.00	3	3.77	60.0%
	3.50-3.74	5	2.82	5	2.64	3	3.52	60.0%
	3.75+	2	3.85	2	3.06	1	2.00	50.0%
Pacer Downs Total		143	2.17	134	2.10	74	2.64	51.7%
Off-Campus	Below 2.25	41	1.61	32	1.52	18	1.98	43.9%
	2.25-2.49	48	2.21	38	2.16	28	2.26	58.3%
	2.50-2.74	62	2.25	50	2.39	29	2.67	46.8%
	2.75-2.99	49	2.59	39	2.69	27	2.97	55.1%
	3.00-3.24	45	2.91	39	2.90	29	3.03	64.4%
	3.25-3.49	19	3.56	19	3.51	16	3.39	84.2%
	3.50-3.74	11	3.62	11	3.14	8	3.82	72.7%
	3.75+	2	3.96	2	3.50	2	3.97	100.0%
	(blank)	5	3.09	2	2.38	2	3.16	40.0%
Off-Campus Total		282	2.49	232	2.51	159	2.79	56.4%
Grand Total		581	2.38	518	2.42	351	2.74	60.4%

Chart 18. One Year Retention Rate By Place of Residence and 1st Semester GPA
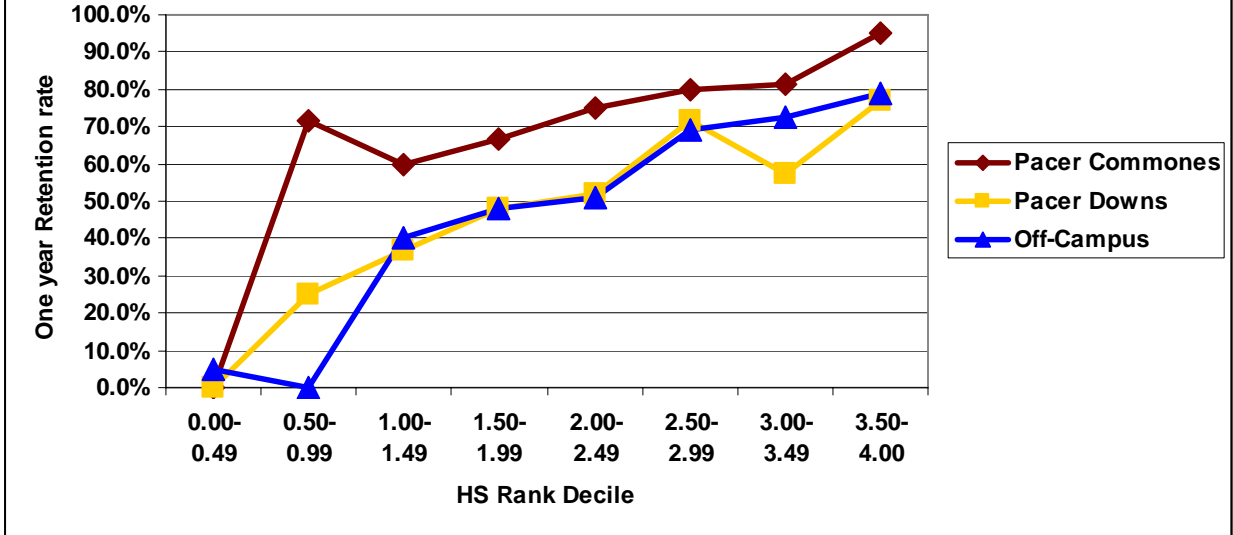
Differences in retention rates of 15 to 20 percentage points were also observed across first semester performance by place of residence, suggesting that factors beyond academic performance are affecting retention rates. Such factors might include social integration, motivation, time usage and study habits, commitment to educational goals, or other factors. These differences in performance are statistically significant, even when controlling for academic inputs, and they suggest that the experience at Pacer Commons in 2004-05 may have been more conducive to academic success and subsequent return to the institution than living at Pacer Downs. Further, the Pacer Commons experience may have generated more of a connection to the institution than living off-campus. This connection may also have been responsible for higher retention rates among the group living in Pacer Commons.

Since these findings appear to support the findings in an earlier study of academic success by place of residence at USCA (Hosch, 2005a), it is perhaps valuable to explore some of the policies, procedures, and practices that differed between the residence halls in the 2004-05 academic year and more closely examine how these may have contributed to or detracted from the university experience for entering students.

Logistic and Linear Regression Models for Retention and Academic Performance

Several logistic regression models were developed to explore the extent to which variables examined in this study affect retention rates. Based solely on SAT scores and core calculated high school GPA, these models do not do a good job of predicting retention on the 2004 FY cohort, suggesting that the data set for analysis may need to be expanded to include additional cohorts or additional data should be collected and matched to retention data. One promising method used in a previous study (Hosch, 2005b) is to include data from the Freshman CIRP survey. While this survey was not administered to the 2004 FY cohort, it was administered in 2005 and 2006.

When using only SAT scores and high school core GPA in a forced entry logistic regression model, to predict retention of students in the 2004 FY cohort, the model can account for only 3-5% of variation and predicts correctly only 60.8% of the time – no better than random chance. The model does suggest, somewhat unsurprisingly that for every full grade point of core high school GPA, the odds of retention increase 1.8 times. The addition of race and gender to this formula do not significantly improve its predictive power.

Table 31. Admission Criteria Retention Logistic Regression Formula

Variables	B	S.E.	Wald	df	Sig.	Odds Ratio
Combined SAT Score	-.001	.001	2.373	1	.123	.999
HS Core GPA	1.046	.211	24.702	1	.000	2.848
Constant	-1.426	.779	3.353	1	.067	.240

A parallel linear regression of SAT scores and high school core GPA (the components of the predicted GPA formula) onto first semester GPA at USCA can predict about 27% of variance in first semester academic performance (adj. R-square = 0.274). This formula is the basis for and turns out to be similar to the predicted GPA formula used for admission. The addition of race and gender to this formula do not significantly increase it predictive power.

Table 32. Admission Criteria First Semester GPA Linear Regression Formula

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-1.77862	0.287636		-6.18357	0.000
HS Core GPA	0.706312	0.077136	0.343771	9.156681	0.000
Combined SAT Score	0.002178	0.265952	0.307517	8.191038	0.000

A more reliable model can be produced, however using first semester academic performance to predict retention. When entered alone into a logistic regression model, first semester GPA explains about 16% of variance in retention in the 2004 FY cohort. This model improves significantly however with the addition of race and gender. When these demographic factors are added to the model, it is able to explain about 26% of variance and correctly predicts student

retention at a rate of 72.7% (cases of attrition are correctly predicted 51.8% of the time and correctly predicts students who persist 86.0%) of the time. This model is about 12 percentage points more accurate than random chance in predicting retention, but a more accurate model is certainly desirable. In this model, for every full point that a student adds to his or her grade point average, the odds of retention increase by 1.9. Further, women have a 1.9 to 1 odds ratio or 65% chance of being retained, and African American students have a 2.6 to 1 odds ration or 71% chance of being retained.

Table 31. Academic Performance Retention Logistic Regression Formula

Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)
Fall 2004 Sem. GPA	1.050	.115	83.007	1	.000	2.858
Female	.670	.204	10.761	1	.001	1.955
African American or Black	.942	.229	16.878	1	.000	2.565
Constant	-2.708	.346	61.348	1	.000	.067

Model Accuracy

Observed	Predicted		
	Not Retained to Fall 2005	Retained to Fall 2005	Percentage Correct
Not Retained to Fall 2005	116	108	51.8
Retained to Fall 2005	49	302	86.0
Overall Percentage			72.7

While this attempt at modeling retention based on academic performance and other characteristics appears as though it may have utility in future development, the efficacy of a predictive formula that allows students to go through an entire semester with no intervention is unlikely to improve academic performance of these students before they leave the university.

Conclusions

This analysis of one year retention rates for the 2004 FY cohort confirms findings from earlier research that student retention is significantly linked to academic inputs and academic performance. Many of the conclusions reached in research on the 2003 FY cohort (Hosch 2005b) again appear to emerge from this analysis, and several are refashioned below. Nevertheless, the observed declines in retention rates of white students, men, and students who earn higher grades are not explained by the data available for analysis for the 2004 FY cohort. In particular, students who resided at Pacer Commons exhibited higher levels of academic performance and higher levels of retention than their counterparts living in Pacer Downs or off-campus, but reasons for this difference are not explained by the current study. Nevertheless, improving the depth and quality of students' learning (not simply awarding higher grades that are unmerited) will likely improve the first year retention rate as well as corresponding graduation rates.

1. Declining retention rates among male college students appears to be a national trend, but the 10% decline in retention of men at USCA between 2002 to 2004 deserves special attention. Factors that may account for these departures should be identified and explored so a plan of action can be developed.

2. Poor academic performance, especially in the first semester, continues to be a common characteristic of half (50.9%) of the students in the 2004 FY cohort who did not return to USCA in Fall 2005, about one percentage point higher than the previous year. Further, earning even one course grade of D, F, or W was a significant risk factor for dropping out. More than one out of two students in the cohort earned one or more first semester course grades of D, F, or W, and only about one out of two of these students was retained to the following Fall. Early detection of poor academic performance *as soon as possible* during the first semester, such as mid- to late-September through a unified and pervasive early warning system could perhaps successfully address this issue (between Fall 2004 and Spring 2006, fewer than 10% of the number of students who earned D's, F's, or W's received an early warning form). Additionally, following the identification of these students early in the first semester, intervention strategies would need to be developed and implemented to improve their success for the rest of the term.

3. Findings from this study again appear to reinforce the currency of efforts to examine specific courses in which students earn grades of D, F, and W at high rates. In cases where retention rates for a specific course are significantly higher or lower than the previous year, academic units might review which faculty members taught these courses. Some differences in course performance and student retention may be attributable to teaching styles. Further development of assessment strategies that are directly linked to student learning outcomes is also necessary to target areas for student improvement.

4. Students who graduated in the bottom 50% of their high school class continued to perform poorly at USCA with a first semester GPA of only 1.94, and only about half of them were retained to Fall 2005. Students in this category made up about 20% of the entering class in 2004, about the same proportion as in 2003. These students could conceivably benefit from additional support and instruction about how to successfully

navigate the academic and social challenges of college, such as through a structured program for provisionally admitted students. It may also be appropriate to examine the impact of limiting or curtailing admission of students who are ranked in the bottom deciles of their high schools upon graduation. Additional focus on academic success strategies may benefit all students.

5. The crucial role of housing and student life and the student outcomes these areas produce deserve additional scrutiny. The large difference in performance between students living in Pacer Commons and their counterparts living in Pacer Downs and off-campus tellingly suggests that out-of-classroom environment and activities contribute significantly toward academic success, yet most data currently available about student outcomes in these areas are self-reported measures of time usage. While these measures tellingly reveal that most students do not spend nearly enough time on academic work outside of class, there is a wide array of other factors that likely can reveal the extent to which students have integrated into the academic and social life of the university community, and focus on measurement in this area will be especially critical as USCA builds another residential facility.

6. Significantly more detailed research about the relationship between financial aid, family income, and academic success needs to be conducted, and this data will be available for the first time for the 2005 FY cohort. Given the significant increase in tuition over the past five years, the cost of higher education is almost certainly playing a large role in students' decision to continue to pursue their education or to drop out.

As a final note, this study couches the return of students to USCA in terms of "retention," placing responsibility on the institution rather than using a language of "persistence," which would place responsibility on the student. That is, institutions retain students, while students persist to a second year (Adelman, 2006). Both of these linguistic formulations likely mask a dynamic, complex, and integrated system of multifaceted issues and forces that contribute to the ultimate end of students acquiring the skills they will need to pursue successful careers and lives in a global economy. As USCA approaches the issue through the angle of retaining students, it will also be important to communicate to students, parents, and other constituencies what student responsibilities are in the educational contract to advance their own learning and development. Sharing of data and findings are especially significant in this respect, and lines of communication should continue to be developed and strengthened to promote active learning and participation among all members of the wider University community to encourage student success in and out of the classroom.

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Appendix

The following tables present one year retention rates and semester GPAs for students in the 2004 FY cohort enrolled in the 10 most popular courses in Fall 2004 (listed by most enrolled to least enrolled). When comparing these figures to other reports, it is important to observe that these tables do not include all students enrolled in the courses for the Fall 2004 term but rather they include only full-time, first-year, baccalaureate-seeking students.

Table A1. One Year Retention Rate By Performance in AEGL 101

Course Grade	Fall 2004 N	% of Total	Mean SAT	Mean HS Rank	Mean Pr GPA	Fall 2005 N	Pct Retn
A	33	6.6%	1089	19%	3.10	27	81.8%
B+	36	7.2%	1079	27%	2.99	28	77.8%
B	99	19.8%	1002	28%	2.76	72	72.7%
C+	76	15.2%	929	38%	2.52	51	67.1%
C	108	21.6%	930	38%	2.50	67	62.0%
D+	29	5.8%	871	39%	2.43	14	48.3%
D	36	7.2%	911	39%	2.51	16	44.4%
F	30	6.0%	942	39%	2.51	4	13.3%
W	52	10.4%	987	37%	2.69	24	46.2%
All in course	499	100.0%	967	34%	2.65	303	60.7%
Did not take course	82	--	1036	20%	2.87	48	58.5%
Cohort Total	581	--	977	32%	2.68	351	60.4%

Table A2. One Year Retention Rate By Performance in AMTH 108

Course Grade	Fall 2004 N	% of Total	Mean SAT	Mean HS Rank	Mean Pr GPA	Fall 2005 N	Pct Retn
A	37	13.2%	1039	19%	3.05	32	86.5%
B+	23	8.2%	1005	25%	2.85	17	73.9%
B	34	12.1%	988	32%	2.69	28	82.4%
C+	25	8.9%	919	27%	2.71	16	64.0%
C	53	18.9%	931	30%	2.62	31	58.5%
D+	6	2.1%	868	34%	2.38	5	83.3%
D	32	11.4%	887	35%	2.44	15	46.9%
F	58	20.7%	893	41%	2.42	19	32.8%
W	12	4.3%	870	36%	2.40	8	66.7%
All in course	280	100.0%	940	31%	2.64	171	61.1%
Did not take course	301	--	1011	33%	2.72	180	59.8%
Cohort Total	581	--	977	32%	2.68	351	60.4%

Table A3. One Year Retention Rate By Performance in APSY 101

Course Grade	Fall 2004 N	% of Total	Mean SAT	Mean HS Rank	Mean Pr GPA	Fall 2005 N	Pct Retn
A	29	12.3%	1097	17%	3.13	27	93.1%
B+	23	9.8%	1057	25%	2.96	18	78.3%
B	49	20.9%	981	28%	2.77	35	71.4%
C+	13	5.5%	956	33%	2.64	11	84.6%
C	52	22.1%	935	33%	2.63	34	65.4%
D+	12	5.1%	931	40%	2.49	5	41.7%
D	31	13.2%	892	37%	2.46	16	51.6%
F	20	8.5%	947	44%	2.48	5	25.0%
W	6	2.6%	958	25%	2.59	3	50.0%
All in course	235	100.0%	973	31%	2.71	154	65.5%
Did not take course	346	--	979	33%	2.65	197	56.9%
Cohort Total	581	--	977	32%	2.68	351	60.4%

Table A4. One Year Retention Rate By Performance in ASCY 101

Course Grade	Fall 2004 N	% of Total	Mean SAT	Mean HS Rank	Mean Pr GPA	Fall 2005 N	Pct Retn
A	15	8.0%	1135	21%	3.12	12	80.0%
B+	14	7.5%	994	24%	2.75	14	100.0%
B	36	19.3%	1043	27%	2.90	26	72.2%
C+	23	12.3%	958	32%	2.55	14	60.9%
C	34	18.2%	941	37%	2.57	22	64.7%
D+	13	7.0%	855	39%	2.39	7	53.8%
D	25	13.4%	899	43%	2.39	8	32.0%
F	21	11.2%	873	38%	2.49	6	28.6%
W	6	3.2%	920	38%	2.31	2	33.3%
All in course	187	100.0%	962	33%	2.63	111	59.4%
Did not take course	394	--	984	32%	2.70	240	60.9%
Cohort Total	581	--	977	32%	2.68	351	60.4%

Table A5. One Year Retention Rate By Performance in AHST 101

Course Grade	Fall 2004 N	% of Total	Mean SAT	Mean HS Rank	Mean Pr GPA	Fall 2005 N	Pct Retn
A	26	19.8%	1113	22%	3.16	23	88.5%
B+	4	3.1%	1100	9%	3.38	4	100.0%
B	26	19.8%	1013	27%	2.79	21	80.8%
C+	7	5.3%	946	37%	2.55	4	57.1%
C	22	16.8%	921	32%	2.55	14	63.6%
D+	4	3.1%	845	40%	2.41	3	75.0%
D	14	10.7%	908	45%	2.28	4	28.6%
F	12	9.2%	924	40%	2.48	2	16.7%
W	16	12.2%	945	27%	2.63	8	50.0%
All in course	131	100.0%	984	30%	2.71	83	63.4%
Did not take course	450	--	975	33%	2.67	268	59.6%
Cohort Total	581	--	977	32%	2.68	351	60.4%

Table A6. One Year Retention Rate By Performance in ATHE 161

Course Grade	Fall 2004 N	% of Total	Mean SAT	Mean HS Rank	Mean Pr GPA	Fall 2005 N	Pct Retn
A	41	42.7%	1034	25%	2.86	31	75.6%
B+	5	5.2%	838	47%	2.28	2	40.0%
B	14	14.6%	954	32%	2.59	10	71.4%
C+	2	2.1%	945	55%	2.18	2	100.0%
C	13	13.5%	868	42%	2.32	5	38.5%
D+	0	0.0%	--	--	--	--	--
D	14	14.6%	865	45%	2.36	6	42.9%
F	7	7.3%	986	31%	2.53	1	14.3%
W	0	0.0%	--	--	--	--	--
All in course	96	100.0%	960	34%	2.61	57	59.4%
Did not take course	485	--	980	32%	2.69	294	60.6%
Cohort Total	581	--	977	32%	2.68	351	60.4%

Table A7. One Year Retention Rate By Performance in ACHM 101

Course Grade	Fall 04 (N)	% of Total	Mean SAT	Mean HS Rank	Mean Pr GPA	Fall 2005 N	Pct Retn
A	4	4.7%	1150	12%	3.43	4	100.0%
B+	5	5.9%	1106	16%	3.08	5	100.0%
B	12	14.1%	1079	21%	2.97	10	83.3%
C+	6	7.1%	1002	27%	2.79	4	66.7%
C	30	35.3%	948	32%	2.62	20	66.7%
D+	5	5.9%	924	34%	2.48	2	40.0%
D	10	11.8%	898	29%	2.54	7	70.0%
F	9	10.6%	874	32%	2.62	2	22.2%
W	4	4.7%	925	33%	2.42	2	50.0%
All in course	85	100.0%	973	28%	2.72	56	65.9%
Did not take course	496	--	977	33%	2.67	295	59.5%
Cohort Total	581	--	977	32%	2.68	351	60.4%

Table A8. One Year Retention Rate By Performance in ABIO 101

Course Grade	Fall 04 (N)	% of Total	Mean SAT	Mean HS Rank	Mean Pr GPA	Fall 2005 N	Pct Retn
A	11	13.1%	1150	15%	3.23	10	90.9%
B+	9	10.7%	1084	30%	3.02	6	66.7%
B	21	25.0%	966	25%	2.79	18	85.7%
C+	8	9.5%	1030	20%	3.00	6	75.0%
C	22	26.2%	871	27%	2.64	15	68.2%
D+	1	1.2%	780	19%	2.31	1	100.0%
D	3	3.6%	810	20%	2.45	1	33.3%
F	4	4.8%	930	65%	2.32	0	0.0%
W	5	6.0%	896	24%	2.72	2	40.0%
All in course	84	100.0%	970	26%	2.81	59	70.2%
Did not take course	497	--	978	34%	2.65	292	58.8%
Cohort Total	581	--	977	32%	2.68	351	60.4%

Table A9. One Year Retention Rate By Performance in ASUP 101

ASUP101	Fall 2004 N	% of Total	Mean SAT	Mean HS Rank	Mean Pr GPA	Fall 2005 N	Pct Retn
A	23	28.4%	1036	25%	2.99	16	69.6%
B+	6	7.4%	960	29%	2.69	3	50.0%
B	26	32.1%	945	37%	2.56	20	76.9%
C+	3	3.7%	757	36%	2.45	2	66.7%
C	10	12.3%	859	40%	2.35	5	50.0%
D+	2	2.5%	970	53%	2.49	1	50.0%
D	3	3.7%	850	51%	2.18	2	66.7%
F	2	2.5%	1040	71%	2.07	0	0.0%
W	6	7.4%	945	33%	2.60	5	83.3%
All in course	81	100.0%	954	35%	2.64	54	66.7%
Did not take course	500	--	980	32%	2.68	297	59.4%
Cohort Total	581	--	977	32%	2.68	351	60.4%

Table A10. One Year Retention Rate By Performance in ABIO 232

ABIO232	Fall 2004 N	% of Total	Mean SAT	Mean HS Rank	Mean Pr GPA	Fall 2005 N	Pct Retn
A	6	8.3%	1150	11%	3.32	6	100.0%
B+	4	5.6%	1060	13%	3.20	4	100.0%
B	12	16.7%	1029	20%	2.92	9	75.0%
C+	7	9.7%	1000	33%	2.66	6	85.7%
C	19	26.4%	967	30%	2.61	13	68.4%
D+	0	0.0%	--	--	--	--	--
D	9	12.5%	888	29%	2.62	7	77.8%
F	6	8.3%	958	31%	2.70	2	33.3%
W	9	12.5%	947	38%	2.57	4	44.4%
All in course	72	100.0%	988	27%	2.76	51	70.8%
Did not take course	509	--	975	33%	2.66	300	58.9%
Cohort Total	581	--	977	32%	2.68	351	60.4%