



**Achieving the Dream Data Team  
Report on Data Analysis  
Fall 2006**

**Prepared by**

**Office of Institutional Research**

## **College of the Mainland—Achieving the Dream Data Team**

### **Report on Data Analysis, Fall 2006**

#### **Introduction**

This report is intended to provide a first look at the Achieving the Dream (AtD) cohort data, as well as an examination of student success for the general college population. The results of these analyses will provide some insight into how well students perform academically, what possible differences in student success exist based on various student characteristics, such as gender and ethnicity, and possible barriers to student success.

#### **Methodology**

For this report, two sets of data were collected for these analyses: trend data for all students covering a five-year period, and historical data for three cohorts of students. Trend data is a more traditional approach to data analysis and can provide a useful, cross-sectional snapshot of the college's population at a specific point in time. In contrast, cohort or longitudinal data allow the college to track what happens to students over time, and is much more valuable for benchmarking institutional performance and monitoring institutional progress. For example, cohort data can reveal how many of the students who enter developmental math complete the developmental sequence, advance through gatekeeper courses, remain enrolled over time, and eventually complete certificates or degrees. The college can also identify key junctures where students are lost and identify particular groups of students that fall out at different points.

For the purposes of AtD, a cohort is defined as all degree or certificate-seeking students who enrolled for the first time at COM in the Fall term, regardless of their status as full-time, part-time, first-time-in-college, or transferred. Currently, data for the Fall 2003, Fall 2004, and Fall 2005 cohorts are available. Trend data was compiled for the past five academic years.

This report is divided into six sections:

- Cohort Demographic and Enrollment Characteristics
- Initial Placement in Developmental Education
- Student Outcomes in Developmental Education
- Student Outcomes in Gatekeeper and other High Enrollment Courses
- Student Retention
- Degrees and Certificates Awarded

With the exception of the last section, this report focuses primarily on the AtD cohort data. Trend data is provided as point of reference or comparison where appropriate, or where cohort data is limited. Because the AtD cohort data includes three or fewer years of data and, as such, very few awards, the examination of data in the last section was limited to the overall college's trend data.

Additional observations are included at the end of this report. A complete list of supporting tables can also be found at the end of this report.

#### **Cohort Demographic and Enrollment Characteristics**

The percentage of students enrolling in college for the first-time has declined from 70% in Fall 2003 to 62% in Fall 2005. Of those students who transferred to COM, 50% or more transferred with 30 or fewer credits, and 5% or less had already obtained a Bachelor's degree or higher. None of the AtD cohort students were previously enrolled at COM as dual credit students. Between 84% to 86% of cohort students have received a high school diploma; whereas, 14% to 16% entered with a GED certificate.

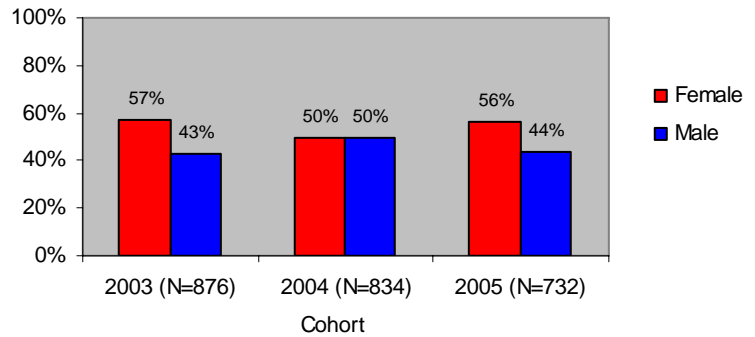
In terms of demographics, females comprise between 50% to 57% of the AtD cohorts. This is slightly lower than the percentage of females in the overall student population at COM, which is typically about 60%.

The ethnic breakdown of the three cohorts closely resembles the overall student population. White students account for 56% to 59% of the cohorts. The percentage of black and Hispanic students has changed little over the past three years, accounting for approximately 17% and 19%, respectively, of each cohort.

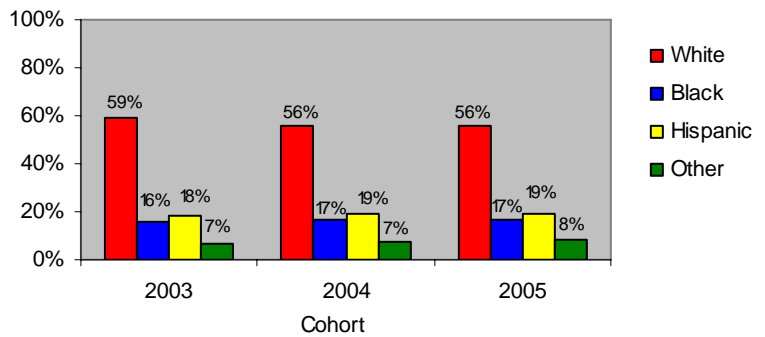
Between 52% and 55% of students in each cohort initially enroll full-time. In contrast, typically 65% of the overall student population is enrolled part-time, with 35% or less enrolled full-time. It is notable that the percentage of full-time students has decreased over the three cohorts. Although the reasons for this decrease are unknown, it bears watching to see if this leads to differences in the overall success of students within each cohort.

Receipt of a Pell grant is utilized by AtD as a measure of economically disadvantaged status. For the COM cohort data, the percentage of students who received Pell ranges from 26% to 30%. This figure has also decreased across the three cohorts. (A complete summary of cohort demographic and enrollment characteristics can be found in Table 4.)

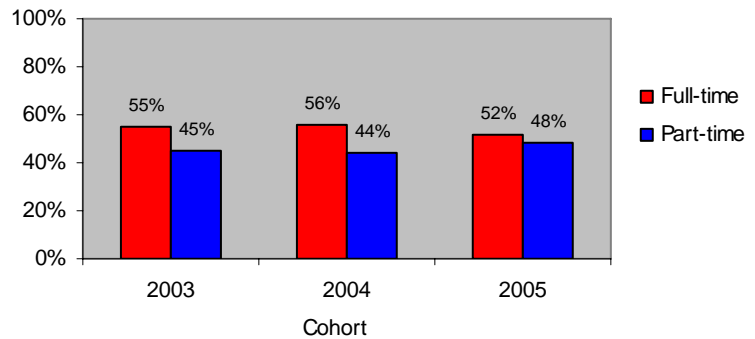
**Figure 1: Cohort distribution by gender.**



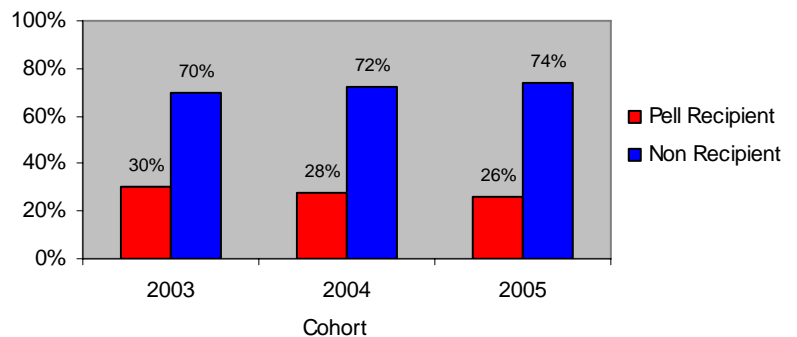
**Figure 2: Cohort distribution by ethnicity.**



**Figure 3: Cohort distribution by enrollment status.**



**Figure 4: Cohort distribution by Pell status.**



**Initial Placement in Developmental Education**

All students applying to COM are required to take a placement exam prior to enrolling, unless they are exempt for reasons such as having already received a Bachelor’s degree. For each of the three AtD cohorts, 95% of students took a placement exam in at least one subject area, English, math, or reading. Five percent of students or fewer were exempt based on having previously earned a Bachelor’s degree or higher. Data was unavailable for anywhere between 2% and 18% depending on the cohort and subject matter (see Table 6).

**English**—With regard to placement in college English, the highest percentage of AtD cohort students tested one level below college level, between 36% to 44%. Approximately 30% to 34% of students from each cohort tested at college level. A small percentage of students, between 7% to 9%, tested at the college level in English, but did not meet the reading requirements to enroll at that level.

**AtD Cohort Initial Placement in English<sup>1</sup>**

English	2003 Cohort		2004 Cohort		2005 Cohort	
	N	%	N	%	N	%
At college level	259	29%	249	30%	281	34%
At college level, reading not met	72	8%	73	9%	60	7%
One level below	394	44%	338	41%	295	36%
Two levels below	67	7%	54	7%	57	7%
No data available	64	7%	89	11%	107	13%
Exempt	46	5%	20	2%	25	3%
Total	902		823		825	

**Math**—Across all three areas, entering students’ placement test scores demonstrated the greatest need for remedial education in math. The largest percentage of AtD cohort students, between 37% to 47%, placed three or more levels below college level in math. The next largest percentage of students placed one level below college level. Across all three cohorts, less than 10% tested at college level.

**AtD Cohort Initial Placement in Math**

Math	2003 Cohort		2004 Cohort		2005 Cohort	
	N	%	N	%	N	%
At college level	75	8%	74	9%	63	7%
One level below	170	19%	152	19%	204	25%
Two levels below	97	11%	97	12%	75	9%
Three levels below	267	30%	219	27%	183	22%
Four levels below	157	17%	125	15%	124	15%
No data available	90	10%	136	17%	151	18%
Exempt	46	5%	20	2%	25	3%

**Reading**—In reading, only 51% to 54% tested at college level. Of those who tested below college level, the highest percentage placed one level below college level. Less than 17% of students in each cohort placed more than one level below college level.

**AtD Cohort Initial Placement in Reading**

Reading	2003 Cohort		2004 Cohort		2005 Cohort	
	N	%	N	%	N	%
At college level	468	52%	420	51%	447	54%
One level below	209	23%	177	22%	136	17%
Two levels below	73	8%	68	8%	70	9%
Three levels below	57	6%	57	7%	60	7%
No data available	49	5%	81	10%	87	11%
Exempt	46	5%	20	2%	25	3%

<sup>1</sup> Percentages may not add to 100 due to rounding.

### Student Outcomes in Developmental Education

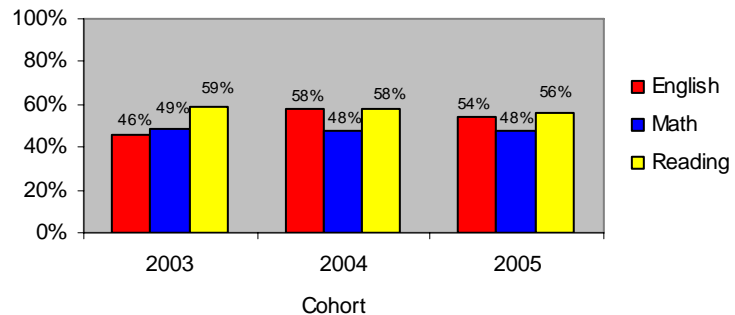
The focus of this section of the data analysis was to determine which developmental courses have low success rates that prevent substantial numbers of students from advancing. Specifically, the following questions were addressed:

- Which developmental courses have the lowest success rates?
- Which groups of students have the lowest success rates in developmental education?
- Are there any notable gaps among different groups of students (by race, ethnicity, income, age, or other characteristics) in the rate at which they complete these courses?

Only 20% to 22% needing remedial instruction in English enrolled in a developmental class. In comparison, 55% to 67% of those placed below college level in math took a developmental class the first semester they enrolled. In reading, 44% to 55% of students needing remedial instruction took a developmental class. The low percentage of students enrolled in developmental English most likely occurred because students are typically advised to complete any reading requirements before attempting any English courses.

Overall, the lowest successful completion rates observed in developmental students were in math. Across all three cohorts, only 48% to 49% of those students enrolling in a remedial math course received a grade of “C” or better. Students enrolled in developmental English displayed the greatest variance in the percentages of successful completion, ranging from 46% to 54%. Reading successful completion rates varied between 56% and 59%.

Figure 5: Successful completions in developmental education.



Within each subject area, the course with the lowest successful completion rates varied across cohorts (see Table 13). One factor that may have contributed to this variance was the inability to enforce placement recommendations in the former student database system. Although students were advised to enroll in a particular course based on their placement scores, there were no restrictions in the legacy system to ensure that students enrolled in the appropriate course (see tables 10-12). To determine the degree to which this system flaw confounded the results, further analysis examining student outcomes in terms of their initial placement level and the course they enrolled in is needed. With the implementation of Datatel’s Colleague in the Fall of 2006, this problem is no longer an issue. As such, future cohort data should also help to determine how much these results are an artifact of the legacy system.

A more detailed examination of AtD cohort student outcomes in developmental education revealed the following trends:

- Male students display lower successful completion rates across all three subject areas.
- Black students also displayed low rates of success, although there was also a great deal of variation across cohorts within each ethnic group.

- Pell recipients generally have higher successful completion rates in all three areas of developmental education, although this too varied.
- Full-time students performed better than part-time students in English. The same trend, however, was not observed in math and reading. (See Tables 14-16 for more detailed information.)

**Student Outcomes in Gatekeeper and other High Enrollment Courses**

Gatekeeper courses are first-level curriculum courses that are prerequisites for higher-level courses with low success rates, preventing large numbers of students from advancing through college programs. The analysis of course completion data focused on the following questions:

- Which groups of students have the lowest success rates in gatekeeper courses?
- Which courses have the highest enrollments and the lowest success rates? Are there any notable gaps in successful course completion among different groups of students?

Two courses previously identified as gatekeeper courses at COM are:

- ENGL 1301 – Composition I
- MATH 1314 – College Algebra

An examination of course enrollments and completion rates for the past five academic years identified six additional courses to examine in more detail:

- BIOL 1406 – General Biology
- GOVT 2301 – American National and State Government
- HIST 1301 – United States History
- PSYC 2301 – Introduction to Psychology
- SOCI 1301 – Introduction to Sociology
- SPCH 1315 – Public Speaking

**ENGL 1301**—Although the completion rate in ENGL 1301 over the past five academic years has remained stable at approximately 80%, the percentage of successful completions is typically less than 64%. Furthermore, this rate has continued to decline since AY 2004. An examination of completion rates by gender reveals that female students consistently succeed at a higher rate than male students do. In terms of ethnicity, black and Hispanic students typically succeed at lower rates than other students.

**Successful Completion Rates in ENGL 1301 by Gender and Ethnicity, AY 2002 to AY 2006**

	2002	2003	2004	2005	2006
<b>Total</b>	61%	64%	61%	58%	57%
<b>Gender</b>					
Female	66%	66%	64%	61%	61%
Male	54%	59%	55%	52%	52%
<b>Ethnicity</b>					
White	64%	65%	63%	60%	61%
Black	58%	63%	55%	52%	48%
Hispanic	53%	58%	60%	54%	55%
Other	63%	71%	59%	61%	59%

**MATH 1314**—Course completion rates in MATH 1314 are typically less than 60% and have declined in recent years. In terms of student success, this course has one of the lowest successful completion rates in comparison to other college level courses, ranging from 42% to 47%. Females tend to demonstrate higher successful completion rates. Although black students have the lowest successful completion rates, these figures seem to fluctuate both across and within ethnic groups.

**Successful Completion Rates in MATH 1314 by Gender and Ethnicity, AY 2002 to AY 2006**

	2002	2003	2004	2005	2006
<b>Total</b>	47%	45%	47%	42%	45%
<b>Gender</b>					
Female	47%	48%	49%	41%	46%
Male	45%	40%	44%	43%	43%
<b>Ethnicity</b>					
White	49%	49%	46%	46%	48%
Black	34%	37%	40%	34%	36%
Hispanic	49%	40%	48%	33%	41%
Other	42%	38%	62%	45%	55%

**Courses with High Enrollments**—Of the six additional courses examined, SPCH 1315 displayed the lowest successful completion rates. Student success in this course has also declined more than 10 percentage points over the past five years. Student outcomes in BIOL 1406 and HIST 1301 also displayed declining successful completion rates over the same time period.

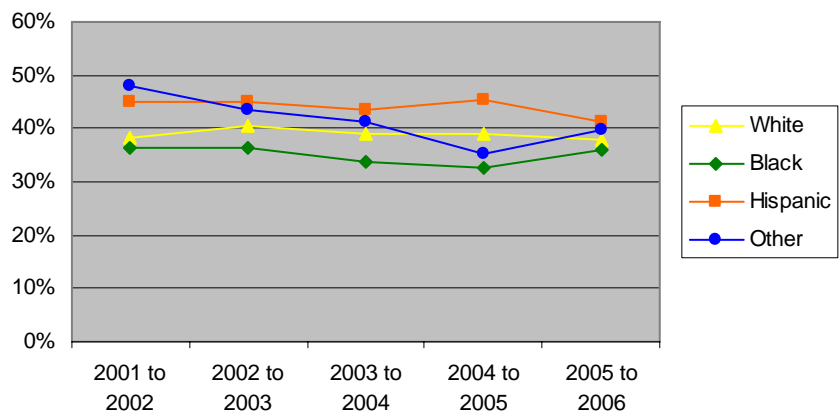
**Successful Completion Rates in Other High Enrollment Courses, AY 2002 to AY 2006**

	2002	2003	2004	2005	2006
BIOL 1406	n/a	75%	70%	68%	62%
GOVT 2301	67%	69%	69%	68%	74%
HIST 1301	70%	67%	68%	67%	65%
PSYC 2301	66%	63%	67%	68%	71%
SOCI 1301	70%	73%	75%	74%	74%
SPCH 1315	68%	66%	61%	57%	56%

**Student Retention**

Overall, student retention at COM has changed little over the past five years. The most current retention rate is 38% for students who were enrolled in Fall 2004 and returned in Fall 2005. This represents a slight decrease from the Fall 2002 rate of 40%. The retention rate for Hispanic students is typically higher than that of students from other ethnic backgrounds, where retention rates for black students are typically lower. These trends by ethnicity do not vary much by gender. The only exception is black males who have displayed a greater rate of increase in retention over the past two years.

**Figure 6: COM Fall to fall retention rates by ethnicity.**



Detailed analysis of retention rates for AtD Cohorts provides more insight into the retention of students and when we are losing students. This analysis was guided by the following questions:

- Who do we lose Fall to Spring?
- Who do we lose Fall to Fall?

- Are there any notable gaps among different groups of students in rates of retention from semester to-semester or year-to-year?

The following trends were observed:

- Although retention rates for AtD cohorts are slightly higher than overall COM rates, these rates also appear to be declining.
- Male students are retained at a lower rate than female students, Fall to Spring and Fall to Fall. This trend explains the discrepancy in student demographics observed when the AtD cohort was compared to the overall population at COM.
- In comparison to white and Hispanic students, black students have higher Fall to Spring retention rates, but lower Fall to Fall rates.
- Full-time students and those who are entering college for the first time also have higher retention rates, and tend to mirror the overall retention rates.
- Pell recipients display the highest retention rates, both Fall to Spring and Fall to Fall.

**AtD Cohorts' First Year Retention Rates by Selected Demographic and Enrollment Characteristics**

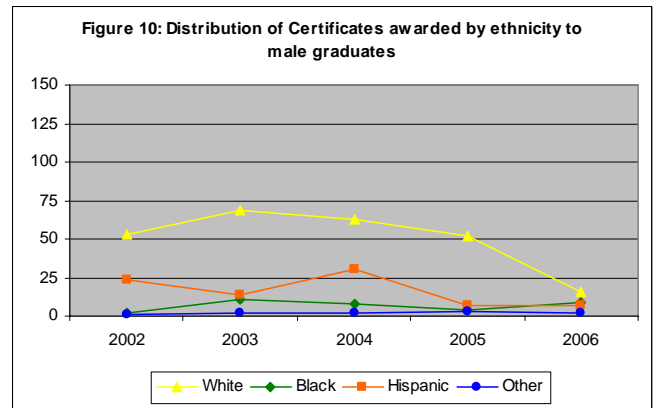
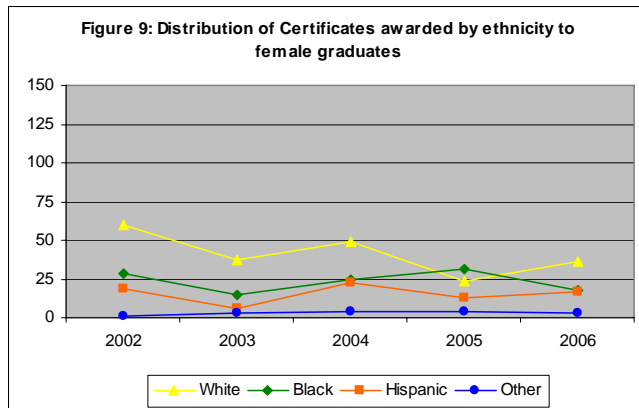
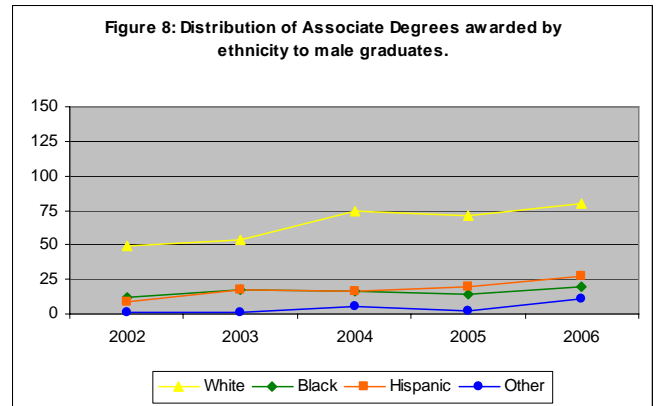
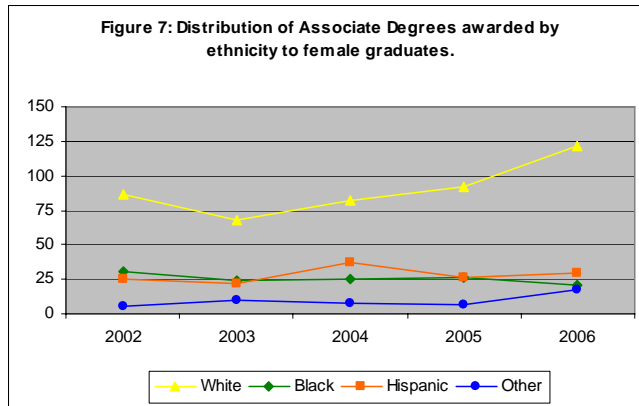
	2003 Cohort		2004 Cohort		2005 Cohort	
	Fall to Spring	Fall to Fall	Fall to Spring	Fall to Fall	Fall to Spring	Fall to Fall
<b>Total</b>	67%	41%	63%	40%	63%	n/a
Female	70%	42%	66%	40%	66%	n/a
Male	64%	38%	63%	40%	59%	n/a
White	66%	40%	62%	39%	61%	n/a
Black	71%	32%	65%	32%	67%	n/a
Hispanic	65%	45%	68%	50%	60%	n/a
Other	76%	52%	74%	43%	66%	n/a
18 and under	74%	51%	71%	49%	68%	n/a
20 to 21	67%	32%	60%	37%	63%	n/a
22 to 24	72%	36%	64%	40%	56%	n/a
25 to 29	65%	37%	57%	26%	56%	n/a
30 to 39	50%	30%	61%	34%	62%	n/a
40 to 49	59%	34%	51%	27%	58%	n/a
50 to 64	44%	16%	44%	17%	67%	n/a
65 and over	0%	0%	0%	0%	50%	n/a
Full-time	77%	49%	74%	46%	72%	n/a
Part-time	55%	30%	53%	33%	52%	n/a
First-time-in-College	69%	43%	67%	42%	64%	n/a
Transfer	64%	35%	59%	36%	60%	n/a
Credits transferred:	67%	39%	56%	38%	66%	
1 to15	74%	50%	73%	48%	61%	n/a
16 to 30	57%	26%	53%	27%	54%	n/a
31 or more	84%	45%	76%	34%	73%	n/a
Received Pell	60%	39%	60%	43%	59%	n/a
Did not Receive Pell	70%	42%	66%	40%	66%	n/a

## Degrees and Certificates Awarded

Because of the limited number of years of AtD cohort data available, the analysis for this section examined the awards data for the entire college. The following questions were addressed:

- How does the distribution of awards compare to the enrollment distribution?
- Are there differences among groups of students with regard to the types of awards received?
- Are there any notable gaps in graduation rates among different groups of students?

Whereas the distribution of the students enrolled at COM has not changed over the past five years in terms of gender or ethnicity, the distribution of graduates has. Below are the highlights of the differences noted in terms of gender, ethnicity, and type of award.



- The number of degrees awarded to white students, regardless of gender, has increased since FY 2003, although there is a larger number of females who received an Associate's degree, compared to male students.
- The number of certificates awarded to white female students has fluctuated up and down over the past five years, with an overall decrease in awards since FY 2002. In contrast, the number of white males receiving certificates peaked in FY 2003 and has steadily declined since that time.
- The number of awards earned by Hispanic female students, regardless of type, has fluctuated without any real increase or decrease over the past five years. Male Hispanic

students, however, display an increase in the number of Associate's degrees, but a decrease in the number of certificates awarded.

- For black students, both males and females displayed a slight increase in the number of Associate's degrees awarded between FY 2005 and FY 2006. The number of certificates awarded to black female and male students, however, has changed little over the past five years.

## **Summary**

The purpose of this report was to provide a detailed overview of the student population at COM and the overall success of these students. Both the AtD cohort data and data for the general student population were examined.

Although the ethnic distribution of the AtD cohorts reflects the overall student population, the gap between the percentage of females and males is not as large. This discrepancy indicates that there is a greater degree of persistence among females than there is for males. This finding is confirmed by the lower retention rate for male students.

Placement data indicates that 90% of students enter COM with a developmental education need in at least one area, most in mathematics. Despite this, fewer than 70% of students needing developmental instruction in mathematics actually enrolled in such a course their first semester at COM. The percentage of students with a developmental need in reading who enrolled in the required course was less than 55%. These findings can be attributed in part to the legacy student database system, which did not enforce course prerequisites based on test scores.

Successful course completion rates in developmental education are typically low, ranging from 46% to 59%. Both males and blacks tend to have lower successful completion rates. Students enrolled full-time and Pell recipients tend to perform better than their counterparts.

Low successful completion rates were also observed in ENGL 1301 and MATH 1314, two gatekeeper courses at COM. In ENGL 1301, successful completion rates ranged from 57% to 64%; in MATH 1314, these rates ranged from 42% to 47%. Other high enrollment courses with low successful completion rates include BIOL 1406, HIST 1305, and SPCH 1315.

The overall retention rate for COM has changed little over the past five years. Hispanic retention rates are typically higher; whereas, retention rates for blacks are lower. As was previously mentioned, males are more likely to withdraw from COM than are females. Full-time students and Pell recipients display much higher rates of retention.

In terms of degrees and certificates awarded, there are some noticeable differences with regard to gender, ethnicity, and type of award. In general, the numbers of students receiving Associate's degrees have increased; whereas, the number of certificates being awarded has declined. Greater increases in the number of awards were observed for females than males, particularly for white students. Hispanic males displayed an increase in the number of degrees awarded, but a decrease in the number of certificates. A slight increase in the numbers of degrees awarded was observed for both female and male black students.

## **Conclusions**

This preliminary analysis reveals some significant problems in terms of student outcomes across all performance measures. Furthermore, there are substantial gaps both in terms of gender and ethnicity. Additional in-depth analysis is needed to identify the barriers that students face that contribute to the lack of student success at COM, as well as the effectiveness of current interventions.

## **Definitions**

Financial Aid Status—Used as an indicator of socio-economic status to identify students considered to be economically disadvantaged, based on whether or not a student received Pell.

Course completion—Students who received any grade except a “W” in a course are considered to have completed that course; that is, the student persisted and remained in the course for the duration of the semester.

Successful completions—Students who received a grade of “C” or better in a course are considered to have successfully completed the course.

Full-time—Enrolled in 12 or more credit hours.