MHEC
MARYLAND HIGHER EDUCATION COMMISSION

Student Outcome and Achievement Report (SOAR)

College Performance of New Maryland High School Graduates

June 2011

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Introduction

Maryland continues to receive national acclaim for its educational system. In 2011, Maryland public schools were ranked #1 in the country by *Education Week* for the third year in a row, and also earned a third consecutive #1 ranking from the College Board for achievement on advanced placement exams. The Maryland State Department of Education (MSDE) also recently received a coveted Race to the Top (RTTT) Grant from the United States Department of Education in the amount of $250 million. The RTTT Grant is aimed at boosting the academic performance of all students, narrowing achievement gaps which separate some groups of students from others, reforming struggling schools and improving the teaching profession. On the higher education side, the statewide six-year college graduation rate reached an all-time high of 64.7 percent in 2010, and Maryland is now third in the country, behind only the District of Columbia and Massachusetts, in the percentage of its workforce holding advanced degrees.

These extraordinary achievements are the result of a continual focus on sustaining and improving educational quality and effectiveness. However, an examination of student performance data at the high school-to-college transition reveals that more can be done to ensure that Maryland students develop the skills needed for success in college and the workforce. The data also suggest that there continues to be an expectations gap between secondary and postsecondary faculty and administrators regarding the skill-level that students need to acquire to graduate from high school, and the knowledge-base that they need to be successful in their first year of college.

This edition of the Student Outcome and Achievement Report (SOAR) continues to serve as the Maryland Higher Education Commission's (MHEC) response to the General Assembly's 1988 charge to "improve information to high schools and local school systems concerning the performance of their graduates at the college level." Since 1990, SOAR has provided key stakeholders of Maryland's educational system, including county superintendents, college administrators and high school principals, with the following information for recent high school graduates who attend in-state colleges and universities: the proportion of students who required developmental coursework in math, English, and reading; average student grades in the first college math and English courses taken; and the cumulative grade point average earned at the end of the first year of collegiate study. Since 1996, MHEC has also provided additional data about students' high school experiences and course-taking patterns in an effort to better understand factors that may influence their postsecondary performance.

The Study

This report examines the academic performance of recent Maryland high school graduates during their freshman year at a Maryland college or university. Students who completed a college preparatory curriculum are defined as "core" students, and those who did not complete a college preparatory curriculum are defined as "non-core" students. The current edition of SOAR focuses on students who graduated from Maryland high schools in the 2007-2008 academic year, and then enrolled at a Maryland college or university during the 2008-2009 academic year. It uses two sets of data. The first dataset is based upon survey data that were collected when students took the ACT or SAT, and is used to examine the relationship between students' background characteristics and high school experiences, and their academic performance during their first year of college. The second dataset includes postsecondary academic performance data (e.g., remediation assessment results, course grades, and GPA) which were obtained directly from the colleges and universities. The report also includes an examination of the long-term graduation and transfer patterns of students who enrolled at public colleges and universities through fall 2002 (four-year campuses) and fall 2004 (community colleges).

SOAR contains three separate sections. The first section examines differences between the college performance of students who did and did not complete a college preparatory curriculum in high school, as indicated by the self-reported SAT/ACT survey data. The next part contains the results of a multivariate regression analysis which attempts to identify factors that best predict student performance during the first year of college. The third section of the study examines trends in the SOAR data since 1997-1998. The final section presents the four-year graduation and transfer rates for students who enrolled in community colleges after graduating from high school, and the six-year graduation rates for students who enrolled in public four-year institutions after completing high school, by core and non-core status.

Throughout the report, the terms remediation or remedial and developmental education are used interchangeably. Typically, these terms are used to describe academic courses and support systems which provide assistance to students in need of intensive instruction, counseling, advising, or tutoring in order to be prepared to take college-level coursework.

Study Limitations

Like every research study, SOAR has certain limitations that should be considered when interpreting the analyses. These limitations are outlined below:

- The high school experiences data included in the report were self-reported through a questionnaire that students completed when they took the SAT or ACT. These data were not verified by external sources such as high school transcripts, and are therefore not definitive. However, it is common for researchers to rely on self-reported data when collecting information from students. Several major, highly-respected national surveys, including the Cooperative Institutional Research Program (CIRP) Freshman Survey administered by the Higher Education Research Institute at the University of California Los Angeles, and the Beginning College Survey of Student Engagement which is hosted by the Center for Postsecondary Research at Indiana University, are based upon self-reported data from recent high school graduates.

- On the SAT/ACT questionnaires some students may indicate that they completed Algebra II when, in fact, it took them two years to complete Algebra I. Additionally, some colleges and universities admit students who have not completed Algebra II even though completing mathematics courses at least through this level typically indicates that students are prepared for college-level mathematics. The self-reported data included in SOAR do not capture these important nuances which impact students' ability to successfully enroll in and complete credit-bearing mathematics courses.

- The content and level of rigor of high school courses taught in specific subject areas may vary across counties, schools and even within the same school. Therefore, there is no guarantee that all students who took a particular course had the same intellectual experience, or were equally prepared to be successful in a college or university setting.

- The report only contains information about Maryland high school graduates who enrolled at Maryland colleges or universities, and excludes all Maryland high school graduates who enrolled in higher education institutions in other states. In addition, only students who took the SAT or ACT are included. Forty-nine percent of students who graduated from Maryland public high schools in 2007-2008 went directly on to attend an in-state college or university, and 32 percent of public high school graduates enrolled in college in Maryland and took the SAT or ACT.

## I. College Performance of Core and Non-Core Students

This section of the report examines students' need for developmental coursework in math, English, and reading, the average grades earned in their first college-level math and English courses and the cumulative grade point average obtained after their first year of collegiate study. The data are presented in the appendices in Tables 2-13.

The SOAR data continue to show that core students outperformed non-core students on every measure of academic achievement. A smaller percentage of core than non-core students were assessed to need developmental math, English or reading. Generally, core students also earned higher grades in their first college-level math and English courses, and ended their first year of college with higher grade point averages than their non-core peers. Continuing a trend that has been evident since SOAR's inception, in this edition of the report, core students outperformed non-core students irrespective of their background characteristics (i.e., gender or race), the county or regional jurisdiction in which they attended high school, or the specific college or university they attended. These findings are discussed more extensively below within the context of the specific academic achievement categories.

Developmental Education

Considerable numbers of both core and non-core students were assessed to need additional academic support in math, English or reading before they enrolled in college-level courses. The graph below shows that more non-core (47 percent) than core (35 percent) students required a developmental math course upon enrolling in college. More non-core (23 percent) than core (12 percent) students also required developmental coursework in English, and reading where 22 percent of non-core versus 13 percent of core students needed developmental support. A prevailing assumption is that students who are required to take developmental courses in college were low-performing students in high school. However, research suggests that many individuals who require developmental courses were academically strong high school students. According to a 2008 study by Strong American Schools, four out of five students who took remedial courses in college earned a "B" average (3.0) or higher in high school. Detailed findings by jurisdiction are presented in Table 2.

Figure 1.

Percentages of students requiring remediation by subject and cohort, 2008-2009
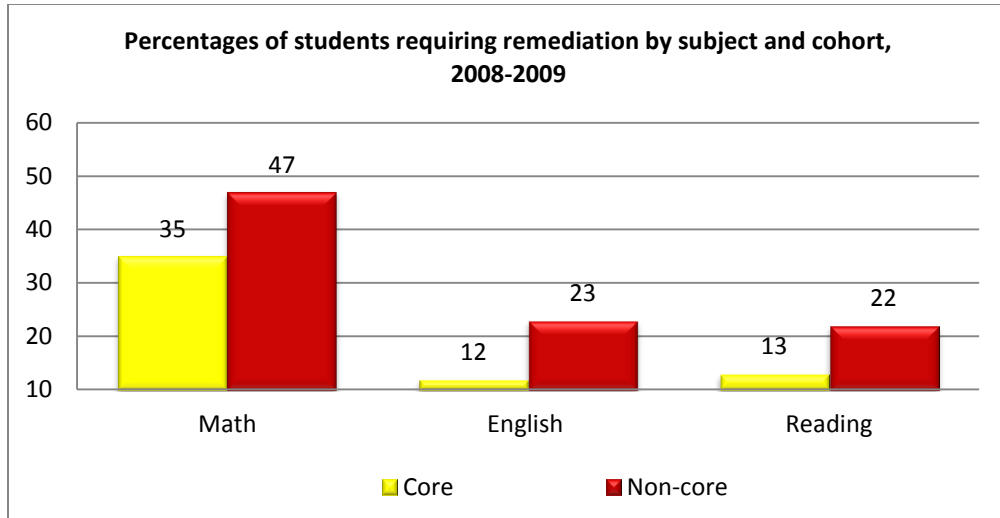
When analyzing only students who first enrolled in community colleges, 61 percent of students in the core category and 69 percent of those in the non-core category required a developmental math course upon enrolling. Fewer students required developmental assistance in English (core – 26 percent; non-core – 37 percent) and reading (core – 25 percent; non-core – 36 percent)

Figure 2.

Percentages of core and non-core students needing developmental assistance in all three areas at community colleges by cohort (2008-2009)
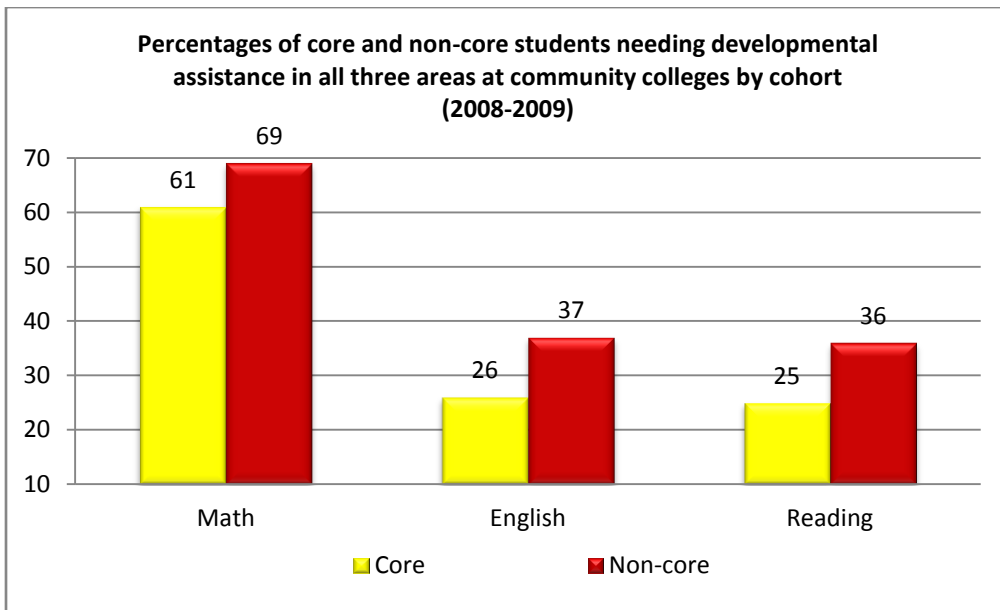
Compared to the community colleges, public four-year institutions enrolled far fewer students needing remedial assistance. Fifteen percent of core students attending public four-year campuses required developmental coursework in mathematics, while much smaller percentages required additional support in English (2 percent) and reading (4 percent). Of the non-core students enrolled, 24 percent required a developmental math course, while 5 percent were assessed as needing developmental English and reading courses.

Figure 3.

Percentages of core and non-core students needing developmental assistance in all three areas at four-year institutions by cohort (2008-2009)
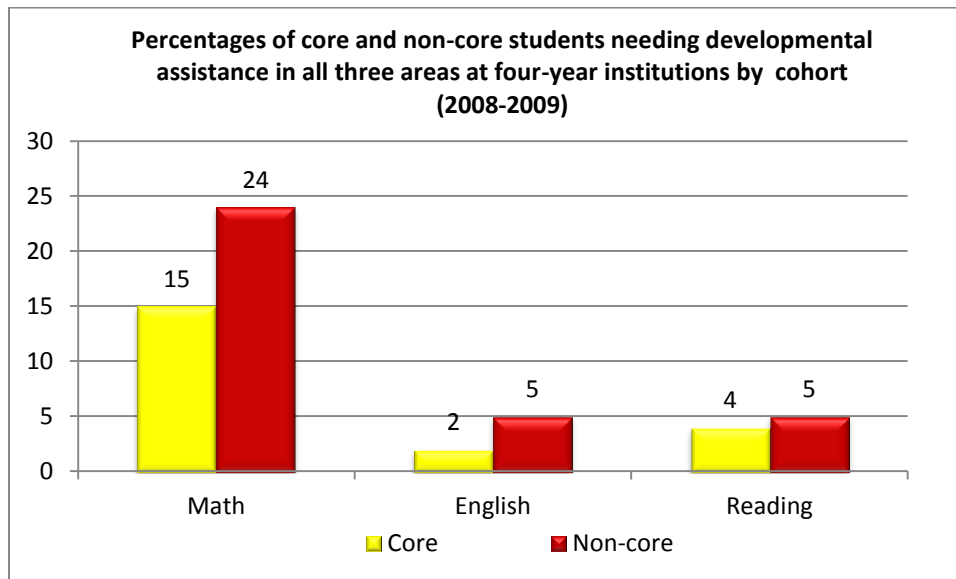
At least 35 percent of core students in the following five regions were assessed as needing remediation in math: Prince George's County (49 percent), the Lower Shore (44 percent), Baltimore City (41 percent), the Susquehanna Region (39 percent), and Western Maryland (35 percent). The mathematics remediation rate for non-core students in all jurisdictions, except mid-Maryland and Southern Maryland, was at least 40 percent. See Table 1 for a list of counties included in each region.

English remediation rates were highest among core students from the Lower Shore (18 percent), and Prince George's County and the Susquehanna Region (17 percent). At least 30 percent of all non-core students from Baltimore City (39 percent) and Prince George's County (30 percent) were required to take a developmental English course. In terms of reading, Prince George's County produced the largest proportion of core students (23 percent) who required a

developmental course in this subject, while 35 percent of non-core students from both Baltimore City and Prince George's County needed to take a developmental reading course.

The data consistently showed that, irrespective of core status, more women than men required developmental coursework in mathematics. For core students, 38 percent of women and 31 percent of men were assessed as needing remedial support. Among non-core students, 51 percent of women and 43 percent of men needed additional support in mathematics. The developmental assistance rates for English and reading were virtually the same for men and women for both the core and non-core groups.

When examining the SOAR data by race and ethnicity, both core and non-core African American and Hispanic students were much more likely than their peers from other racial and ethnic backgrounds to require remediation in math, English or reading. For example, while larger percentages of African American (54 percent) and Hispanic (44 percent) students in the core category required developmental math, much smaller percentages of Asian (17 percent) and White (28 percent) students did so. The same was true among non-core students, where 64 percent and 55 percent of African American and Hispanic students, respectively, needed developmental support in mathematics compared to 27 percent of Asian and 35 percent of White students.

Grade in First Math Course

Core students earned an average grade of 2.53 in their first college-level math course, performing better than non-core students whose average grade was 2.42. Also, a slightly higher percentage of core (80 percent) than non-core (77 percent) students earned a grade of "C" or better in their first math course. Similar to the findings reported in the last edition of SOAR, individuals who attended Western Maryland high schools earned the highest math grade (2.70) among all core students, while students from Prince George's County earned the lowest average math grade (2.15).

Although, as discussed in the previous section, a greater percentage of women than men were assessed as needing developmental math, women outperformed men in their first college-level math classes. Among core students, 84 percent of women received a grade of "C" or better in their first math course, while only 76 percent of men did so. Similarly, women in the core category earned an average grade of 2.68 in the first math class, while the average grade for men was 2.37.

Grade in First English Course

In general, recent high school graduates were more successful in their first English courses than they were in their initial math courses. Students in the core category earned an average grade of 2.74 in their first college English course, while non-core students earned a grade of 2.56. Also when compared to performance in the first math course, larger percentages of both core (87 percent) and non-core (83 percent) students achieved a grade of at least "C" or better in their first English course. Core students from Mid-Maryland (2.85) and Baltimore County (2.80) earned the highest English grades, while those from Prince George's County (2.54) and the Lower Shore (2.56) earned the lowest average grade among students from all jurisdictions.

Women in the core (2.89 vs. 2.56) and non-core (2.72 vs. 2.38) categories earned significantly higher grades in the first English course than their male peers. While African Americans' average English grades were considerably lower than those of their peers from other groups (2.37 for core; 2.26 for non-core), nearly 80 percent of African American students in the core- and non-core categories received grades of "C" or better in their first English course.

Grade Point Average (GPA)

After completing their first year of college, core students had earned a cumulative grade point average of 2.63, while the grade point average for non-core students was 2.44. Across all jurisdictions, the first-year GPAs ranged from 2.47 for those who attended high school in Prince George's County to 2.78 for students from Mid Maryland.

With first year GPAs of 2.75 and 2.55, respectively, both core and non-core women outperformed their male counterparts who earned GPAs of 2.48 (core) and 2.32 (non-core). The first-year GPAs of African American core (2.23) and non-core (2.09) students were considerably lower than the grade point averages of students from other racial/ethnic groups.

Figure 4.

Average GPA by Core Status and Race, 2008-2009
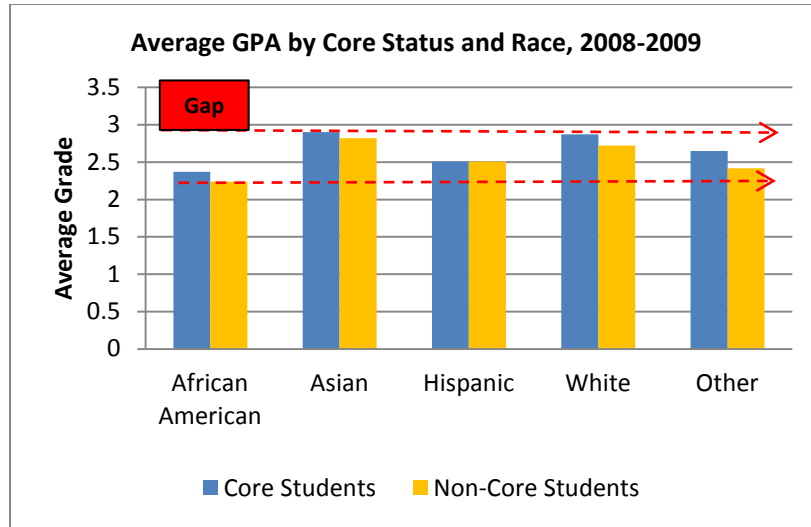
II. FACTORS AFFECTING COLLEGE PERFORMANCE

In order to identify factors that may influence and help to predict college success, SOAR continues to include an examination of the relationship between students' high school experiences and background characteristics, and their performance in college. This section is designed to provide high school teachers, guidance counselors, administrators and parents with information they can use when advising students about preparing for college.

Method

A multiple regression analysis was conducted using numerous SAT survey items and demographic data from the SOAR database which provided indicators of students' high school experiences and background characteristics (independent variables), and students' grades in the first college math and English courses and cumulative first-year grade point average as measures of collegiate performance (dependent variables). Data from the ACT were not included in this section of the study because the sample of students who took this test was too small and may have caused discrepancies or errors in the results.

The following steps were used for this analysis:

➢ The SAT and SOAR data were used to develop a model that only contained relevant variables – those that were the best predictors of college performance.

➢ A stepwise selection approach that only retained variables that met the standard significance criterion for each of the college performance variables was implemented. This step eliminated the majority of the high school experiences and background attribute variables. The stepwise procedure adds variables one by one, starting with the independent variable that explains the greatest amount of variation in the dependent variable. At each step, all variables in the model are re-tested and removed if they no longer meet a pre-specified significance level.

➢ Missing values for certain variables were handled using the mean substitution method in order to ensure that each step would be performed on the same data. The regression coefficients and standard errors for the final model selected by the stepwise procedure were recalculated using only those observations with complete data. A final analysis was completed for all independent variables to ensure significance at the 1 percent level in both models.

➢ A correlation coefficient was calculated for each set of college performance and high school experiences variables. Only variables that were at least 10 percent correlated with the dependent variable were included in the final regression.

The individual factors which emerged as predictors of college performance ($t \leq .01$) are listed below in order of strength.

Figure 5: Math Grade

Stepwise Results				Estimates		
Step	Independent Variable	R^2	R^2 Change	Coefficients	Std. Error	t-statistic
-	Constant	-	-	-1.2049	0.1481	-8.14
1	High School GPA	0.1285	0.1285	0.4280	0.0450	9.51
2	SAT Math/100	0.1506	0.0221	0.1765	0.0208	8.49
3	Female	0.1711	0.0205	0.3670	0.0334	11.01
4	Avg. Math Grade	0.1783	0.0072	0.2168	0.0289	7.50
5	Avg. Foreign Lang. Grade	0.1802	0.0019	0.1166	0.0275	4.24
6	African American	0.1819	0.0016	-0.1073	0.0423	-2.54
7	Parents' Education	0.1830	0.0012	0.1074	0.0330	3.25

Figure 6: English Grade

Stepwise Results				Estimates		
Step	Independent Variable	R^2	R^2 Change	Coefficients	Std. Error	t-statistic
-	Constant	-	-	-0.1755	0.1120	-1.57
1	High School GPA	0.1414	0.1414	0.4428	0.0336	13.19
2	SAT Verbal/100	0.1566	0.0152	0.1033	0.0164	6.29
3	Female	0.1755	0.0189	0.2665	0.0253	10.52
4	African American	0.1807	0.0052	-0.1920	0.0304	-6.32
5	Avg. English Grade	0.1849	0.0042	0.1498	0.0245	6.11
6	Avg. Foreign Lang Grade	0.1874	0.0025	0.1050	0.0202	5.19
7	Parents' Education	0.1895	0.0020	0.1046	0.0255	4.11
8	Honors Languages	0.1907	0.0013	0.0905	0.0281	3.22

Figure 7: Cumulative Grade Point Average

Stepwise Results				Estimates		
Step	Independent Variable	R^2	R^2 Change	Coefficients	Std. Error	t-statistic
-	Constant	-	-	-0.5371	0.0749	-7.17
1	High School GPA	0.2265	0.2265	0.4611	0.0238	19.38
2	SAT Verbal/100	0.2561	0.0296	0.0907	0.0123	7.35
3	Female	0.2698	0.0137	0.2176	0.0179	12.13
4	SAT Math/100	0.2759	0.0060	0.0616	0.0123	5.00
5	Avg. English Grade	0.2812	0.0054	0.1276	0.0171	7.45
6	Parents' Education	0.2856	0.0044	0.1204	0.0177	6.80
7	Avg. Foreign Lang Grade	0.2892	0.0036	0.1078	0.0141	7.64
8	African American	0.2918	0.0026	-0.1345	0.0224	-6.01
9	Hispanic	0.2927	0.0009	-0.1454	0.0427	-3.40

The coefficients reported in the above models estimate how a change in an independent (predictor) variable affects the dependent (predicted) variable. The coefficients estimate the effect of a one-unit increase in a given independent variable. For the first math grade, the coefficient on the SAT Math variable is 0.1765. The first math grade is measured on the standard 4.0 scale, while the SAT Math variable is divided by 100. A one-unit increase in SAT Math score would therefore be a 100 point increase (e.g., from 500 to 600). The coefficient suggests that a 100 point increase would increase a student's expected first math grade by about 0.18 (e.g., from a 3.0 to a 3.18), holding all other variables in the model constant. For another example, consider the coefficient of the African American variable for first math grade. The coefficient is -0.1073, meaning that on average, an African American student would have a grade about a tenth of a point lower than a non-African American student with the exact same high school GPA, SAT scores, gender, etc.

Findings of Regression Analysis

This is the 11th consecutive report in which high school grade point average was the best predictor of first college English grade and first-year grade point average. High school grade point average has also been the best predictor of first math grade in 10 of the 11 SOAR studies produced.

In addition to high school GPA, SAT math score and being a female student were the strongest predictors of first math grade. Similarly, notable predictors of the first English grade were SAT verbal score and being a female student. The best predictors of college grade point average were SAT verbal scores, being a female student and SAT math score.

Historically, race and gender have had a statistically significant impact on the three college performance variables, even after controlling for other demographic characteristics and academic achievement variables. The current report shows the persistence of this trend, as there was a negative correlation between being an African American student and all three academic performance variables. There was also a negative correlation between being a Hispanic student and first-year GPA. This marks the sixth consecutive SOAR in which race has had a significant impact on the three college performance variables. Likewise, being a female student was the third strongest predictor of each of the academic achievement variables. Thus, gender has had a significant impact on all three college performance variables in every rendition of SOAR, except the 2006 study.

III. TRENDS IN COLLEGE PERFORMANCE OF HIGH SCHOOL GRADUATES

The past eleven years of SOAR trend data are featured in Tables 14-34. These tables provide information on the academic performance of recent high school graduates by jurisdiction (e.g., county or regional service area), higher education segment, race and gender**.** Overall, the student performance data have remained highly stable over time.

Remediation Rates
Consistent with the national trend, in 2008-2009, more Maryland students in both the core and non-core categories required remediation in math than in reading or English. This finding continues a trend that has been evident since SOAR's inception. While 35 percent and 47 percent of core and non-core students, respectively, in the current cohort required developmental coursework in mathematics, much smaller proportions required such support in English (12 percent for core; 23 percent for non-core) or reading (13 percent for core; 22 percent for non-core). Additionally, since the first SOAR was published, the proportion of core students requiring math remediation has increased significantly from 23 percent to 35 percent. In just the last two years the population of core students assessed as needing remedial math increased by 3 percentage points from 32 percent to 35 percent, while remediation rates for non-core students decreased by 2 percentage points from 49 percent to 47 percent.

When examining the higher education segments, the SOAR data show that since the last study was released the percentage of students attending a community college who needed remediation in math increased for core students (from 56 percent to 61 percent), and remained at 69 percent for non-core students.   Since 1997-1998, the percentage of community college students in the core category requiring developmental coursework in math has increased by 23 percentage points (from 38 percent to 61 percent), while the percentage of non-core students requiring additional support in math has increased 20 percentage points (from 49 percent to 69 percent). At the public four-year universities the increase in the need for mathematics remediation since the last SOAR remained at 15 percent for core students, and actually decreased from 28 percent to 24 percent for non-core students. Over the last 11 years, the mathematics remediation rate at four-year institutions has increased at a more gradual pace than at the community colleges.

The percentage of students needing additional assistance in English and reading has remained stable over time. For example, in 1997-1998, 12 percent of core students and 22 percent of non-core students needed developmental assistance in English. Eleven years later in 2007-2008, the proportion of core students who required a remedial English course remained 12 percent, and the proportion of non-core students assessed to need remedial English increased by just one percentage point to 23 percent. Similarly, over the same time period, the proportion of students requiring developmental coursework in reading decreased from 14 percent to 13 percent for core students and from 24 percent to 22 percent for non-core students.

Performance in First Math Course

This year, a slightly higher percentage of core (80 percent) than non-core (77 percent) students received at least a grade of "C" in their first college-level math course. These findings continue a trend which has been evident since the beginning of SOAR: a narrow margin, from two to six percentage points, has separated the performance levels of core and non-core students.

While more women than men, in both the core and non-core categories, have historically required remedial assistance in math, women have also been considerably more likely to earn a higher grade in the first math course than their male counterparts. The percentage of women earning a "C" or better in their first math class has ranged from seven to nine percentage points higher than that of men.

Performance in First English Course

Since SOAR was first published, more than 80 percent of core and non-core students have earned at least a "C" grade in their first English course, and slightly more core than non-core students have achieved this status each year. In every SOAR, more women than men have received a "C" grade in English, and this year more than 85 percent of women in both the core and non-core categories reached this level of achievement.

Grade Point Average

In previous SOARs, core students have outperformed their non-core peers in terms of first-year cumulative grade point average. That trend continues with the current edition of the study. Similar to the grades earned in the first math and English courses, core and non-core women have earned higher GPAs than men since 1997-1998. Also, students who attended high school in Mid Maryland and Montgomery County continue to have the highest GPAs of students from all jurisdictions, and have exceeded the statewide average GPA in each SOAR. Conversely, students from the Lower Shore and Prince George's County have typically earned GPAs that are lower than those of their peers from other jurisdictions, and below the State average.

Factors Affecting College Performance

Since 1997-1998, high school grade point average has been the strongest predictor of college performance, among all high school experience and background variables included in the database. With only one exception, high school grade point average has been the best predictor of all three college performance measures (first college math grade, first college English grade, and college grade point average) in each of the last 11 years. While several other variables have

historically had a strong relationship to one or more of the college performance measures for several years, no other indicator has had the predictive power of the high school grade point average variable. The SAT verbal score and average grade in high school English variables each had a statistically significant effect on first English grade and cumulative GPA in each of the last 11 years. Likewise, the SAT math score variable has also been an important predictor of students' first math grade in every SOAR, and of grade point average in 10 of the last 11 studies. Average high school math grade has also been a strong predictor of students' performance in their first college math course in 10 of the last 11 years. Gender has been related to all three college performance variables for 10 years, and race has had a statistically significant effect on all three college performance variables in 6 of the 11 editions of SOAR.

IV. GRADUATION RATES OF CORE AND NON-CORE STUDENTS

The SOAR analysis also includes trends in the transfer and graduation rates of core and non-core students at Maryland's public two-year and four-year colleges and universities. Table 32 shows that since 1994, completion and transfer rates for students enrolled at community colleges have been much higher for core than non-core students, and most recently the gap between students in the two groups increased to nearly 10 percentage points. Overall, the success rates for students attending community colleges have remained relatively stable over time, with modest increases of 1.7 percentage points and 4.4 percentage points, respectively, for core and non-core students over the past 10 years.

Table 33 includes data for students who enrolled in a public four-year university immediately after graduating from high school. The six-year graduation rates for both core (72.2 percent) and non-core (67.2 percent) students in the 2002 cohort were higher than the success rates achieved by any previous cohort. However, this year, a 5 percentage point gap separated core students from their non-core peers, while the analysis for the 2000 cohort revealed nearly identical graduation rates for both groups (67.6 percent for core and 67.0 percent for non-core). While the four-year graduation and transfer rates for community colleges experienced only modest increases over the last 10 years, the six-year graduation rate increases at the four-year institutions were more significant for both core (8.2 percentage points) and non-core students (10.1 percentage points).

 The data in table 34 reflect transfer and graduation rates of core and non-core students by gender, race/ethnicity, and jurisdiction. Women in both the core and non-core categories had higher graduation and transfer rates than men attending either the community colleges or four-year colleges and universities. However, the margin of difference which separated women from men was much larger at the four-year campuses where the graduation rates for core and non-core women were 8.3 and 10.8 percentage points higher, respectively, than the rates for men. In terms of the long-term outcomes for specific racial and ethnic groups, significant gaps separate

African American students from others. For example, at the community colleges there is a 26 percentage point difference between the rate at which African American students and Asian students (the highest performing group) in the core category graduate or transfer, and at the four-year campuses the difference in the six-year graduation rate for these two groups of students is nearly 24 percentage points. With very few exceptions, students in the core category had more favorable long-term outcomes than those in the non-core category. Core community college students from Frederick County, the Lower Shore, Mid Maryland and Montgomery County graduated and transferred at considerably higher rates (at least 10 percentage points) than their non-core peers. Similarly, core students from Baltimore City and the Upper Shore who attended four-year universities had six-year graduation rates that were at least 10 percentage points higher than their non-core counterparts.

The SOAR findings related to students' long-term success rates suggest that regardless of race, gender or place of residence, core students were more likely than non-core students to graduate from college or transfer to another postsecondary institution. This finding is supported by prior research such as ACT's *Mind the Gaps* (2010) which suggests that students who take a rigorous high school curriculum are more likely than others to earn a college degree, and that doing so narrows the achievement gaps that separate underrepresented students from others.

Recommendations for Policy, Practice and Research

The ACT's College Readiness Benchmarks set a minimum score that students should achieve in order to have a 50 percent chance of earning a grade of "B" or higher, or a 75 percent chance of earning a "C" or higher in a typical first-year college-level course. According to the organization's recent annual report, *Solutions for Success in an Evolving Global Market,* of the 1.6 million high school graduates who took the ACT in 2010, 66 percent met the benchmark for succeeding in a first-year English course, followed by 52 percent in reading, 43 percent in mathematics and 29 percent in science. These findings are aligned with the results of the SOAR study, which suggest that Maryland must continue to focus on ameliorating the need for recent high school graduates to enroll in developmental coursework.

The following recommendations are designed to highlight several issues which should remain at the forefront of statewide policy conversations regarding developmental education:

- Various stakeholders, including educators, policymakers and business and community leaders, must stay committed to implementing the recommendations included in the final report of the College Success Task Force (2010) which was commissioned by the P-20 Leadership Council. The task force's recommendations, which range from adopting and implementing the Common Core Standards to making high schools accountable for graduating more college and career-ready students, and colleges more responsible for

successfully moving students through gateway courses, should continue to guide statewide efforts to reduce the need for remediation for recent high school graduates.

- Given the need for Maryland to produce more college graduates in science, technology, engineering and mathematics (STEM) fields, and the SOAR finding that students are more likely to require remediation in mathematics than in any other subject, the recommendations included in the final report of Governor O'Malley's STEM Task Force (2009) must also inform statewide conversations about decreasing remediation rates. Several of the task force's recommendations, such as the need to align P-12 STEM curriculum with college requirements and workforce expectations, and preparing more teachers in STEM shortage areas, directly address issues at the intersection of PreK-12 and higher education.

- More robust data regarding the pathways and outcomes of students who require remedial courses must be collected and carefully analyzed. In addition to knowing if a student took a remedial course it would be helpful to know if and when he took the next credit-bearing course in the sequence and how he performed in that course. New data collections, such as those required by Complete College America, will provide some of these data and they should eventually be integrated into the State's longitudinal data system and used to inform policy decisions and interventions.

- Best practices for preparing students to be successful in college and the workforce, as well as promising strategies for successfully moving students through required developmental courses, should be more broadly shared throughout the State.

The Future of SOAR

There are a number of current forces that herald change for the Student Outcome and Achievement Report. The 2008 SOAR recommended that MHEC gather additional data to improve its analysis, including data from a then-prospective P-20 longitudinal data system as well as data from the National Student Clearinghouse on Marylanders who leave the state to pursue postsecondary study. Since that time, planning has begun for Maryland's Longitudinal Data System (MLDSC), and the MLDS is expected to be in place by 2014. The MLDS promises to make available richer and more comprehensive student data, which will undoubtedly enhance future iterations of SOAR. Additionally, the 2011 Joint Chairmen's Report called on the Maryland State Department of Education and the local education agencies to provide recommendations to MHEC on how SOAR might be changed to increase its usefulness for school districts and high schools. This information will certainly be considered when developing future versions of SOAR.

While the aforementioned changes hold great promise, none of them have yet been realized, and the current edition of SOAR therefore follows the format of previous editions. Perhaps for this reason, the findings in this version of SOAR are very similar to those in previous reports. The challenge for educators and policymakers is to find ways to use these results to improve the education of students, and to help identify best practices that can be replicated across various schools and colleges.

SOAR is not intended to stand as the last word on remediation and student progress, but as an intermediate step in improving student success. Further study along the lines described here, conducted by schools and colleges as well as by MHEC and other agencies, will help bolster efforts to enhance the achievement of all Maryland students.

APPENDICES

Table 1

Number of 2007-2008 Maryland Public High School Graduates and the
Number and Percentage of Those Who Enrolled at a Maryland
College or University in 2008-2009

	H. S. Grads	Enrolled in College		Enrolled in College and Took SAT or ACT***	
	N	N	% H.S. Grads	N	% H.S. Grads
Anne Arundel	5,244	2,763	52.7%	1,655	31.6%
Baltimore City	4,019	1,628	40.5%	1,290	32.1%
Baltimore	7,526	3,621	48.1%	2,521	33.5%
Frederick	3,013	1,563	51.9%	1,011	33.6%
Lower Shore	1,570	806	51.3%	534	34.0%
Somerset	148	81	54.7%	44	29.7%
Wicomico	879	460	52.3%	281	32.0%
Worcester	543	265	48.8%	209	38.5%
Mid Maryland	6,069	3,160	52.1%	2,243	37.0%
Carroll	2,335	1,169	50.1%	793	34.0%
Howard	3,734	1,991	53.3%	1,450	38.8%
Montgomery	10,175	5,577	54.8%	3,921	38.5%
Prince George's	8,617	3,110	36.1%	2,199	25.5%
Southern Maryland	4,620	2,156	46.7%	1,249	27.0%
Calvert	1,403	678	48.3%	464	33.1%
Charles	2,083	955	45.8%	481	23.1%
St. Mary's	1,134	523	46.1%	304	26.8%
Susquehanna	3,901	2,005	51.4%	1,165	29.9%
Cecil	1,106	475	42.9%	288	26.0%
Harford	2,795	1,530	54.7%	877	31.4%
Upper Shore	1,835	840	45.8%	537	29.3%
Caroline	399	174	43.6%	111	27.8%
Dorchester	357	158	44.3%	96	26.9%
Kent	179	46	25.7%	35	19.6%
Queen Anne's	554	298	53.8%	181	32.7%
Talbot	346	164	47.4%	114	32.9%
Western Maryland	2,582	1,209	46.8%	745	28.9%
Allegany	726	327	45.0%	191	26.3%
Garrett	324	173	53.4%	89	27.5%
Washington	1,532	709	46.3%	465	30.4%
ALL MARYLAND**	**59,171**	**29,105**	**49.2%**	**19,127**	**32.3%**

* Graduates from Edison schools are not available.

**Note: Total includes unknown county

***Students with campus-reported scores or College Board survey data are included. Previous reports only counted students with survey data.

Table 2

Percent of Core and Non-Core Curriculum Students Needing Remediation in College
(By Jurisdiction)

	Math		English		Reading	
	Core	Non-Core	Core	Non-Core	Core	Non-Core
Anne Arundel	33%	46%	4%	12%	5%	11%
Baltimore City	41%	65%	15%	39%	15%	35%
Baltimore	34%	48%	13%	23%	14%	22%
Frederick	31%	40%	5%	11%	10%	20%
Lower Shore	44%	48%	18%	28%	9%	12%
Somerset	52%	50%	19%	38%	13%	23%
Wicomico	41%	57%	16%	31%	10%	16%
Worcester	48%	39%	23%	23%	7%	7%
Mid Maryland	28%	36%	11%	15%	13%	16%
Carroll	37%	40%	18%	18%	17%	18%
Howard	22%	33%	8%	12%	10%	15%
Montgomery	29%	41%	12%	17%	12%	17%
Prince George's	49%	60%	17%	30%	23%	35%
Southern Maryland	22%	31%	10%	14%	7%	10%
Calvert	19%	34%	9%	12%	5%	7%
Charles	29%	34%	12%	15%	10%	12%
St. Mary's	18%	21%	9%	16%	4%	9%
Susquehanna	39%	48%	17%	25%	17%	25%
Cecil	44%	46%	13%	13%	16%	15%
Harford	38%	49%	18%	29%	17%	29%
Upper Shore	28%	41%	16%	28%	15%	25%
Caroline	29%	43%	18%	31%	15%	29%
Dorchester	39%	43%	29%	40%	29%	35%
Kent	48%	63%	22%	50%	26%	38%
Queen Anne's	19%	36%	11%	19%	10%	17%
Talbot	27%	40%	14%	19%	14%	17%
Western Maryland	35%	40%	16%	22%	14%	16%
Allegany	29%	35%	12%	17%	9%	12%
Garrett	38%	52%	9%	36%	2%	8%
Washington	37%	41%	21%	22%	20%	19%
ALL MARYLAND	**35%**	**47%**	**12%**	**23%**	**13%**	**22%**

Table 3
Performance in First College Math Course of
Core and Non-Core Curriculum Students
(By Jurisdiction)

	% With 'C' or Better		Average Grade	
	Core	Non-Core	Core	Non-Core
Anne Arundel	83%	78%	2.61	2.41
Baltimore City	81%	65%	2.51	1.91
Baltimore	80%	82%	2.58	2.54
Frederick	83%	82%	2.67	2.64
Lower Shore	78%	77%	2.56	2.46
Somerset	88%	80%	3.00	2.53
Wicomico	81%	65%	2.65	2.11
Worcester	67%	82%	2.12	2.62
Mid Maryland	81%	77%	2.54	2.45
Carroll	86%	81%	2.74	2.58
Howard	78%	75%	2.44	2.38
Montgomery	81%	80%	2.61	2.56
Prince George's	70%	70%	2.15	2.19
Southern Maryland	81%	78%	2.48	2.34
Calvert	83%	87%	2.57	2.63
Charles	74%	70%	2.23	2.03
St. Mary's	87%	79%	2.63	2.48
Susquehanna	84%	77%	2.64	2.54
Cecil	81%	55%	2.51	1.93
Harford	85%	85%	2.67	2.77
Upper Shore	81%	83%	2.59	2.65
Caroline	73%	92%	2.52	2.69
Dorchester	90%	80%	2.90	2.70
Kent	77%	50%	2.69	2.00
Queen Anne's	85%	84%	2.63	2.54
Talbot	81%	79%	2.50	2.75
Western Maryland	86%	88%	2.70	2.70
Allegany	86%	86%	2.64	2.32
Garrett	90%	93%	2.83	2.64
Washington	84%	88%	2.70	2.84
ALL MARYLAND	**80%**	**77%**	**2.53**	**2.42**

Table 4
Performance in First College English Course of
Core and Non-Core Curriculum Students
(By Jurisdiction)

	% With 'C' or Better		Average Grade	
	Core	Non-Core	Core	Non-Core
Anne Arundel	88%	86%	2.76	2.64
Baltimore City	87%	76%	2.75	2.28
Baltimore	88%	84%	2.80	2.58
Frederick	88%	83%	2.79	2.63
Lower Shore	83%	80%	2.56	2.44
Somerset	88%	95%	2.72	2.84
Wicomico	84%	78%	2.74	2.30
Worcester	80%	78%	2.31	2.45
Mid Maryland	88%	87%	2.85	2.72
Carroll	87%	83%	2.76	2.57
Howard	88%	89%	2.89	2.82
Montgomery	88%	83%	2.79	2.61
Prince George's	83%	81%	2.54	2.40
Southern Maryland	87%	86%	2.72	2.58
Calvert	89%	89%	2.76	2.67
Charles	82%	83%	2.54	2.48
St. Mary's	90%	84%	2.89	2.64
Susquehanna	87%	87%	2.77	2.72
Cecil	78%	78%	2.33	2.18
Harford	90%	91%	2.89	2.94
Upper Shore	89%	86%	2.72	2.59
Caroline	82%	97%	2.36	3.06
Dorchester	94%	88%	2.67	2.67
Kent	89%	67%	2.89	1.83
Queen Anne's	90%	80%	2.89	2.41
Talbot	91%	85%	2.70	2.45
Western Maryland	88%	87%	2.73	2.83
Allegany	90%	86%	2.73	2.63
Garrett	93%	84%	2.67	2.58
Washington	86%	88%	2.74	2.94
ALL MARYLAND	**87%**	**83%**	**2.74**	**2.56**

Table 5
Cumulative Grade Point Average After First Year of
Core and Non-Core Curriculum Students
(By Jurisdiction)

	Core	Non-Core
Anne Arundel	2.66	2.53
Baltimore City	2.52	2.03
Baltimore	2.58	2.43
Frederick	2.69	2.59
Lower Shore	2.48	2.35
Somerset	2.76	2.16
Wicomico	2.56	2.31
Worcester	2.19	2.41
Mid Maryland	2.78	2.64
Carroll	2.81	2.72
Howard	2.76	2.60
Montgomery	2.70	2.57
Prince George's	2.47	2.42
Southern Maryland	2.58	2.38
Calvert	2.60	2.54
Charles	2.36	2.16
St. Mary's	2.81	2.53
Susquehanna	2.68	2.59
Cecil	2.57	2.57
Harford	2.72	2.60
Upper Shore	2.62	2.50
Caroline	2.52	2.47
Dorchester	2.58	2.61
Kent	2.58	1.70
Queen Anne's	2.70	2.57
Talbot	2.60	2.41
Western Maryland	2.69	2.69
Allegany	2.72	2.58
Garrett	2.82	2.53
Washington	2.69	2.74
ALL MARYLAND	**2.63**	**2.44**

Table 6

Percent of Core and Non-Core Curriculum Students Needing Remediation in College
(By Institution)

	Math		English		Reading	
	Core	Non-Core	Core	Non-Core	Core	Non-Core
Community Colleges						
Allegany	59%	58%	33%	33%	24%	32%
Anne Arundel	54%	63%	5%	13%	6%	12%
Baltimore City	85%	95%	71%	81%	44%	64%
Baltimore County	75%	84%	31%	51%	32%	50%
Carroll	70%	65%	41%	36%	33%	31%
Cecil	67%	54%	19%	18%	25%	21%
Chesapeake	45%	55%	32%	46%	35%	44%
Frederick	53%	60%	10%	16%	21%	33%
Garrett	56%	78%	20%	56%	9%	19%
Hagerstown	52%	54%	32%	34%	30%	28%
Harford	68%	76%	34%	48%	30%	46%
Howard	58%	67%	23%	30%	23%	30%
Montgomery	59%	64%	27%	30%	24%	28%
Prince George's	80%	82%	41%	51%	61%	70%
Southern Maryland	24%	36%	16%	22%	8%	13%
Wor-Wic	78%	76%	31%	47%	12%	19%
All Community Colleges	**61%**	**69%**	**26%**	**37%**	**25%**	**36%**
University System of Maryland						
Bowie	61%	61%	13%	22%	20%	25%
Coppin	75%	77%	n/a	n/a	n/a	n/a
Frostburg	23%	25%	n/a	n/a	n/a	n/a
Towson	20%	32%	n/a	n/a	1%	1%
UMBC	2%	2%	<1%	0%	14%	12%
UMCP	3%	5%	0%	0%	n/a	n/a
UMES	62%	62%	20%	16%	n/a	n/a
All University System of MD	**15%**	**25%**	**1%**	**3%**	**3%**	**4%**
Morgan	16%	18%	16%	18%	16%	18%
All Public Four-Year	**15%**	**24%**	**2%**	**5%**	**4%**	**5%**
Independents						
Capitol College	29%	60%	0%	70%	n/a	n/a
Hood	32%	29%	13%	18%	n/a	n/a
Loyola	3%	3%	n/a	n/a	n/a	n/a
MD Institute College of Art	n/a	n/a	6%	16%	n/a	n/a
Mount St. Mary's	35%	44%	n/a	n/a	n/a	n/a
Stevenson	n/a	n/a	n/a	n/a	22%	23%
Washington Adventist	20%	15%	n/a	n/a	n/a	n/a
All Independents	**8%**	**9%**	**2%**	**5%**	**6%**	**6%**
All Campuses	**35%**	**47%**	**12%**	**23%**	**13%**	**22%**

Note: Most four-year institutions do not assess for remediation in all three subjects. Denoted as "n/a."

Table 7
Performance in First College Math Course of
Core and Non-Core Curriculum Students
(By Institution)

	% with 'C' or Better		Average Grade	
	Core	Non-Core	Core	Non-Core
Community Colleges				
Allegany	73%	87%	2.17	2.63
Anne Arundel	81%	78%	2.56	2.34
Baltimore City	60%	53%	2.40	1.47
Baltimore County	72%	75%	2.27	2.32
Carroll	80%	77%	2.47	2.35
Cecil	76%	50%	2.37	1.73
Chesapeake	85%	82%	2.85	2.88
Frederick	85%	77%	2.73	2.51
Garrett	97%	86%	2.90	2.36
Hagerstown	81%	82%	2.43	2.71
Harford	81%	88%	2.60	2.77
Howard	58%	51%	1.74	1.57
Montgomery	73%	78%	2.40	2.44
Prince George's	53%	63%	1.68	2.07
Southern Maryland	78%	80%	2.34	2.41
Wor-Wic	81%	68%	2.81	2.26
All Community Colleges	**76%**	**75%**	**2.39**	**2.36**
University System of Maryland				
Bowie	67%	65%	2.08	2.01
Coppin	88%	100%	2.63	2.75
Frostburg	76%	72%	2.19	1.97
Salisbury	76%	73%	2.40	2.27
Towson	89%	87%	2.81	2.82
UB	63%	100%	2.00	2.00
UMBC	74%	81%	2.37	2.53
UMCP	86%	87%	2.78	2.83
UMES	61%	53%	1.79	1.53
All University System of MD	**81%**	**79%**	**2.57**	**2.49**
Morgan	70%	65%	2.03	1.81
St. Mary's	96%	93%	3.16	3.02
All Public Four-Year	**81%**	**78%**	**2.55**	**2.42**
Independents				
Capitol College	86%	67%	2.71	2.11
Goucher	100%	50%	2.75	2.00
Hood	89%	84%	2.91	2.76
Loyola	95%	100%	3.30	3.45
McDaniel	88%	81%	2.88	2.50
Mount St. Mary's	90%	96%	2.83	3.18
Notre Dame	78%	79%	2.52	2.43
St. John's	100%	100%	3.00	4.00
Stevenson	88%	93%	2.99	2.93
Washington Adventist	100%	100%	2.67	3.29
Washington College	88%	73%	3.12	2.64
All Independents	**90%**	**87%**	**2.95**	**2.86**
All Campuses	**80%**	**77%**	**2.53**	**2.42**

Notes: Johns Hopkins does not provide students with letter grades in their first semester, so average grades are not available for first math course. Maryland Institute College of Art does not have math courses.

Table 8
Performance in First College English Course of
Core and Non-Core Curriculum Students
(By Institution)

	% with 'C' or Better		Average Grade	
	Core	Non-Core	Core	Non-Core
Community Colleges				
Allegany	86%	75%	2.59	2.33
Anne Arundel	82%	78%	2.55	2.43
Baltimore City	86%	66%	2.68	1.80
Baltimore County	78%	76%	2.44	2.26
Carroll	77%	71%	2.30	2.13
Cecil	78%	76%	2.31	2.10
Chesapeake	85%	83%	2.50	2.27
Frederick	81%	76%	2.48	2.32
Garrett	89%	74%	2.43	2.21
Hagerstown	82%	82%	2.64	2.79
Harford	84%	86%	2.60	2.75
Howard	77%	80%	2.48	2.41
Montgomery	82%	80%	2.50	2.49
Prince George's	64%	72%	1.96	2.09
Southern Maryland	83%	80%	2.65	2.48
Wor-Wic	77%	67%	2.30	2.03
All Community Colleges	**80%**	**77%**	**2.48**	**2.36**
University System of Maryland				
Bowie	69%	71%	1.95	1.97
Coppin	81%	76%	2.03	1.86
Frostburg	82%	80%	2.31	2.27
Salisbury	92%	94%	2.75	2.71
Towson	95%	94%	3.19	3.10
UB	92%	100%	3.08	2.86
UMBC	92%	91%	2.94	2.92
UMCP	95%	94%	3.13	3.07
UMES	90%	86%	2.80	2.62
All University System of MD	**91%**	**88%**	**2.89**	**2.74**
Morgan	82%	77%	2.50	2.34
St. Mary's	97%	93%	3.45	3.19
All Public Four-Year	**90%**	**87%**	**2.89**	**2.70**
Independents				
Capitol College	86%	78%	2.57	2.78
Goucher	100%	87%	2.98	2.65
Hood	96%	98%	3.24	3.14
Loyola	100%	94%	3.10	3.21
MD Institute College of Art	94%	94%	3.24	3.39
McDaniel	92%	92%	2.93	2.73
Mount St. Mary's	97%	100%	3.03	3.16
Notre Dame	75%	89%	2.25	2.61
St. John's	100%	100%	3.00	3.33
Stevenson	97%	93%	3.20	2.86
Washington Adventist	92%	85%	2.62	2.62
Washington College	97%	95%	3.16	2.88
All Independents	**96%**	**93%**	**3.09**	**2.93**
All Campuses	**87%**	**83%**	**2.74**	**2.56**

Notes: Johns Hopkins does not provide students with letter grades in their first semester, so average grades are not available for first English course.

Table 9
Cumulative Grade Point Average After First Year of
Core and Non-Core Curriculum Students
(By Institution)

	Core	Non Core
Community Colleges		
Allegany	2.34	2.30
Anne Arundel	2.49	2.35
Baltimore City	2.30	1.89
Baltimore County	2.19	2.02
Carroll	2.61	2.57
Cecil	2.48	2.47
Chesapeake	2.34	2.29
Frederick	2.43	2.38
Garrett	2.63	1.99
Hagerstown	2.52	2.56
Harford	2.47	2.30
Howard	2.37	2.09
Montgomery	2.43	2.39
Prince George's	2.40	2.42
Southern Maryland	2.44	2.19
Wor-Wic	2.18	1.97
All Community Colleges	**2.40**	**2.25**
University System of Maryland		
Bowie	2.23	2.28
Coppin	2.20	2.11
Frostburg	2.47	2.38
Salisbury	2.74	2.67
Towson	2.97	2.86
UMBC	2.66	2.61
UMCP	3.06	3.09
UMES	2.48	2.25
All University System of MD	**2.81**	**2.69**
Morgan	2.11	2.01
St. Mary's	3.27	3.06
All Public Four-Year	**2.78**	**2.62**
Independents		
Capitol College	2.88	2.32
Goucher	2.95	2.46
Hood	2.86	2.95
Johns Hopkins	3.17	3.19
Loyola	3.16	3.18
MD Institute College of Art	3.30	3.15
McDaniel	2.86	2.75
Mount St. Mary's	2.73	2.83
Notre Dame	2.89	2.67
St. Johns	2.95	3.46
Stevenson	2.89	2.64
Washington Adventist	2.63	2.95
Washington College	3.01	2.90
All Independents	**2.93**	**2.83**
All Campuses	**2.63**	**2.44**

Note: The grade point averages for Johns Hopkins are for the second semester only. McDaniel uses a grading scale of 4.3, instead of 4.0.

Table 10
Percent of Core and Non-Core Curriculum Students
Needing Remediation in College
(By Gender and Race)

	Math		English		Reading	
	Core	Non-Core	Core	Non-Core	Core	Non-Core
Gender						
Men	31%	43%	13%	22%	13%	20%
Women	38%	51%	12%	23%	14%	24%
Race						
African-American	54%	64%	24%	37%	26%	36%
Asian	17%	27%	9%	16%	12%	16%
Hispanic	44%	55%	17%	23%	17%	24%
White	28%	35%	8%	13%	8%	12%
Other	41%	53%	13%	21%	14%	23%

Table 11
Performance in First Math Course of
Core and Non-Core Curriculum Students
(By Gender and Race)

	% with 'C' or Better		Average Grade	
	Core	Non-Core	Core	Non-Core
Gender				
Men	76%	74%	2.37	2.31
Women	84%	81%	2.68	2.54
Race				
African-American	70%	66%	2.11	1.97
Asian	83%	84%	2.66	2.70
Hispanic	78%	74%	2.41	2.32
White	83%	82%	2.66	2.63
Other	81%	74%	2.53	2.40

Table 12

Performance in First English Course of
Core and Non-Core Curriculum Students
(By Gender and Race)

	% with 'C' or Better		Average Grade	
	Core	Non-Core	Core	Non-Core
Gender				
Men	84%	79%	2.56	2.38
Women	90%	86%	2.89	2.72
Race				
African-American	79%	77%	2.37	2.26
Asian	91%	90%	2.90	2.82
Hispanic	85%	83%	2.67	2.54
White	89%	86%	2.87	2.72
Other	88%	85%	2.84	2.63

Table 13

Cumulative Grade Point Average After First Year of
Core and Non-Core Curriculum Students
(By Gender and Race)

	Core	Non-Core
Gender		
Men	2.48	2.32
Women	2.75	2.55
Race		
African-American	2.23	2.09
Asian	2.83	2.77
Hispanic	2.51	2.51
White	2.77	2.65
Other	2.65	2.42

Table 14
Trends in Core and Non Core Curriculum Students Needing Math Remediation in College
(By Major Jurisdiction)

	1997-1998		1998-1999		1999-2000		2000-2001		2002-2003		2004-2005	
	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core
Anne Arundel	22%	33%	22%	31%	19%	28%	24%	31%	31%	41%	32%	39%
Baltimore City	27%	54%	39%	63%	37%	53%	31%	54%	35%	59%	37%	60%
Baltimore	21%	26%	22%	35%	18%	22%	19%	22%	18%	21%	18%	20%
Frederick	30%	42%	32%	47%	24%	42%	26%	43%	26%	38%	26%	38%
Lower Shore	22%	30%	26%	40%	26%	41%	29%	41%	37%	55%	39%	45%
Mid Maryland	20%	31%	24%	34%	25%	34%	26%	34%	23%	35%	25%	36%
Montgomery	16%	31%	25%	39%	27%	41%	25%	35%	26%	38%	30%	41%
Prince George's	30%	40%	31%	41%	34%	45%	38%	47%	43%	51%	44%	54%
Southern Maryland	11%	16%	14%	21%	6%	14%	10%	17%	13%	20%	15%	18%
Susquehanna	28%	39%	28%	38%	33%	48%	34%	45%	31%	42%	40%	49%
Upper Shore	24%	37%	19%	43%	32%	45%	38%	45%	35%	47%	27%	47%
Western Maryland	30%	48%	41%	60%	34%	45%	37%	47%	27%	37%	31%	46%
ALL MARYLAND	**23%**	**36%**	**27%**	**41%**	**26%**	**38%**	**27%**	**38%**	**28%**	**40%**	**30%**	**41%**

	2006-2007		2008-2009	
	Core	Non-Core	Core	Non-Core
Anne Arundel	31%	44%	33%	46%
Baltimore City	37%	69%	41%	65%
Baltimore	32%	45%	34%	48%
Frederick	24%	37%	31%	40%
Lower Shore	38%	51%	44%	48%
Mid Maryland	27%	42%	28%	36%
Montgomery	30%	42%	29%	41%
Prince George's	42%	55%	49%	60%
Southern Maryland	20%	32%	22%	31%
Susquehanna	40%	53%	39%	48%
Upper Shore	30%	46%	28%	41%
Western Maryland	28%	28%	35%	40%
ALL MARYLAND	**32%**	**49%**	**35%**	**47%**

Table 15

Trends in Core and Non-Core Curriculum Students Needing English Remediation in College (By Jurisdiction)

	1997-1998		1998-1999		1999-2000		2000-2001		2002-2003		2004-2005	
	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core
Anne Arundel	10%	16%	9%	15%	7%	15%	11%	16%	5%	5%	3%	6%
Baltimore City	18%	41%	28%	50%	29%	53%	25%	50%	20%	44%	19%	40%
Baltimore	12%	22%	19%	32%	17%	24%	17%	23%	12%	18%	12%	16%
Frederick	17%	21%	13%	20%	11%	24%	11%	17%	9%	15%	7%	13%
Lower Shore	16%	25%	19%	27%	10%	21%	13%	21%	14%	28%	16%	24%
Mid Maryland	9%	21%	13%	22%	11%	18%	8%	15%	8%	14%	5%	13%
Montgomery	5%	12%	14%	22%	15%	25%	12%	18%	19%	27%	13%	20%
Prince George's	19%	28%	20%	32%	17%	27%	22%	30%	21%	25%	18%	26%
Southern Maryland	9%	17%	8%	16%	10%	14%	10%	20%	10%	17%	8%	12%
Susquehanna	9%	17%	11%	21%	14%	20%	11%	22%	13%	20%	14%	21%
Upper Shore	7%	15%	11%	21%	11%	18%	14%	27%	11%	24%	16%	24%
Western Maryland	16%	28%	20%	41%	18%	20%	19%	26%	21%	32%	19%	33%
ALL MARYLAND	**12%**	**22%**	**16%**	**28%**	**15%**	**25%**	**15%**	**25%**	**14%**	**22%**	**12%**	**21%**

	2006-2007		2008-2009	
	Core	Non-Core	Core	Non-Core
Anne Arundel	4%	5%	4%	12%
Baltimore City	10%	36%	15%	39%
Baltimore	11%	18%	13%	23%
Frederick	7%	12%	5%	11%
Lower Shore	16%	22%	18%	28%
Mid Maryland	9%	16%	11%	15%
Montgomery	12%	23%	12%	17%
Prince George's	15%	22%	17%	30%
Southern Maryland	11%	23%	10%	14%
Susquehanna	12%	20%	17%	25%
Upper Shore	15%	28%	16%	28%
Western Maryland	18%	26%	16%	22%
ALL MARYLAND	**11%**	**22%**	**12%**	**23%**

Table 16

Trends in Core and Non-Core Curriculum Students Needing Reading Remediation in College (By Major Jurisdiction)

	1997-1998		1998-1999		1999-2000		2000-2001		2002-2003		2004-2005	
	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core
Anne Arundel	15%	21%	15%	18%	9%	15%	8%	11%	6%	5%	6%	11%
Baltimore City	20%	44%	28%	53%	26%	53%	30%	55%	28%	48%	25%	46%
Baltimore	14%	23%	19%	29%	15%	21%	18%	23%	13%	19%	14%	20%
Frederick	10%	9%	14%	18%	9%	22%	11%	18%	10%	13%	10%	16%
Lower Shore	9%	20%	17%	28%	11%	20%	13%	16%	14%	19%	10%	16%
Mid Maryland	10%	16%	11%	18%	9%	15%	15%	21%	10%	16%	9%	18%
Montgomery	12%	20%	12%	20%	11%	21%	10%	16%	13%	19%	11%	17%
Prince George's	18%	29%	19%	32%	19%	33%	27%	36%	31%	37%	31%	43%
Southern Maryland	25%	39%	22%	37%	7%	10%	11%	22%	9%	13%	8%	11%
Susquehanna	6%	7%	6%	10%	7%	13%	6%	12%	5%	11%	16%	21%
Upper Shore	7%	13%	16%	25%	11%	17%	15%	26%	13%	26%	14%	30%
Western Maryland	11%	18%	15%	25%	11%	16%	10%	14%	9%	14%	11%	20%
ALL MARYLAND	**14%**	**24%**	**16%**	**28%**	**13%**	**24%**	**16%**	**25%**	**15%**	**21%**	**15%**	**24%**

	2006-2007		2008-2009	
	Core	Non-Core	Core	Non-Core
Anne Arundel	8%	10%	5%	11%
Baltimore City	16%	40%	15%	35%
Baltimore	15%	22%	14%	22%
Frederick	12%	17%	10%	20%
Lower Shore	11%	15%	9%	12%
Mid Maryland	11%	22%	13%	16%
Montgomery	11%	20%	12%	17%
Prince George's	24%	36%	23%	35%
Southern Maryland	8%	13%	7%	10%
Susquehanna	15%	21%	17%	25%
Upper Shore	17%	32%	15%	25%
Western Maryland	10%	17%	14%	16%
ALL MARYLAND	**13%**	**25%**	**13%**	**22%**

Table 17

Trends in Percentage of Students Who Earned "C" or Better in First College Math Course Among Core and Non Core Curriculum Students
(By Major Jurisdiction)

	1997-1998		1998-1999		1999-2000		2000-2001		2002-2003		2004-2005	
	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core
Anne Arundel	81%	74%	78%	75%	80%	71%	82%	78%	85%	79%	82%	80%
Baltimore City	79%	73%	77%	75%	77%	75%	77%	73%	80%	65%	77%	71%
Baltimore	80%	72%	80%	80%	80%	78%	79%	81%	84%	78%	81%	84%
Frederick	80%	84%	82%	78%	84%	84%	83%	78%	88%	83%	83%	81%
Lower Shore	79%	91%	78%	73%	77%	77%	82%	89%	84%	77%	81%	74%
Mid Maryland	81%	74%	83%	80%	83%	77%	83%	79%	82%	81%	82%	78%
Montgomery	78%	70%	78%	72%	76%	67%	82%	78%	81%	78%	80%	79%
Prince George's	73%	68%	76%	70%	70%	62%	78%	74%	75%	72%	76%	71%
Southern Maryland	77%	74%	80%	75%	79%	72%	78%	74%	84%	80%	78%	78%
Susquehanna	82%	84%	82%	77%	83%	77%	82%	77%	84%	76%	84%	85%
Upper Shore	86%	80%	86%	77%	72%	69%	82%	84%	80%	80%	86%	73%
Western Maryland	84%	82%	83%	79%	87%	87%	89%	87%	89%	87%	82%	84%
ALL MARYLAND	**79%**	**74%**	**79%**	**75%**	**78%**	**71%**	**81%**	**78%**	**82%**	**78%**	**80%**	**78%**

	2006-2007		2008-2009	
	Core	Non-Core	Core	Non-Core
Anne Arundel	80%	81%	83%	78%
Baltimore City	81%	72%	81%	65%
Baltimore	84%	81%	80%	82%
Frederick	86%	80%	83%	82%
Lower Shore	77%	81%	78%	77%
Mid Maryland	83%	76%	81%	77%
Montgomery	81%	81%	81%	80%
Prince George's	73%	76%	70%	70%
Southern Maryland	81%	75%	81%	78%
Susquehanna	80%	75%	84%	77%
Upper Shore	87%	82%	81%	83%
Western Maryland	77%	78%	86%	88%
ALL MARYLAND	**81%**	**78%**	**80%**	**77%**

Table 18

Trends in Percentage of Students Who Earned "C" or Better in First College English Course Among Core and Non Core Curriculum Students
(By Major Jurisdiction)

	1997-1998		1998-1999		1999-2000		2000-2001		2002-2003		2004-2005	
	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core
Anne Arundel	87%	87%	88%	88%	90%	91%	90%	90%	88%	87%	89%	85%
Baltimore City	86%	77%	85%	84%	84%	78%	87%	79%	87%	80%	85%	79%
Baltimore	88%	86%	90%	86%	90%	89%	89%	87%	90%	87%	89%	86%
Frederick	91%	85%	86%	87%	89%	91%	90%	90%	91%	85%	91%	83%
Lower Shore	88%	83%	85%	70%	92%	84%	87%	80%	89%	82%	85%	78%
Mid Maryland	89%	85%	89%	81%	90%	89%	89%	84%	91%	87%	90%	85%
Montgomery	84%	77%	83%	77%	86%	82%	87%	84%	88%	84%	85%	82%
Prince George's	85%	80%	85%	81%	85%	81%	89%	86%	87%	86%	85%	80%
Southern Maryland	85%	86%	89%	87%	89%	89%	89%	79%	91%	82%	88%	84%
Susquehanna	89%	87%	90%	86%	91%	82%	89%	86%	91%	87%	86%	84%
Upper Shore	90%	81%	91%	78%	88%	84%	85%	80%	95%	88%	87%	81%
Western Maryland	92%	90%	93%	86%	90%	87%	93%	84%	93%	90%	93%	85%
ALL MARYLAND	**87%**	**83%**	**87%**	**83%**	**88%**	**85%**	**88%**	**85%**	**89%**	**85%**	**87%**	**83%**

	2006-2007		2008-2009	
	Core	Non-Core	Core	Non-Core
Anne Arundel	87%	83%	88%	86%
Baltimore City	84%	75%	87%	76%
Baltimore	88%	86%	88%	84%
Frederick	87%	86%	88%	83%
Lower Shore	86%	77%	83%	80%
Mid Maryland	87%	85%	88%	87%
Montgomery	87%	83%	88%	83%
Prince George's	81%	81%	83%	81%
Southern Maryland	85%	85%	87%	86%
Susquehanna	89%	82%	87%	87%
Upper Shore	86%	83%	89%	86%
Western Maryland	86%	80%	88%	87%
ALL MARYLAND	**86%**	**82%**	**87%**	**83%**

Table 19

Trends in Cumulative Grade Point Average of Core and Non Core Curriculum Students After First Year (By Major Jurisdiction)

	1997-1998		1998-1999		1999-2000		2000-2001		2002-2003		2004-2005	
	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core
Anne Arundel	2.6	2.3	2.5	2.4	2.6	2.4	2.7	2.6	2.8	2.6	2.7	2.6
Baltimore City	2.4	2.1	2.4	2.1	2.3	2.1	2.3	2.0	2.4	2.1	2.4	2.1
Baltimore	2.5	2.4	2.5	2.4	2.5	2.4	2.6	2.4	2.6	2.5	2.6	2.5
Frederick	2.7	2.7	2.7	2.4	2.8	2.4	2.7	2.5	2.8	2.5	2.7	2.5
Lower Shore	2.6	2.3	2.4	2.2	2.5	2.3	2.5	2.3	2.6	2.3	2.5	2.4
Mid Maryland	2.6	2.4	2.6	2.4	2.7	2.5	2.7	2.5	2.8	2.5	2.8	2.5
Montgomery	2.6	2.2	2.6	2.3	2.6	2.3	2.6	2.4	2.7	2.5	2.7	2.5
Prince George's	2.3	2.2	2.4	2.2	2.3	2.2	2.4	2.1	2.4	2.2	2.4	2.2
Southern Maryland	2.6	2.3	2.6	2.4	2.7	2.4	2.7	2.4	2.7	2.5	2.7	2.4
Susquehanna	2.5	2.4	2.6	2.4	2.6	2.3	2.7	2.4	2.7	2.4	2.6	2.4
Upper Shore	2.6	2.3	2.5	2.2	2.5	2.3	2.4	2.3	2.6	2.4	2.6	2.3
Western Maryland	2.6	2.4	2.8	2.4	2.7	2.5	2.8	2.5	2.8	2.6	2.8	2.6
ALL MARYLAND	**2.5**	**2.3**	**2.5**	**2.3**	**2.6**	**2.3**	**2.6**	**2.4**	**2.7**	**2.4**	**2.6**	**2.4**

	2006-2007		2008-2009	
	Core	Non-Core	Core	Non-Core
Anne Arundel	2.70	2.52	2.66	2.53
Baltimore City	2.44	2.01	2.52	2.03
Baltimore	2.64	2.46	2.58	2.43
Frederick	2.69	2.52	2.69	2.59
Lower Shore	2.47	2.36	2.48	2.35
Mid Maryland	2.77	2.54	2.78	2.64
Montgomery	2.70	2.50	2.70	2.57
Prince George's	2.27	2.17	2.47	2.42
Southern Maryland	2.59	2.44	2.58	2.38
Susquehanna	2.64	2.42	2.68	2.59
Upper Shore	2.64	2.43	2.62	2.50
Western Maryland	2.69	2.55	2.69	2.69
ALL MARYLAND	**2.61**	**2.37**	**2.63**	**2.44**

Table 20

Trends in Core and Non-Core Curriculum Students Needing Math Remediation in College (By Higher Education Segment)

	1997-1998		1998-1999		1999-2000		2000-2001		2002-2003		2004-2005		2006-2007		2008-2009	
	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core
Community Colleges	38%	49%	43%	55%	46%	56%	46%	54%	49%	59%	46%	58%	56%	69%	61%	69%
Public Four-Year	11%	18%	13%	21%	13%	17%	12%	17%	14%	16%	17%	22%	15%	28%	15%	24%
Independent	5%	8%	8%	10%	7%	8%	3%	4%	4%	7%	10%	11%	6%	9%	8%	9%
ALL CAMPUSES	**23%**	**36%**	**27%**	**41%**	**26%**	**38%**	**27%**	**38%**	**28%**	**40%**	**30%**	**41%**	**32%**	**49%**	**35%**	**47%**

Table 21

Trends in Core and Non Core Curriculum Students Needing English Remediation in College (By Higher Education Segment)

	1997-1998		1998-1999		1999-2000		2000-2001		2002-2003		2004-2005		2006-2007		2008-2009	
	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core
Community Colleges	21%	32%	29%	41%	27%	38%	25%	36%	25%	34%	21%	32%	21%	35%	26%	37%
Public Four-Year	5%	9%	7%	11%	7%	10%	8%	9%	7%	8%	5%	7%	3%	7%	2%	5%
Independent	1%	1%	1%	3%	1%	2%	2%	3%	3%	4%	3%	5%	1%	2%	2%	5%
ALL CAMPUSES	**12%**	**22%**	**16%**	**28%**	**15%**	**25%**	**15%**	**25%**	**14%**	**22%**	**12%**	**21%**	**11%**	**23%**	**12%**	**23%**

Table 22

Trends in Core and Non Core Curriculum Students Needing Reading Remediation in College (By Higher Education Segement)

	1997-1998		1998-1999		1999-2000		2000-2001		2002-2003		2004-2005		2006-2007		2008-2009	
	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core
Community Colleges	25%	35%	27%	38%	21%	35%	25%	34%	23%	31%	21%	34%	22%	35%	25%	36%
Public Four-Year	6%	9%	8%	13%	7%	11%	9%	11%	9%	11%	10%	12%	7%	13%	4%	5%
Independent	1%	2%	6%	9%	6%	5%	4%	7%	*	*	4%	7%	6%	6%	6%	6%
ALL CAMPUSES	**14%**	**24%**	**16%**	**28%**	**13%**	**24%**	**16%**	**25%**	**15%**	**21%**	**15%**	**24%**	**7%**	**12%**	**13%**	**22%**

* Less than 0.5 percent

Table 23

Trends in Percentage Who Earned "C" or Better in First College Math Course Among Core and Non-Core Curriculum Students
(By Higher Education Segment)

	1997-1998		1998-1999		1999-2000		2000-2001		2002-2003		2004-2005		2006-2007		2008-2009	
	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core
Community Colleges	72%	68%	72%	70%	72%	64%	75%	74%	79%	74%	77%	76%	75%	71%	76%	75%
Public Four-Year	81%	77%	83%	77%	80%	75%	83%	80%	83%	79%	81%	79%	82%	80%	81%	79%
Independent	91%	87%	90%	88%	90%	85%	85%	86%	91%	88%	89%	86%	89%	89%	90%	87%
ALL CAMPUSES	**79%**	**74%**	**79%**	**75%**	**78%**	**71%**	**81%**	**78%**	**82%**	**78%**	**80%**	**78%**	**81%**	**78%**	**80%**	**77%**

Table 24

Trends in Percentage Who Earned "C" or Better in First College English Course Among Core and Non-Core Curriculum Students
(By Higher Education Segment)

	1997-1998		1998-1999		1999-2000		2000-2001		2002-2003		2004-2005		2006-2007		2008-2009	
	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core
Community Colleges	80%	76%	79%	75%	81%	79%	82%	79%	84%	79%	82%	77%	79%	76%	80%	77%
Public Four-Year	91%	89%	92%	90%	91%	90%	92%	90%	92%	90%	91%	88%	90%	87%	90%	87%
Independent	95%	91%	95%	95%	96%	95%	95%	93%	95%	93%	94%	91%	95%	93%	96%	93%
ALL CAMPUSES	**87%**	**83%**	**87%**	**83%**	**88%**	**85%**	**88%**	**85%**	**89%**	**85%**	**87%**	**83%**	**86%**	**82%**	**87%**	**83%**

Table 25

Trends in Cumulative Grade Point Average of Core and Non-Core Curriculum Students After First Year (By Higher Education Segment)

	1997-1998		1998-1999		1999-2000		2000-2001		2002-2003		2004-2005		2006-2007		2008-2009	
	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core
Community Colleges	2.3	2.1	2.3	2.1	2.3	2.1	2.4	2.2	2.5	2.2	2.4	2.2	2.38	2.19	2.40	2.25
Public Four-Year	2.7	2.5	2.7	2.5	2.7	2.6	2.7	2.6	2.8	2.6	2.7	2.6	2.64	2.49	2.78	2.62
Independent	2.9	2.7	2.9	2.8	2.9	2.8	2.9	2.8	3.0	2.8	2.9	2.8	2.92	2.77	2.93	2.83
ALL CAMPUSES	**2.5**	**2.3**	**2.5**	**2.3**	**2.6**	**2.3**	**2.6**	**2.4**	**2.7**	**2.4**	**2.6**	**2.4**	**2.61**	**2.40**	**2.63**	**2.44**

Table 26

Trends in Core and Non-Core Curriculum Students Needing Math Remediation in College (By Gender and Race)

	1998-1999		1999-2000		2000-2001		2002-2003		2004-2005		2006-2007		2008-2009	
	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core
Gender														
Men	23%	36%	23%	33%	24%	34%	24%	37%	24%	34%	28%	44%	31%	43%
Women	29%	46%	29%	43%	29%	41%	31%	43%	34%	47%	35%	53%	38%	51%
Race														
African-American	44%	61%	41%	55%	43%	56%	48%	62%	50%	63%	49%	66%	54%	64%
Asian	14%	24%	16%	21%	14%	20%	17%	18%	17%	23%	15%	24%	17%	27%
Hispanic											40%	61%	44%	55%
White	22%	33%	22%	31%	23%	31%	22%	32%	23%	32%	28%	39%	28%	35%
Other	30%	42%	33%	48%	32%	38%	40%	50%	38%	52%	36%	45%	41%	53%

Table 27

Trends in Core and Non-Core Curriculum Students Needing English Remediation in College (By Gender and Race)

	1998-1999		1999-2000		2000-2001		2002-2003		2004-2005		2006-2007		2008-2009	
	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core
Gender														
Men	17%	27%	15%	25%	15%	25%	14%	23%	11%	21%	11%	22%	13%	22%
Women	15%	30%	15%	26%	15%	24%	14%	22%	13%	22%	11%	23%	12%	23%
Race														
African-American	32%	48%	28%	44%	30%	45%	27%	41%	25%	38%	22%	36%	24%	37%
Asian	10%	18%	10%	18%	10%	18%	14%	19%	9%	15%	18%	28%	9%	16%
Hispanic											8%	14%	17%	23%
White	11%	19%	11%	16%	10%	15%	9%	15%	7%	12%	7%	13%	8%	13%
Other	19%	25%	21%	30%	16%	27%	23%	30%	19%	27%	14%	26%	13%	21%

Table 28

Trends in Core and Non-Core Curriculum Students Needing Reading Remediation in College (By Gender and Race)

	1997-1998		1998-1999		1999-2000		2000-2001		2002-2003		2004-2005		2006-2007		2008-2009	
	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core
Gender																
Men	14%	22%	15%	24%	12%	21%	14%	21%	13%	20%	12%	20%	12%	21%	13%	20%
Women	14%	26%	17%	31%	14%	27%	17%	27%	16%	23%	16%	27%	11%	23%	14%	24%
Race																
African-American	25%	42%	32%	48%	27%	44%	34%	50%	35%	48%	34%	47%	28%	40%	26%	36%
Asian	14%	19%	16%	24%	14%	23%	14%	21%	14%	18%	10%	19%	10%	18%	12%	16%
Hispanic													20%	26%	17%	24%
White	10%	15%	11%	18%	8%	13%	9%	13%	7%	10%	8%	13%	9%	14%	8%	12%
Other	15%	29%	18%	24%	15%	29%	15%	25%	18%	27%	18%	26%	14%	31%	14%	23%

Table 29

Trends in Percentage Who Earned "C" or Better in First College Math Course Among Core and Non-Core Curriculum Students (By Gender and Race)

	1997-1998		1998-1999		1999-2000		2000-2001		2002-2003		2004-2005		2006-2007		2008-2009	
	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core
Gender																
Men	75%	70%	75%	72%	73%	68%	76%	74%	78%	73%	77%	76%	76%	74%	76%	74%
Women	82%	78%	83%	79%	83%	75%	85%	83%	85%	83%	84%	81%	85%	82%	84%	81%
Race																
African-American	71%	67%	73%	71%	67%	61%	73%	68%	72%	66%	70%	66%	70%	71%	70%	66%
Asian	81%	76%	85%	79%	81%	79%	85%	81%	81%	79%	84%	84%	82%	82%	83%	84%
Hispanic													79%	72%	78%	74%
White	81%	76%	81%	76%	82%	75%	83%	81%	86%	81%	83%	80%	83%	81%	83%	82%
Other	77%	67%	75%	72%	73%	63%	79%	75%	79%	84%	76%	79%	79%	69%	81%	74%

Table 30

Trends in Percentage Who Earned "C" or Better in First College English Course Among Core and Non-Core Curriculum Students (By Gender and Race)

	1997-1998		1998-1999		1999-2000		2000-2001		2002-2003		2004-2005		2006-2007		2008-2009	
	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core
Gender																
Men	83%	79%	84%	79%	84%	82%	85%	81%	86%	82%	84%	79%	82%	78%	84%	79%
Women	90%	86%	90%	86%	91%	88%	91%	88%	92%	88%	90%	87%	90%	85%	90%	86%
Race																
African-American	82%	76%	83%	79%	83%	80%	85%	80%	85%	81%	81%	76%	80%	75%	79%	77%
Asian	88%	83%	86%	81%	87%	87%	88%	87%	89%	84%	88%	86%	90%	89%	91%	90%
Hispanic													83%	80%	85%	83%
White	89%	86%	89%	85%	90%	87%	90%	86%	92%	87%	90%	86%	88%	85%	89%	86%
Other	85%	74%	84%	73%	83%	83%	83%	79%	83%	85%	82%	78%	83%	80%	88%	85%

Table 31

Trends in Cumulative Grade Point Average After First Year Among Core and Non-Core Curriculum Students (By Gender and Race)

	1997-1998		1998-1999		1999-2000		2000-2001		2002-2003		2004-2005		2006-2007		2008-2009	
	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core	Core	Non-Core
Gender																
Men	2.4	2.2	2.4	2.2	2.4	2.2	2.4	2.2	2.5	2.3	2.5	2.3	2.5	2.2	2.5	2.3
Women	2.6	2.4	2.6	2.4	2.7	2.4	2.7	2.5	2.8	2.6	2.7	2.5	2.7	2.5	2.8	2.6
Race																
African-American	2.2	2.0	2.2	2.0	2.2	2.1	2.2	2.0	2.3	2.0	2.2	2.0	2.2	2.0	2.2	2.1
Asian	2.6	2.4	2.6	2.5	2.7	2.5	2.7	2.6	2.8	2.6	2.8	2.6	2.8	2.7	2.8	2.8
Hispanic													2.7	2.5	2.5	2.5
White	2.6	2.4	2.6	2.4	2.7	2.5	2.7	2.5	2.8	2.5	2.8	2.6	2.8	2.6	2.8	2.7
Other	2.5	2.2	2.5	2.2	2.4	2.2	2.5	2.3	2.5	2.4	2.5	2.4	2.8	2.5	2.7	2.4

Tables 32 and 33

Trends in Long-Term Outcomes of Core and Non-Core Students Who Enrolled as New
Full-Time Freshmen Maryland Community Colleges and Public Four Year Campuses

	Table 32				Table 33		
	Four-Year Graduation and Transfer Rate at Community Colleges				Six-Year Graduation Rates at Public Four-Year Campuses		
	N	Core	Non-Core		N	Core	Non-Core
1994	4,264	46.0%	33.7%		5,580	64.0%	57.1%
1995	4,810	47.2%	36.0%		6,229	64.4%	57.1%
1996	4,474	47.0%	36.9%		6,642	65.0%	56.8%
1997	4,605	45.1%	39.9%		6,694	66.1%	62.0%
1998	4,813	44.1%	36.9%		7,123	67.0%	65.1%
1999	4,589	45.4%	35.8%		6,956	66.1%	66.5%
2000	5,133	48.6%	39.4%		7331	67.6%	67.0%
2002	5,282	47.1%	40.2%		7,107	72.2%	67.2%
2004	4,699	47.7%	38.1%				

Note: Community College percentages reflect all students who graduated **or** transferred.

Table 34

Long-Term Outcomes of Core and Non-Core Students Who Enrolled as
New Full-Time Freshman at Maryland Community Colleges
and Public Four-Year Campuses.

	Four-Year Graduation and Transfer Rate-Community Colleges (2004 Cohorts)			Six-Year Graduation Rates at Public Four-Year Campuses (2002 Cohorts)		
	N	Core	Non-Core	N	Core	Non-Core
Gender						
Men	2,121	46.0%	38.1%	3,301	67.6%	61.9%
Women	2,569	49.0%	38.2%	3,806	75.9%	72.7%
Race						
African-American	891	31.1%	23.6%	1,830	55.0%	48.1%
Asian	240	57.0%	42.9%	638	78.8%	74.3%
Hispanic	204	44.6%	30.0%	204	77.7%	66.1%
White	3,148	51.2%	43.5%	4,120	78.4%	75.4%
Other	216	43.9%	39.8%	315	72.0%	64.8%
Major Jurisdiction						
Anne Arundel	369	55.6%	58.5%	495	75.5%	78.5%
Baltimore City	346	29.9%	27.3%	589	56.6%	46.4%
Baltimore	625	44.3%	35.0%	1,098	72.0%	68.5%
Frederick	286	55.0%	40.1%	271	73.7%	81.7%
Lower Shore	108	47.6%	37.8%	234	65.8%	56.1%
Mid Maryland	537	59.7%	43.3%	818	78.7%	76.3%
Montgomery	750	48.3%	37.9%	1,459	78.4%	74.0%
Prince George's	318	37.3%	33.1%	987	61.6%	52.9%
Southern Maryland	312	45.9%	41.1%	378	78.8%	69.0%
Susquehanna	483	37.7%	37.1%	343	73.3%	75.0%
Upper Shore	133	48.3%	37.3%	165	83.9%	58.3%
Western Maryland	346	58.9%	34.5%	263	71.4%	69.1%