



**POSTSECONDARY PROGRESSION OF  
1993-94 FLORIDA PUBLIC HIGH SCHOOL  
GRADUATES: 2001 UPDATE**

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**Report and Recommendations by the  
Florida Postsecondary Education Planning Commission**

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**May 2001**

**POSTSECONDARY EDUCATION PLANNING COMMISSION**

*Postsecondary Progression of 1993-94 Florida Public High School  
Graduates  
2001 Update*

Prepared in Response to Specific Appropriations 153 through 157  
of the 2000 General Appropriations Act  
Chapter 2000-166, Laws of Florida

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## EXECUTIVE SUMMARY

### Legislative Charge

In proviso language accompanying Specific Appropriations 153 through 157 of the General Appropriations Act, the 2000 Legislature directed the Postsecondary Education Planning Commission, in conjunction with the Department of Education, State Board of Community Colleges, and Board of Regents, to:

*continue its longitudinal cohort study of the progression of public high school graduates as they enroll in, advance through, and graduate from the state's postsecondary education delivery system and enter the workforce. A progress report shall be submitted to the Governor, Legislature and the State Board of Education by May 31, 2001.*

This study is also referred to as the "Student Progression Study."

### Study Background and Purpose

The 1998 *Master Plan for Florida Postsecondary Education* calls for raising the educational attainment of Floridians by increasing participation and completion rates for both recent high school graduates as well as working age adults to meet the workforce demands of a knowledge-based economy. Since Florida's system relies heavily on the two-plus-two concept of articulation, a primary key to better student progression is the ability of students to move smoothly from one sector to another to continue their education. A longitudinal cohort study of high school graduates offers the opportunity to analyze a variety of factors related to accomplishing the State goal of enhancing student access to baccalaureate degrees.

The purpose of this study is to follow Florida public high school graduates as they enroll in, progress through, and graduate from the state's postsecondary education delivery system and enter the workforce. The public high school graduating class of 1993-94 was selected as the initial cohort to follow through college and into the workforce because it was the first class for which reliable high school course data were available from the state level database serving the Division of Public Schools. The following agencies have provided follow-up data on the cohort: the Department of Education, the Florida Community College System (CCS), the State University System of Florida (SUS), the Bureau of Student Financial Assistance (BSFA), the Department of Labor and Employment Security, the College Board, and ACT. This status report documents the postsecondary progress of the cohort through the Spring term of 2000, or six years after high school graduation.

The two major outcomes addressed in this progress report were baccalaureate degree completion and the time to baccalaureate degree completion. The study focused on 1993-94 public high school graduates who by Fall 1994 enrolled in baccalaureate degree programs or associate in arts or general freshman community college programs. Analyses examined the relationship between the outcomes of interest and a variety of factors, including pre-college student attributes, college student experiences, and institutional characteristics.

## Methodology

Descriptive statistics were generated for all public high school graduates as well as for those graduates who matriculated in Fall 1994 to the CCS, SUS, and independent four-year sector. Second, a six-year graduation rate was calculated for the cohort of Fall 1994 matriculants on a number of variables thought to be related to degree completion. A probit analysis, a statistical technique appropriate for modeling the probability of binary outcomes, was also undertaken to derive a statistical model of factors predictive of bachelor's degree completion within the tracking period. Finally, a multivariate ordinary least squares (OLS) regression was conducted to derive an explanatory model of students' time to the completion of their first baccalaureate degree. In contrast to the probit model above, the OLS technique is more appropriate for analyzing time to degree, given the variable's continuous nature.

## Findings

### Overview of the Cohort

*Gender.* Females' relative share of postsecondary enrollments, when compared to their representation among high school graduates, increased in all postsecondary sectors. For example, whereas females accounted for 52.5% of the high school graduating cohort, they made up about 57% of the matriculants to the CCS and SUS. The increase in representation was most pronounced in the independent sector, where women's enrollment share was ten percentage points higher than it had been among public high school graduates.

*Race/Ethnicity.* White students accounted for 60.5% of public high school graduates, black students 18.9%, Hispanic students 12.8%, and Asian students 2.7%. Among Fall 1994 matriculants to postsecondary education, the relative representation of white students increased in the CCS and SUS. Conversely, black students' enrollment share decreased among CCS and SUS matriculants but increased among students who matriculated to the independent sector. Hispanic students represented a lower share of SUS and ICUF matriculants than they did among public high school graduates, but their enrollment share among CCS matriculants increased by three percentage points.

*Family Income.* Income estimates existed for 31,584 (38.2%) of the high school graduating cohort. This included 74% of ICUF matriculants, 81% of SUS matriculants, and 42% of CCS matriculants. From the available data, SUS matriculants' estimated family income more frequently fell within the upper income ranges, with 30.3% of students reporting annual family incomes of \$60,000 or more. This compares to 20.8% and 17.8% for the ICUF and CCS cohorts, respectively. Only 29.7% of SUS matriculants reported a family income of less than \$30,000, compared to about 40% for both the ICUF and CCS cohorts.

*High School Courses.* An analysis of high school courses taken revealed that 35,687 of the graduates completed the course distribution prescribed for SUS admission (43% of 82,787).

## Postsecondary Enrollment Profiles

*Postsecondary Sector Attended.* Of the 82,787 1993-94 public high school graduates, 15% started in the SUS in Fall 1994 or began in the Summer and continued into the Fall term. Nearly twenty-nine percent enrolled initially in the Community College System and 3.1% enrolled at the University of Miami or one of the institutions that constituted the Independent Colleges and Universities of Florida.

*Part-Time and Full-Time Enrollment.* Students in the SUS Cohort were much more likely to enroll full-time (12 or more semester credit hours) in Fall 1994 than were students in the CCS Cohort. The percentage of CCS starters attending full-time in Fall 1994 was 66.1%, compared to 95.2% for SUS starters.

*Working While Enrolled.* As students progressed through their postsecondary careers, the percentage working while enrolled in classes increased, from 29.3% in Fall 1994 to 59.5% to Fall 1999. Across sectors, working patterns varied. SUS matriculants were more likely to attend college without working. In contrast, a greater percentage of community college matriculants were found working concurrent to enrollment in more than four semesters of the tracking period.

*Remediation Needs.* The State requires that all students entering the CCS or SUS show proficiency in certain basic skills. Either the SUS or CCS determined that 15.4% of the 1993-94 high school graduates needed remediation in reading, 16% needed remediation in writing, and 19.6% needed remediation in math. Due in large part to the open enrollment admissions policies of the CCS, there was a large discrepancy between the remediation needs of CCS starters and SUS starters. Of the 23,862 students starting in the CCS, 31.4% were determined to need remediation in reading, 33.3% in writing, and 38.6% in math. In contrast, only 4.7% of SUS starters were found to need remediation in reading, 4.7% in writing, and 4.1% in math.

*Dual Enrollment and Acceleration Activity.* Of the 1993-94 public high school graduates, 14,938 (18%) had taken dual enrollment courses or received other acceleration credit. For those having such credit, the average number of hours of dual enrollment credit was 10.39, while the average number of test credit granted was 9.23 hours. There was not a noticeable difference in the average number of dual enrollment hours and acceleration credits garnered by CCS starters and SUS starters.

## Six-Year Bachelor's Degree Outcomes

*Highest Credential Held.* Among students who had enrolled in the SUS immediately following high school graduation, an A.A. or A.S. degree was the highest degree held for 7.1% of these students by the end of Spring 2000. A baccalaureate degree was the highest degree held for 57% of the SUS starters, and 3.1% had earned a post-baccalaureate degree. For CCS starters, an A.A. or A.S. degree was the highest degree obtained by 19.2%, 12.7% had obtained a baccalaureate degree, and 0.4% had obtained a post-baccalaureate degree. Over half (53.9%) of the 1993-94 Florida public high school graduates who matriculated in either the SUS or the CCS had obtained no postsecondary degree or credential six years later.

*Graduation Rates.* Prior to computing baccalaureate graduation rates and conducting two multivariate analyses, the cohort was further restricted in order to maximize the accuracy of cross- sector comparisons. First, only those students who had taken credit hours in their first term of postsecondary enrollment were included. Second, students who had graduated from the Escambia and Hendry school districts were excluded because of omissions in the data submitted for those counties. Third, to be included in the community college cohort, students were required to have taken an entry-level placement test and must have attempted at least 15 credit hours in the Community College System from 1994 to 1996. However, students were retained in the community college cohort if they attempted less than 15 credit hours but later enrolled in the State University System. These additional restrictions reduced the cohort from 36,245 to 27,659 students, consisting of 12,070 members who started in the State University System and 15,589 community college starters.

Six-year baccalaureate degree graduation rates were calculated for several demographic, academic performance, and enrollment variables. Through the Spring term of 2000:

- The overall six-year baccalaureate attainment rate for the 27,659 students in the cohort was 35.6%.
- Females graduated at a rate of 39%, while males graduated at a rate of 31.1%.
- Asian and white students had the highest six-year graduation rates overall (42.8% and 39.9%, respectively). Black students had a graduation rate of 25.5% and Hispanic students had a graduation rate of 24.3%.
- Graduation rates increased as family income increased. Students with estimated family incomes of less than \$10,000 had a graduation rate of 33.8% while those with estimated family income of \$70,000 and above had a graduation rate of 57.3%.
- As high school GPA increased so too did six-year graduation rates. Students with high school grade point averages between 2.0-2.49 graduated at a rate of 13.1%. In contrast, for a high school GPA of 3.0-3.49 the baccalaureate graduation rate was 43.3%. Overall, nearly 80% of students with a high school GPA of 4.0 or higher graduated with a bachelor's degree within six years.
- Students who had met the high school academic course requirements for SUS admission had much higher graduation rates than those who did not (44.8% and 15%).
- The graduation rate was 59.7% for SUS starters and 17% for community college starters.
- The number of institutions attended had a varied impact. Graduation rates remained relatively stable for students who had attended between one and three institutions, ranging from 33.8% to 39.3%. For students who had attended more than three institutions, graduation rates decreased sharply (26.2% for four institutions and 17.4% for five institutions attended).
- The graduation rates remained fairly stable regardless of how many terms a student was found working while enrolled, fluctuating between 31% and 44%.

## Multivariate Analyses

### *Factors Predicting Six-Year Degree Completion*

The above restricted cohort was further used to develop a multivariate model of six-year degree completion. With baccalaureate degree completion in six years as the dichotomous dependent variable, a probit regression model was used to analyze the effect of certain factors on degree completion. **Table 17a** contains a list of the variables included in the model, the significance level of each variable, and the direction of their relationship to the dependent variable.

Analysis was done in order to obtain the predicted probability of degree completion given a particular value on an independent variable, while holding all other independent variables at their mean or mode values. Among student demographic and secondary performance factors, high school grade point average had the strongest effect. The impact of the number of acceleration credits (i.e., dual enrollment or credits by examination) was rather modest. Among the postsecondary enrollment factors, starting at a state university, full-time enrollment, and first-term grade point average appeared to have the strongest effect on the likelihood of earning the degree within six years. The negative relationship to the likelihood of baccalaureate degree completion of certain variables such as part-time attendance and community college matriculation was mitigated for students with stronger high school academic backgrounds.

### *Factors Explaining First Baccalaureate Time-to-Degree*

The restricted cohort was further used to estimate an ordinary least squares regression model of time to baccalaureate degree completion. Overall, the model explained 54% of the variance in students' time to degree completion (**Table 21**). The average time to degree calculated for each variable included in the model is contained in **APPENDIX C**. Within the model, the time to degree is increased the most by two variables: pursuit of a longer-than-average academic major and the number of "stopouts" within the tracking period. For students enrolled in baccalaureate degree programs requiring more than 128 semester hours, the time to degree increased by 1.5 semesters. Likewise, for each fall or spring term a student was not enrolled in classes, his or her time to degree increased by nearly 1.5 semesters. Beginning one's postsecondary degree in the SUS as opposed to the CCS also decreased the time to degree. However, controlling for other variables included in the model, the time to degree only decreased by approximately a quarter of a semester for SUS starters.

## **Conclusions and Future Analyses**

This report on the postsecondary progression of 1993-94 high school graduates represents two major enhancements from the Commission's first cohort follow-up study, published in 1998. First, it utilized statistical techniques that enabled the researchers to estimate statistical models that controlled for the presence of other predictor variables. Second, it extended the tracking period to six years, a common time frame for state and national studies of graduation rates and time to degree.

## Conclusions

With regard to the likelihood of bachelor's degree completion, high school academic preparation and achievement matter. Although community college matriculants were predicted less likely to earn a bachelor's degree in a six-year period, community college starters with better high school grade point averages closed the gap on SUS starters. Among the postsecondary enrollment factors, starting at a state university, full-time enrollment, and first-term grade point average appeared to have the strongest effect on the likelihood of earning the degree within six years.

With regard to the number of terms to the first baccalaureate degree, the number of "stopouts" and the pursuit of a longer-than-average academic major had the strongest impact on increasing a student's time to degree. The accumulation of acceleration credit was found to decrease students' time to degree. Among students in the cohort, earning 15 hours of dual enrollment or other acceleration credit reduced the estimated time to degree by about one-half of one term. On the other hand, the number of areas in which a student was determined to need remediation increased the estimated time to degree completion. However, this impact was modest, increasing a student's time to degree by only about one quarter of a term if the student was determined to need remediation in three areas. Beginning one's postsecondary education in the SUS as opposed to the CCS decreased the time to degree, but by only approximately a quarter of one semester after controlling for other variables included in the model.

It is not surprising that community college and state university baccalaureate degree attainment rates differ, given the differing natures of the populations when they arrive and their differing attendance patterns when they enroll. Perhaps the more appropriate question is, "Under what conditions does the two-plus-two system of articulation work best?" The results of this study point to some conclusions on that question as well.

- Students should arrive academically prepared. This was true for all students. High school performance had the strongest influence of all pre-college student characteristics.
- Students should maintain continuous enrollment, full-time if possible. This was especially true for community college students.
- Community college students should complete the associate's degree. For community college starters, the probability of bachelor's degree completion within six years was nearly three times greater for those who earned the A.A. at a community college compared to those who did not.

### Future Analyses

The Commission plans to follow the current cohort through the spring term of 2002, or eight years following high school graduation. The Commission's next official report on the 1993-94 Florida public high school graduates is not due until May 31, 2002. However, interim reports are planned on the following topics: factors predictive of intermediate outcomes such as postsecondary participation and A.A. degree completion; the impact of the amount and type of financial aid on degree completion; and post-graduate employment and earnings.

## LEGISLATIVE CHARGE

In proviso language accompanying Specific Appropriations 153 through 157 of the General Appropriations Act, the 2000 Legislature directed the Postsecondary Education Planning Commission, in conjunction with the Department of Education, State Board of Community Colleges, and Board of Regents, to:

*continue its longitudinal cohort study of the progression of public high school graduates as they enroll in, advance through, and graduate from the state's postsecondary education delivery system and enter the workforce. A progress report shall be submitted to the Governor, Legislature and the State Board of Education by May 31, 2001.*

This study is also referred to as the "Student Progression Study."

## BACKGROUND

In recent years, studies have indicated that the economic return on education increases greatly for both graduates and the State with the attainment of a baccalaureate degree. Several states have undertaken studies in recent years to examine postsecondary degree attainment and time to degree. In 1996, the State Higher Education Executive Officers (SHEEO) reported the results of a survey of states' efforts to decrease time to degree. Twenty-seven states reported the initiation of studies or strategies to examine the issue. The Southern Regional Education Board (SREB), in its *1996 Educational Benchmarks*, reported that over half its member states had undertaken efforts to examine time to degree in their state. In addition, the focus of discussion on access has shifted from entrance to postsecondary education to completion of the baccalaureate degree. The 1982 *Master Plan for Florida Postsecondary Education* stated that Florida built an extensive system of public universities, community colleges, and vocational technical centers and assisted students attending private colleges and universities to provide opportunities for postsecondary education. Since this system relies heavily on the "two-plus-two" concept, one key to better student progression is the ability of students to move smoothly from one sector to another to continue their education. Subsequent master planning documents emphasized that Florida's education system must function as a continuum and provide for the transition of students from one level to another. The Commission also recognized that educating more students with limited resources is an essential task in addressing the dual issues of quality and access and placed a high priority on increasing the productivity of postsecondary education.

In 1994, in response to a request from the Council on Education Interdependence, the Commission studied the appropriate share of the State's first-time-in-college (FTIC) students by postsecondary sector. Discussions early in the study led the Commission to examine access from two perspectives: 1) access to postsecondary education, and 2) access to a baccalaureate degree. The resulting report, *Access to the Baccalaureate Degree in Florida*, concluded that longitudinal studies of students in Florida's postsecondary delivery system were needed to identify factors that either impede or accelerate the progression of students toward the completion of a baccalaureate degree. The report recommended that, in conjunction with the Board of Regents, the State Board of Community Colleges, and the Independent Colleges and Universities of Florida, the Commission should conduct longitudinal cohort studies that track high school

graduates of similar ability levels as they enroll in, progress through, and graduate from the State's postsecondary education delivery system. A longitudinal cohort study of high school graduates offers the opportunity to analyze a variety of factors related to accomplishing the State goal of enhancing student access to baccalaureate degrees.

The two major outcomes addressed in this progress report are: (1) baccalaureate degree completion and (2) the time/credit hours to baccalaureate degree completion. The study focuses on 1993-94 public high school graduates who enrolled in associate in arts or general freshman community college programs or baccalaureate programs by Fall 1994, including analysis of the impact of a variety of factors on students' degree completion and time to degree.

## **REVIEW OF THE LITERATURE**

Researchers conducting national, state, and institutional studies have identified a number of factors related to persistence and have extensively described the educational attainment levels of select groups of postsecondary students. In analyzing this type of research, however, it is imperative to remain cognizant of the fact that individual studies may vary significantly in terms of sample makeup, research methodology, experimental controls, and definition of persistence. Thus, the findings may be inconclusive or inconsistent in some areas. The current study is limited by the amount and types of data available, thus several of the factors affecting postsecondary persistence and attainment found in the literature could not be operationalized. Overall, though, a review of the literature helped to define the research questions included in the current study, as well as guide the methodology utilized and the variables explored.

A number of researchers have focused on the factors related to postsecondary educational attainment. These factors can be divided into three categories: institutional factors, college student experience factors, and pre-college student characteristics.

### ***Institutional Factors***

Some studies have shown that the specific characteristics of various postsecondary institutions may directly or indirectly affect the educational attainment of individuals in attendance. However, in the 1999 study *Answers in the Toolbox: Academic Intensity, Attendance Patterns, and Bachelor's Degree Attainment*, Adelman warns that the analysis of institutional effects on degree completion can be compromised when students in the analysis attend two or more institutions.

### **Quality**

Within four-year institutions, measures of quality (i.e., academic selectivity, institutional resources, and prestigious reputation) have a modest positive effect on completion of the bachelor's degree and pursuit of graduate/professional education (Pascarella & Terenzini, 1991). There is a positive correlation between institutional selectivity and pursuit of graduate/professional education. A negative correlation exists between institutional selectivity and student expectations of transferring. Some possible explanations for this are: (1) the students admitted to high quality institutions are predisposed for high achievement levels; (2) the privilege of enrolling at a high quality institution is an accomplishment that translates to high student motivation and commitment to degree completion; and (3) the prestige of the degree

sought at a high quality institution translates to high student motivation and commitment to degree completion (Pascarella & Terenzini, 1991).

### Control

Although the evidence is somewhat inconsistent, research suggests that attending a private rather than a public institution has a positive effect on degree completion and pursuit of graduate/professional education. In considering the typical private institution, this effect may be related to the residential nature of such campuses, the spiritual support associated with shared religious beliefs or values, the solidity or distinctiveness of institutional mission, or the greater financial obligation that translates to high commitment to degree completion (Pascarella & Terenzini, 1991).

### Size

Institutional size appears to have an indirect effect on educational attainment by enhancing the individual's level of integration with the social and academic cultures of the institution (Pascarella & Terenzini, 1991). Specifically, attendance at a small college tends to facilitate greater involvement with peers and faculty which, in turn, positively influences degree completion and pursuit of graduate/professional education.

### Type

Research consistently shows that, among students seeking a bachelor's degree, those who initially attend a two-year institution are less likely to persist or to pursue graduate/professional education than those who initially attend a four-year institution (Pascarella & Terenzini, 1991). This effect may be related to lower levels of academic and social integration for students at the two-year campus, difficulties transferring, or difficulties adjusting to the four-year campus. Using the National Longitudinal Study of the High School Class of 1972, Velez (as cited in Pascarella & Terenzini, 1991) found that four-year college entrants had an 18.7% advantage over two-year college entrants in completing a bachelor's degree within seven years after graduating from high school.

### Racial Composition

For black students, attendance at historically black colleges enhances degree completion and pursuit of graduate/professional education. Black students who attend predominantly white institutions experience significantly greater levels of social isolation, dissatisfaction, and overt racism than their counterparts at historically black institutions (Pascarella & Terenzini, 1991). Lower levels of social and academic integration for minority students at predominantly white institutions may, indirectly, affect degree completion and further educational attainment.

### Gender Composition

Attendance at a single-sex institution is associated with higher levels of persistence and educational attainment, particularly for women (Pascarella and Terenzini, 1991). This may be an indirect effect related to the uniquely supportive social and academic environment of women's institutions.

### Supportive Student Personnel Services

Research suggests that degree completion may be a function of the extent to which students are supported by effective student personnel services. For example, a 1970 study of 21 two-year colleges (as cited in Pascarella & Terenzini, 1991) indicated that all of the colleges with a student personnel staff to day student ratio of 1:150 or less reported graduating 50% or more of their students in two years. In contrast, only 20% of the colleges with a higher ratio reported graduating 50% of their students in two years. Another study (Astin, 1993) indicated that the percentage of institutional resources invested in student services also has a weak but positive effect on persistence.

### Curriculum

There is some evidence that curricular variables have a positive effect on educational attainment. According to Astin (1993), persistence is enhanced by a true core curriculum, a distributional system with progressive offerings (e.g., gender or ethnic studies), a women's studies course requirement, or a required senior comprehensive exam.

### ***College Student Experience Factors***

Some studies have shown that, dependent or independent of the institution, the activities, experiences, or accomplishments of individual college students may directly or indirectly affect their own educational attainment.

### Delayed Entry and Transfers Between Institutions

Delays in entering college and interruptions in attendance have significant negative effects on degree completion. According to a 1987 estimate by Tinto, about 15% of all four-year college students will transfer at least once during their first two years after initial matriculation (as cited in Pascarella & Terenzini, 1991). A 1985 study by Pascarella indicated that the number of colleges attended has a small but statistically significant negative effect on completion of the bachelor's degree over a nine-year period (as cited in Pascarella & Terenzini, 1991).

### Academic Achievement

Undergraduate grades are perhaps the best college experience predictor of degree completion and pursuit of graduate/professional education (Pascarella & Terenzini, 1991). This effect is true even with controls for pre-college characteristics, institutional characteristics, and collegiate experiences. Institutions have had some success in improving individual academic achievement through study skills seminars, advising and counseling programs, remedial studies, living-learning centers in residence facilities, and other support services (Pascarella & Terenzini, 1991).

### Academic Involvement

There is strong evidence that persistence is enhanced by an individual's level of academic involvement, including hours spent in classroom instruction, hours spent in individual or group study, use of computer and library resources, participation in honors programs, participation in internship programs, etc. (Astin, 1993). This is consistent with Adelman (1999) who found that continuous enrollment in postsecondary education is one of the two factors contributing the most to baccalaureate degree attainment. Additionally, the 1992 report, *High School and Beyond* (National Center for Education Statistics), indicated that the intensity of initial attendance at a postsecondary institution was related to degree completion. Respondents who attended either a

four-year or two-year school immediately after high school were more likely to persist if they enrolled full-time than if they enrolled part-time.

### Interaction with Faculty

As role models, faculty have a significant impact on student attitudes, values, and career aspirations (Pascarella & Terenzini, 1991). There is evidence that interaction with faculty members outside the classroom has a positive effect on degree completion and pursuit of graduate/professional education. In a 1973 study of graduate/professional students (Baird, Clark, & Hartnett as cited in Pascarella & Terenzini, 1991), a significant number of students credited an undergraduate faculty member for personally encouraging their pursuit of graduate/professional education. Working on a professor's research project or being a guest at a professor's home also has a positive impact on educational attainment (Astin, 1993). Other faculty measures showing positive effects on persistence include: humanities orientation, morale, liberalism, diversity orientation, percentage of women among the faculty, percentage of Ph.D. degrees among the faculty, and perception of racial conflict on campus (Astin, 1993).

### Peer Relationships and Extra-curricular Involvement

Clear evidence indicates that interaction with peers and participation in extra-curricular activities have an impact on degree completion (Pascarella & Terenzini, 1991). Relationships with other students provide an important source of support, both personally and academically. Similarly, participation in extra-curricular activities increases individual feelings of involvement and connection to the institution. Overall, individual commitment to the institution is enhanced by involvement and successful integration into the campus community.

### Academic Major

Research on the direct influence of academic major on degree completion is inconsistent. However, factors related to the major department (e.g., size, levels of faculty support or encouragement, grading practices, etc.) may have an indirect impact on degree completion (Pascarella & Terenzini, 1991). Furthermore, those occupations with the potential for immediate economic returns or prestige (e.g., engineering or business) may actually discourage pursuit of graduate/professional education (Pascarella & Terenzini, 1991).

### Residence Facilities and Programs

Students who live on campus are more likely to interact with other members of the campus community, to be involved in extra-curricular activities, and to use campus facilities and resources (Pascarella & Terenzini, 1991). As a clear relationship between persistence and involvement on campus has been established, it is not surprising that students who live on campus have an advantage in degree completion. Astin (1993) posits that this is a direct effect. Others, however, argue that this advantage may be related to the pre-college characteristics (e.g., higher levels of academic aptitude, educational aspirations, family socioeconomic status, etc.) of those who live on campus (Pascarella & Terenzini, 1991). Special residence hall programs, such as living-learning centers, have had a positive impact on persistence.

### Financial Aid and Work

The research related to the effect of financial aid on persistence is inconsistent. Financial aid recipients are at least as likely as other students to complete a bachelor's degree (Pascarella &

Terenzini, 1991). However, there is only limited evidence that scholarships are associated with a higher level of degree completion than other types of aid such as loans or work-study (Pascarella & Terenzini, 1991). The location and number of hours a student works per week is clearly related to degree completion. Part-time or full-time employment off campus is likely to have a negative impact, while part-time employment on campus is likely to have a positive impact (Astin, 1993; Pascarella & Terenzini, 1991). According to a 1998 study by the National Center for Education Statistics, *Profiles of Undergraduates in U.S. Postsecondary Education Institutions: 1995-96*, 79% of undergraduates reported working while they were enrolled. Fifty percent of undergraduates reported working to help pay for educational expenses (*Students Who Work*) while 29% considered themselves primarily employees who were also taking classes (*Employees Who Study*). *Students Who Work* were generally younger, were more likely to attend four-year institutions, and were more likely to enroll full-time. *Students Who Worked* were employed an average of 25 hours per week while enrolled; however, 26% of the *Students Who Worked* reported working full-time. Even among those students who attended college exclusively full-time, 19% worked full-time. The more hours students reported working, the more likely they were to report that work negatively affected their academic performance or first year persistence.

### ***Pre-College Student Characteristics***

Some studies have shown that the pre-college educational background and family characteristics of individual students may directly or indirectly affect educational attainment. Adelman (1999) found that one of the two most important variables contributing to baccalaureate degree attainment is a composite measure of the academic content and performance a student brings to postsecondary education from their secondary experience. A 1993 comprehensive study by Astin revealed a number of student characteristics related to persistence. In a sample of 38,587 students nationwide, thirty-three different student input characteristics carried significant weight in predicting baccalaureate degree completion within a four-year period. Some of the input characteristics with strong significant positive effects included:

- (1) High School GPA - High school grades were the best pre-college predictor for baccalaureate completion.
- (2) Standardized Test Scores - As ability scores increased, baccalaureate completion rates increased for all students.
- (3) High School Academic Rank - As another measure of ability, high school academic rank was closely associated to persistence.
- (4) Socioeconomic Status - Those in the middle and upper levels of the socioeconomic strata were more likely to enter college and to persist to baccalaureate completion.
- (5) Educational Levels of Parents - Persistence was enhanced for those students whose parents had completed baccalaureate education or beyond.
- (6) Religion - Higher levels of persistence were associated with students who were Roman Catholic or Jewish.

(7) Gender - There was a slight advantage for women in degree completion within a four-year period.

(8) Social Activism - Participation in volunteer opportunities, tutoring, and extra-curricular activities was positively correlated with degree aspirations and baccalaureate completion.

### ***NCES Longitudinal Study***

In a comprehensive longitudinal study, the National Center for Education Statistics followed a cohort of high school sophomores and reported on their postsecondary participation, job entry and income, and family formation after 12 years (10 years after the cohort's anticipated graduation from high school). *In High School and Beyond: Educational Attainment of 1980 High School Sophomores by 1992*, NCES examined degree attainment and the effects of degree aspiration, delayed entry, and full-time enrollment.

### **Participation in Postsecondary Education**

In the four years after high school graduation, 60% of the cohort had enrolled in some form of postsecondary education. The share of 1980 high school sophomores' participation in postsecondary education rose to 66% 10 years after graduation from high school. Of those who did enroll by 1992, 43% enrolled first in a four-year institution, 37% in a public two-year institution, and the remainder in some other type of postsecondary institution, most typically a private for-profit or proprietary institution.

### **Postsecondary Attainment**

As sophomores in high school (1980), 75% of the cohort aspired to some form of postsecondary education. As of 1992, the highest degree earned by about one-half of the cohort (51.5%) was a high school diploma, including almost 36% of those students who had enrolled in a postsecondary institution at some time between 1982 and 1992. Additionally, 5.6% did not attain a high school degree.

By 1992, 43% of the cohort had attained some type of postsecondary credential. For 19% of the cohort, the highest degree attained was pre-baccalaureate: 11% earned a vocational certificate (typically, the equivalent of one full-time year of postsecondary education) and 8% attained an associate's degree.

Twenty-four percent of the cohort (more than half of those earning any type of postsecondary credential) attained a bachelor's degree (20%) or higher (4%), including 1% who earned a professional degree or doctorate.

### **Postsecondary Attainment and Expectations as High School Seniors**

Of the 1980 high school sophomores who expected to obtain a bachelor's degree, 64% had earned some type of postsecondary credential by 1992 (by highest degree: 1% earned less than a high school degree, 35% earned a high school degree, 13% less than the baccalaureate, 45% the baccalaureate, and 6% an advanced degree).

### Postsecondary Attainment and Immediate Versus Delayed Entry

The 1980 sophomores were much more likely to earn a postsecondary credential if they enrolled in postsecondary education immediately after high school than if they delayed their entry. Forty percent of 1980 sophomores who entered postsecondary education immediately after high school had earned a bachelor's degree by 1992, and another 7.9% had attained an advanced degree. By contrast, 9% of those who delayed entry (after October 1982) had attained a bachelor's degree by 1992, with another 1% having attained an advanced degree.

The general patterns of differential attainment between immediate and delayed entrants persisted when educational expectations were held constant. The length of delay was associated with students' postsecondary expectations while still in high school, students' socioeconomic status, and academic achievement in high school.

### Postsecondary Attainment and Full-Time Versus Part-Time Enrollment

The 1980 high school sophomores were more likely to attain a postsecondary credential if they enrolled in postsecondary education immediately and full-time. For example, at four-year institutions, almost 58% of the cohort who enrolled full-time in fall 1982 had earned a bachelor's degree by 1992, compared with about one-fourth of those who enrolled part-time. Similar findings occurred with attainment rates at two-year institutions: 25% of full-time enrollees had earned a baccalaureate by 1992, compared with 14% of those who enrolled part-time; and likewise, 24% who enrolled full-time had earned an associate's degree by 1992, while 9% of those who enrolled part-time had attained an associate's degree.

The rate at which students attained some type of postsecondary degree was about the same among immediate part-time entrants to postsecondary education as among those who delayed entry. Differences in attainment may not be as much due to differences in the timing of entry as they are due to differences in the intensity of the students' initial enrollment.

## **STUDY PURPOSE**

The purpose of this study is to follow Florida public high school graduates as they enroll in, progress through, and graduate from the state's postsecondary education delivery system and enter the workforce. The public high school graduating class of 1993-94 was selected as an initial cohort to follow through college and into the workforce. The 1993-94 cohort was selected because it was the first class for which reliable high school course work data were available from the state level database serving the Division of Public Schools. The analysis of high school coursework and grade point averages and admissions test scores determined which students met State University System admissions policies.

## **STUDY LIMITATIONS**

1. ***Reliance on Social Security Numbers.*** Not all high school graduates have accurate Social Security Numbers (SSN) in the sector databases, and errors in SSNs may exist in each of the databases. Matching high school students with postsecondary databases, and therefore

longitudinal tracking, is not possible without accurate SSNs. All matching and tracking of students in the longitudinal study is based on those students with SSNs identified for matching. In the public school database, 82,787, or 92% of the 90,079 graduates, high school graduates had Social Security Numbers identified for matching with data in the education sectors and employment databases.

2. **Definition of SUS Admissibility.** Some high school graduates who were not identified as meeting SUS course distribution and GPA/test score requirements for admission may in fact have met those requirements. Omission from this group may have occurred for a number of reasons, including data reporting problems or institutional assessment of high school courses and GPA which by nature and design have greater sensitivity to individual transcript variations. In addition, SUS institutions are allowed to accept a limited number of students as exceptions to the minimum requirements. (Exceptions may be made on the basis of important attributes or special talents of individual applicants who do not qualify for admission based only on their academic records and admissions test scores, but may demonstrate potential for success in college.) Additional exceptions may occur for students with disabilities for whom reasonable substitutions of admissions requirements may be made. (Counseling for Future Education, p.78)
3. **Delayed Entry.** The current study, which focuses on high school graduates who enrolled immediately in Florida colleges and universities in Fall 1994, does not take into account those students who delay entry into postsecondary education. However, as aforementioned, the 1995 NCES study *High School and Beyond*, suggested that differences in degree attainment may not be as much due to differences in the timing of entry as they are due to differences in the intensity of the students' initial enrollment. This limitation clearly impacts the CCS cohort more than the SUS. By restricting the analysis to those who matriculated immediately following graduation, the number of students excluded in the SUS cohort is only 351 (2.8%), while the number excluded in the CCS cohort is 5,437 (20%) (**Figure 1**).
4. **Financial Aid.** The current analysis did not take into account the receipt of financial aid. Florida's Bureau of Student Financial Assistance administers a large array of aid programs, both merit- and need-based. In the Commission's 2001 study, *State Student Financial Aid Policy*, a statistical analysis of state-level data found state need-based aid to have a small but positive statistically significant relationship to continuation rates from high school to college. Thus, analysis of aid, at both the state and Federal level, is relevant to the current analysis. The Commission will incorporate financial aid into subsequent analyses and release the results at a later date as part of a supplementary report.
5. **Student Work.** The work data for the current analysis are based on the quarterly wages of students in the cohort, from state unemployment insurance records. The data excluded student wages from college work study programs and OPS employment. The number of hours worked by these students was not available, thus wages served as a proxy for the amount of time spent working. Therefore, for each semester students were categorized as working while enrolled, or not working while enrolled. First quarter (January to March) wages were matched against Spring enrollment, while fourth quarter (October to December) wages were matched to Fall enrollment. Then the number of terms in which a student was

found to be working while enrolled was incorporated into the analysis. In order to increase the validity of the work measure, students earning less than \$975 in any semester were not included in the analysis. This figure was derived by multiplying \$5.00 by 15 hours a week for a quarter (13 weeks).

6. ***Independent Sector.*** The tracking of students through independent colleges and universities in Florida is very limited. Independent institutions are generally not required to submit SSN-level data to a state agency. A limited indicator of private sector enrollment was derived from Bureau of Student Financial Assistance data on students who received the Florida Resident Access Grant. Receipt of this tuition equalization grant is limited to Florida residents who attend full-time the University of Miami or one of the other four-year accredited non-profit institutions that constitute the Independent Colleges and Universities of Florida. However, information on whether and when the student earned a degree from a private institution is not available.
7. ***Out-of-State Students.*** Data on student enrollment and progression in institutions outside of Florida is not available and thus not included in the current study.
8. ***Career Education.*** The analysis of enrollment activity by students in career education programs (i.e., those resulting in an Adult Technical Diploma or vocational certificate) is currently limited to those within the Community College System.
9. ***Family Income Data.*** The income data used in the current analysis is only for those students who took the SAT or the ACT. Therefore, the data is not representative of the entire high school cohort. Results could potentially be skewed toward those students in higher income brackets.

## **METHODOLOGY**

The College Board, ACT, and the following state agencies have provided follow-up data on the cohort through 1999-2000: the Department of Education, the Florida Community College System (CCS), the State University System of Florida (SUS), the Bureau of Student Financial Assistance (BSFA), and the Department of Labor and Employment Security. This collaborative effort yielded a rich repository of data on student demographics, high school course work, standardized test scores, student aspirations, enrollment, family income, financial aid, degree program and completion, and employment history. The Commission gratefully acknowledges the contributions made by all those who provided data for the study.

Descriptive statistics were generated for all public high school graduates as well as for those graduates who matriculated in Fall 1994 to the CCS, SUS, and independent four-year sector. Secondly, a six-year graduation rate was calculated for the cohort of Fall 1994 matriculants as a whole. Graduation rates were then calculated for subsets of the cohort on a number of variables thought to be related to degree completion. A probit analysis, a statistical technique appropriate for modeling the probability of binary responses or outcomes, was also conducted to derive a statistical model of factors predictive of baccalaureate degree completion within the tracking period. This maximum likelihood method of analysis estimates the parameters in order to

achieve the greatest probability of observing the actual data (Maddala, 1983). Finally, a multivariate ordinary least squares (OLS) regression was constructed as an explanatory model of students' time to the completion of their first baccalaureate degree. In contrast to the probit model above, the OLS technique is more appropriate for analyzing time to degree, given the variable's continuous nature.

## OVERVIEW OF THE COHORT

There were 90,072 graduates from Florida public high schools in 1993-94. Of these 82,787 (92%) had valid social security numbers. The analysis of their courses revealed that 35,687 of the graduates had completed the course distribution prescribed for SUS admission (43% of 82,787). Students were designated as either native associate in arts or general freshman community college students, native SUS students, or native independent college/university students depending upon their enrollment in Fall 1994. In the event that individuals were enrolled in the SUS and CCS simultaneously, they were categorized as native SUS students. In the event that individuals were enrolled in the public and independent sectors simultaneously, they were categorized as native independent students.

### Gender and Race

The high school graduating cohort was 52.5% female and 47.5% male (**Table 1**). Females' relative share, when compared to their representation among high school graduates, increased in all postsecondary sectors. This increase was most pronounced in the independent sector, where women's enrollment share was ten percentage points higher than it had been among the public high school graduates.

White students accounted for 60.5% of public high school graduates, black students 18.9%, Hispanic students 12.8%, and Asian students 2.7%. Among Fall 1994 matriculants to postsecondary education, the relative representation of white students increased in the CCS and SUS. Conversely, black students' enrollment share decreased among CCS and SUS matriculants but increased among students who matriculated to the independent sector. Hispanic students represented a lower share of SUS and ICUF matriculants than they did among public high school graduates, but their enrollment share among CCS matriculants increased by three percentage points.

### Family Income

Family income data were derived from questionnaires completed by students who registered for the ACT and SAT exams. These questionnaires are optional and based on student estimates. A recent cross-validation of these data by the Commission showed most students' estimates of family income to be fairly reliable, within +/- one income band (\$10,000). Because of differences in the income ranges used by ACT and the College Board, only SAT income estimates were included in the current analysis. Income estimates existed for 31,584 (38.2%) of the high school graduating cohort (**Table 2**). This included 74% of ICUF matriculants, 81% of SUS matriculants, and 42% of CCS matriculants. The lower percentage of income estimates for CCS students is probably a result of the fact that entry level tests are not required for community college admission.

The data suggest that SUS matriculants' estimated family income more frequently falls within the upper income ranges, with 30.3% of students reporting annual family incomes of \$60,000 or more. This compares to 20.8% and 17.8% for the ICUF and CCS cohorts, respectively. Only 29.7% of SUS matriculants reported a family income of less than \$30,000. This compares to about 40% for both the ICUF and CCS cohorts.

#### Achievement Indicators

On average, the cumulative high school grade point average and standardized test scores for the SUS cohort were higher than those of the CCS and ICUF cohorts (**Table 3**). This is due in large part to the open enrollment policy of the CCS.

### **POSTSECONDARY ENROLLMENT PROFILES**

In order to gauge the enrollment patterns of students in the cohort, several descriptive analyses were undertaken (**Figure 2**). Of the 82,787 1993-94 public high school graduates, 12,383 students were found to have started in the SUS in Fall 1994 or began in the Summer and continued on into the Fall term. This cohort accounted for 15% of the prior year's public high school graduates. Students initially enrolling in the Community College System in Fall 1994 or beginning in the Summer and continuing on into the Fall term numbered 23,862. This accounted for 28.8% of the prior year's high school graduates. There were 2,850 1993-94 public high school graduates initially enrolling at the University of Miami or one of the institutions that constitute the Independent Colleges and Universities of Florida, in Fall 1994 or beginning in the Summer and continuing on into the Fall term. This constituted 3.1% of the previous year's high school graduates.

#### Term by Term Enrollment and Progression Patterns

**Table 4**, which contains a series of term-by-term snapshots of student enrollment and degree attainment throughout the tracking period, provides a first descriptive look at the postsecondary progression patterns of the Fall 1994 SUS and CCS matriculant groups. Possible outcomes within each term were defined as follows: still enrolled in the postsecondary system of origin, enrolled in another system (CCS, SUS, or ICUF), earned a bachelor's degree in the SUS, or not found.

The group of SUS matriculants displayed what might be termed a "traditional" pattern of postsecondary progression, as bachelor's degrees earned had begun to replace enrollment counts in fairly sizable numbers by the end of the fourth year. Furthermore, typically only 7-15% members of the SUS group were not found in any given fall or spring semester. It is interesting to note that 10% of the SUS starters had "reverse transferred" into the CCS by Fall 1995, a figure that remained fairly constant through Fall 1997 before beginning to drop off in Fall 1998 and 1999.

The progression of the community college cohort was much less linear, as nearly one-third of the students who started at a community college in Fall 1994 were no longer found enrolled in any system the next fall term. By Fall 1997, over half the community college starters were no longer enrolled, and the "not found" figure was 60% by Fall 1999. We expect that by Fall 1997 the "not found" count reflects to a certain extent the earning of an associate's degree after which some in

the CCS Cohort may have stopped out for a time. Only 24.5% were enrolled in the SUS or had earned a bachelor's degree from that system by Spring 2000. This finding was an indication that restricting the CCS matriculant group to students with a degree program code of "A.A." or "General Freshman" was insufficient for determining eventual baccalaureate degree intent. This resulted in further culling of the community college cohort for subsequent multivariate analyses and the calculation of baccalaureate attainment rates. In all likelihood, these students stopped out or left a community college for employment, either prior to or after earning an associate's degree, and considered this a satisfactory outcome. It is possible that a bachelor's degree was never the actual goal for many.

### Working While Enrolled

As students progressed through their postsecondary career, the percentage working while enrolled increased from 29.3% in Fall 1994 to 59.5% in Fall 1999 (**Table 5**). Across sectors, working patterns varied. For those students matriculating into the SUS, 40.2% did not work while enrolled during any semester over the tracking period (**Table 6**). In contrast, of CCS starters, only 27% did not work while enrolled at any time during the tracking period. For students found working at least one but less than five terms, the patterns for SUS and CCS starters were relatively similar. For students found working while enrolled one to four semesters, the percentages were 49.5% for CCS starters and 43.7% for SUS starters. However, CCS starters were more likely to be found working while enrolled five or more terms. Nearly 24% of CCS starters were found working while enrolled for five or more semesters as opposed to 16.2% of SUS starters.

### Part-Time and Full-Time Enrollment

As expected, attendance status patterns varied between CCS and SUS starters (**Table 7**). Students in the SUS Cohort were much more likely to enroll for 12 or more semester credit hours than were students in the CCS Cohort. The percentage of CCS starters attending full-time in Fall 1994 was 66.1%, compared to 95.2% for SUS starters.

### Remediation Required

The state requires that all students entering the CCS or SUS must show proficiency in certain basic skills (for discussion of the State remedial requirements, see **APPENDIX A**). Of the 82,787 high school graduates either the SUS or CCS determined that 15.4% needed remediation in reading, 19.6% needed remediation in math, and 16% needed remediation in writing (**Table 8**). There were 9,278 students (11.2%) determined to need remediation in only one area, 6,445 students (7.8%) determined to need remediation in two areas, and 6,701 (8.1%) determined to need remediation in all three areas. Due in large part to the open enrollment admissions policies of the CCS, there was a large discrepancy between the remediation needs of CCS starters and SUS starters (**Table 9**).

Of the 23,862 students starting in the CCS, 31.4% were determined to need remediation in reading, 38.6% were determined to need remediation in math, and 33.3% were determined to need remediation in writing. There were 5,306 students (22.2%) determined to need remediation in one area, 3,792 students (15.9%) determined to need remediation in two areas, and 3,916 (16.4%) determined to need remediation in all three areas.

For SUS starters 4.7% were found to need remediation in reading, 4.1% were found to need remediation in math, and 4.7% were found to need remediation in writing. Of these students, 6.1% needed remediation in one area, 2.6% needed remediation in two areas, and 0.7% needed remediation in all three areas.

#### Dual Enrollment and Acceleration Activity

Of the 82,787 1994 public high school graduates, 14,938 (18%) had taken dual enrollment courses or received acceleration credit (**Table 10**). The average number of hours of dual enrollment credit attempted was 10.39, while the average number of test credit granted was 9.23 hours. When analyzing the differences between CCS starters and SUS starters in the average number of acceleration credits awarded, there was not a noticeable difference. For CCS starters, the average number of dual enrollment hours attempted was 9.98, while the average number of hours for SUS starters was 11.08 (**Table 11**). Similarly, the average number of non-dual enrollment acceleration hours awarded to CCS starters was 8.09, while the average number of non-dual enrollment acceleration credit hours granted to SUS starters was 9.23 (**Table 12**).

### **SIX-YEAR OUTCOMES**

There were a total of 25,266 degrees/credentials awarded to 1993-94 Florida public high school graduates between 1994 and 2000 (**Table 13a**). For CCS starters there were 11,789 degrees and certificates granted in either the CCS or SUS (**Table 13b**). This figure includes a duplicate count for those students receiving more than one degree. For SUS starters there were 10,191 degrees and certificates granted in either sector. Degree information broken out by sector of initial enrollment and term is provided in **Tables 14a-b**.

#### Highest Degree Held

Analysis was done in order to examine the highest degree held by Spring 2000 for both SUS starters and CCS starters. Students might have completed more than one degree during this period. However, to obtain the highest degree information only students' most advanced degree was included. Students were included in the analysis regardless of whether they took credit hour courses in their first term, in order to obtain data on students enrolling solely in clock hour courses and completing certificate or apprenticeship programs. Those included in the SUS cohort were students who began in the SUS in the Fall of 1994 or in Summer of 1994 and continued on into Fall. Likewise, students included in the CCS cohort were those enrolling in the CCS in Fall 1994 or beginning classes in Summer 1994 and continuing on into the Fall. Students found in both sectors were included in the SUS cohort.

Of those students beginning in the SUS, 7.1% earned an A.A. or A.S., 57% earned a baccalaureate degree, and 3.1% earned a post-baccalaureate degree as their highest degree held by Spring of 2000 (**Table 15**). For CCS starters, 19.2% had obtained an A.A. or A.S. degree, 12.7% had obtained a baccalaureate degree, and 0.4% had obtained a post-baccalaureate degree as their highest degree held by Spring 2000. Unfortunately, 53.9% of the 1993-94 Florida public high school graduates who matriculated in either the SUS or the CCS had not obtained a postsecondary degree or credential after six years. This is consistent with the findings of Whitfield and Howat (1999).

## MULTIVARIATE ANALYSIS OF BACCALAUREATE DEGREE COMPLETION IN SIX YEARS

In order to get a better understanding of how the variables found in the literature impact postsecondary persistence and degree attainment, several multivariate analysis techniques were employed. In order to maximize the accuracy of the cross sector comparisons, certain additional restrictions were placed on the students included in the analysis, bringing the total number of cases included in the multivariate analyses to 27,659. First, unlike the descriptive statistics above, only students who had taken credit hours in their first term of postsecondary enrollment were included in the multivariate analyses. In addition, students who graduated in districts Escambia and Hendry were excluded because of omissions in the data submitted for those counties. The cohorts utilized to assess the impact of various factors were specified as follows:

SUS Starters - The State University System (SUS) cohort consisted of students who were enrolled in credit hour courses in the SUS in Fall 1994. Students who were found in both the CCS and SUS in Fall 1994 were placed in the SUS cohort. This reduced the number of students from 12,383 to 12,070 for the SUS cohort.

CCS Starters - Students included in the CCS cohort for graduation rates had to be seeking an Associate in Arts degree or be classified as general freshmen. In addition, students must have attempted at least 15 credit hours in the Community College System from 1994 to 1996. If a student had less than 15 credit hours but was later found enrolled in the State University System, he or she was also included. Finally, in order to be included in the cohort, students must have taken an entry-level placement test in the first three years of the tracking period (1994-96). This reduced the CCS cohort from 23,862 to 15,589 students.

### ***Graduation Rates***

In order to assess the differences in baccalaureate degree attainment among different variables, baccalaureate graduation rates were calculated for SUS and CCS starters. As of Spring 2000, the overall graduation rate for the 27,659 students in the cohort was 35.6% (**Table 16a**). For CCS starters, the six-year graduation rate was 17%, while 59.7% of SUS starters had obtained a baccalaureate degree in six years (**Table 16b**).

Graduation rates were calculated for several demographic, academic performance, and enrollment variables. A full set of graduation rates can be found in **APPENDIX B**. Graduation rates for selected variables are highlighted below.

- Asian and white students have the highest six-year graduation rates overall (42.8% and 39.9%, respectively). In contrast, blacks had a graduation rate of 25.5% and Hispanic students had a graduation rate of 24.3%. (**APPENDIX B-1a**)
- Females graduated at a rate of 39%, while males graduated at a rate of 31.1%. (**APPENDIX B-2a**)
- There appears to be a steady increase in graduation rates as one moves up the family income ladder. Students with estimated family incomes of less than \$10,000 had a graduation rate of

only 33.8%, while those with an estimated family income of \$70,000 and above had a graduation rate of 57.3%. (**APPENDIX B-3a**)

- As would be expected, as high school GPA increased so too did six-year graduation rates. Students whose high school GPA was 2.0-2.49 graduated at a rate of 13.1%. For a GPA of 3.0-3.49 the rate was 43.3%. Overall, nearly 80% of students with a high school GPA of 4.0 or higher graduated with a bachelor's degree within six years. (**APPENDIX B-4a**)
- Students who had met the high school academic course requirements for SUS admission had significantly larger graduation rates than those who did not (44.8% and 15%). (**APPENDIX B-5a**)
- The number of institutions attended had a varied impact. Graduation rates remained relatively stable for students who had attended between one and three institutions, ranging from 33.8% to 39.3%. Once students had attended more than three institutions, graduation rates decreased sharply (26.2% for four institutions and 17.4% for five institutions attended). (**APPENDIX B-6a**)
- The graduation rates remained quite stable regardless of how many terms a student was found working while enrolled, fluctuating between 31% and 44%. (**APPENDIX B-7a**)

### ***Probit Model – Prediction of Degree Completion***

The above cohort of 27,659 CCS and SUS starters was used to develop a multivariate model of six-year degree completion. Cases with missing data further reduced this number to 25,413. With a dichotomous dependent variable, a probit model was used to analyze the effect of certain factors on degree completion.

$$\text{BAEARNED} = \text{CONSTANT} + \text{ALTERMS} + \text{TERMGPA} + \text{HSGPA} + \text{CRSMET} + \text{INSTS} + \text{PTTERMS} + \text{WHITE} + \text{BLACK} + \text{ASIAN} + \text{HISP} + \text{FEMALE} + \text{SUSTART} + \text{RETAINED} + \text{WRKTERMS} + \text{ALLDUAL} + \text{ALLTEST} + \text{DISABLE} + \text{EREMEDW} + \text{EREMEDR} + \text{EREMEDM} + \text{AADEGREE}$$

Where

BAEARNED:	Completion of the bachelor's degree by Spring 2000 (Y=0). <sup>1</sup>
ALTERMS:	Total number of terms (summer, fall and spring) in the tracking period in which the student was enrolled.
TERMGPA:	Fall 1994 term grade point average (GPA) for students enrolled at the community college or state university. <sup>2</sup>
HSGPA:	High school grade point average.
CRSMET:	Dichotomous variable indicating if student fulfilled the SUS course requirements, as determined by independent analysis.
INSTS:	Number of unique institutions student attended from Fall 1994 to Spring 2000.

<sup>1</sup> Normal processing of a probit model in SAS requires that the yes=0 and no=1.

<sup>2</sup> If the student was enrolled in both sectors, the Fall 1994 GPA from the state university was utilized.

PTTERMS:	Number of Fall and Spring terms in the tracking period in which the student was enrolled part-time.
WHITE:	Dichotomous variable indicating if student was white (X=1).
BLACK:	Dichotomous variable indicating if student was black (X=1).
ASIAN:	Dichotomous variable indicating if student was Asian (X=1).
HISPANIC:	Dichotomous variable indicating if student was Hispanic (X=1).
FEMALE:	Dichotomous variable indicating if student was female (X=1).
SUSTART:	Dichotomous variable for students who began postsecondary enrollment in a state university in Fall 1994 (X=1). <sup>3</sup>
RETAINED:	Dichotomous variable for students who continued their postsecondary enrollment in Fall 1995 in either sector (X=1).
WRKTERMS:	The number of fall and spring terms students were found enrolled and working. Only students with semester earnings of \$975 or more were included.
ALLDUAL:	Sum of all dual enrollment hours attempted.
ALLTEST:	Sum of all acceleration test credit awarded.
DISABLE:	Dichotomous variable indicating if student reported a disability (X=1).
EREMEDW:	Dichotomous variable indicating whether student was determined by a SUS or CCS institution to need remediation in writing (X=1).
EREMEDR:	Dichotomous variable indicated whether student was determined by a SUS or CCS institution to need remediation in reading (X=1).
EREMEDM:	Dichotomous variable indicated whether student was determined by a SUS or CCS institution to need remediation in mathematics (X=1).
AADEGREE:	Dichotomous variable indicating that a student who started in the CCS completed an AA degree at a community college (X=1).

The above variables were found to be statistically significant ( $p < .05$ ), with the exception of WHITE, ASIAN, HISP, DISABLE, and EREMEDM (**Table 17a**). In addition, the relationships with the dependent variable, after applying statistical controls, were in the expected direction. For example, starting one's postsecondary education in the State University System is associated with a higher probability of degree completion. Also, acceleration credits are associated with a higher likelihood of degree completion, while the need for remediation decreases the probability of baccalaureate completion in six years. The fact that the number of institutions attended was significant in predicting degree completion is contrary to findings by previous researchers. For example, in the 1999 study *Answers in the Toolbox: Academic Intensity, Attendance Patterns, and Bachelor's Degree Attainment*, Adelman found that the number of institutions a student attends has no effect on degree completion. Overall, the model correctly predicted degree completion for 87.5% of the cases (**Table 17b**). A simple model based on the percentage of cases in the analysis with bachelor's degree completion would predict 62.5% correctly.

Coefficients in non-linear models, such as probit, cannot be interpreted directly from the results table in the same fashion as coefficients in linear models. Unlike in linear models (e.g., linear regression), where a one-unit change in the independent variable always results in the same change in the dependent variable, in probit models, the effect of the independent variable on the dependent variable is not constant. The magnitude of the effect depends on the value of the

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<sup>3</sup> If the student was enrolled in both sectors, the State University System was credited with the student's enrollment.

independent variable. Therefore, a helpful way of interpreting the effect of particular independent variables on the dependent variable in probit models is to calculate predicted probabilities. Analysis was done in order to obtain the predicted probability of degree completion given a particular value on an independent variable, while holding all other independent variables at their mean or modal values (**Table 18**). **Table 19** demonstrates the relative impact of an independent variable at different values. Among student demographic and secondary performance factors, high school grade point average had the strongest effect. Students with a 2.5 GPA had a degree completion probability of 0.10, while the probabilities for students with 3.5 and 4.0 GPAs were 0.15 and 0.17, respectively.

The impact of acceleration mechanisms was as expected, with the likelihood of baccalaureate degree completion increasing as the number of dual enrollment hours and the acceleration test credit awarded increased. However, the effect was most dramatically felt only after a student had earned a substantial amount of acceleration credit. For example, a student would have to attempt about 28 dual enrollment hours to nearly double his/her probability of degree completion (from .12 for zero hours to .22 for 28 hours). Likewise a student would have to earn 30 acceleration test credits in order to double his/her probability of degree completion (from .12 for zero credits to .24 for 30 credits).

Among the postsecondary enrollment factors, starting at a state university, full-time enrollment, and first-term grade point average appeared to have the strongest effect on the likelihood of earning the degree within six years, when all other variables were held at their mean or modal values. The probability of degree completion increased dramatically for students who started at a state university (0.40) compared to those who started at a community college (0.12). As the number of part-time terms enrolled increased, the probability of degree completion decreased considerably, from 0.34 for students with no part-time terms to 0.04 for students with four part-time terms. When term grade point average increased from 2.0 to 4.0, the probability of degree completion increased from 0.09 to 0.23.

**Table 20** illustrates how the probit model predicted the probability of degree success, given specific student attributes. Students were classified into three different types: *Above Average*, *Average*, and *Below Average*. *Above Average* students were those with 3.5 high school and term GPAs, had met the SUS course requirements, and had 15 hours each of dual enrollment and acceleration credit. *Average* students were those who had 2.5 high school and term GPAs, had met the SUS course requirements, and had 7 hours both of dual enrollment and acceleration credit. *Below Average* students had 2.0 high school and term GPAs, had not met the SUS course requirements, had no dual enrollment or acceleration credits, and were determined to need remediation in reading and writing. Regardless of the type of student, the probability of degree completion was markedly higher for those students who initially enrolled in the SUS. For those students who initially matriculated in the SUS rather than the CCS, the probability of degree completion doubled for *Above Average* students (.36 to .71) and more than tripled for *Average* students (.13 to .43).

Additional analysis revealed that the number of terms enrolled part-time played a substantial role in affecting the likelihood of baccalaureate degree completion among SUS and CCS starters. For example, if a SUS starter did not enroll part-time at any point during the tracking period, the

probability of degree completion (while holding all other model factors constant) increased from .40 in the base model to .70. The impact was even greater for CCS starters, where a student's probability of degree completion more than tripled (.12 to .34).

The impact of the number of part-time terms was also seen across the aforementioned student types (**Figure 3**). For *Above Average* students who initially enrolled in the SUS, the likelihood of degree completion in six years was .91 for those students with zero part-time terms. This likelihood decreased dramatically once students reached four part-time terms, reducing the probability to below .50. This trend continued as the number of part-time terms increased, falling below .10 for students with eight part-time terms and approaching zero once a student had enrolled in 10 or more part-time terms. Similar patterns emerged for *Average* and *Below Average* students. *Average* students were allowed only two part-time terms before their likelihood of degree completion fell below .50. *Below Average* students faced a more difficult task, as their probability, even with zero part-time terms, was only .36.

Among the different student types, CCS starters exhibited similar effects of part-time enrollment on baccalaureate degree completion. Like their SUS counterparts, *Above Average* students were allowed more part-time terms than *Average* and *Below Average* students before the probability of degree completion became unlikely (**Figure 4**). However, even for *Above Average* students with zero part-time terms, a substantial gap persists between CCS starters and SUS starters in terms of their likelihood of degree completion (.66 and .91, respectively).

Whereas the impact of part-time enrollment had dramatic effects on the likelihood of degree completion, working while enrolled did not significantly alter the probability of degree attainment. Across all student types and sectors, the probability of baccalaureate attainment decreased by a margin of .01 to .05, as the number of terms enrolled while working increased.

When reviewing these findings it is important to note a couple of points. First of all, critics may feel that certain variables contained in this analysis should be interacted to more accurately gauge their effect on baccalaureate degree attainment. For example, some might suggest that the effect of high school GPA on degree attainment would be greater for SUS starters than for CCS starters. However, non-linear statistical models such as probit are inherently interactive. Because of the model's inherent interactive nature, scholars have argued that the use of interaction terms to show the effects between independent variables is erroneous (Nagler, 1991).

Secondly, a standardized test score, like the SAT or ACT, was not included as a variable in the probit analysis used in the current study. As aforementioned, standardized tests are not a requirement of admission into the community college system. Thus, the number of cases in the current analysis decreases significantly when a standardized test score is included in the model.

### *Multivariate Regression – Explanatory Model of First Baccalaureate Time-to-Degree*

The above cohorts were used to develop a multivariate model of time to baccalaureate degree completion.

BACCALAUREATE TIME-TO-DEGREE =

CONSTANT + HSGPA + PTTERMS + FEMALE + SUSTART + TERMGPA + ALLDUAL + ALLTEST + CRSMET + WRKTERMS + DISABLE + EREMNO + AADEGR + STOPOUTS + SUMMER + DMAJOR + MAJORNO2 + STARTERM + ALTERMS + LONGDEGR

TIME-TO-DEGREE: Time (measured in units of 1) between the term of the baccalaureate degree and the starting term

HSGPA: High school grade point average.

PTTERMS: Number of fall and spring terms in the tracking period in which the student was enrolled part-time.

FEMALE: Dichotomous variable indicating if student was female (X=1).

SUSTART: Dichotomous variable for students who began postsecondary enrollment in a state university in Fall 1994.<sup>4</sup>

TERMGPA: Fall 1994 term grade point average (GPA) for students enrolled at the community college or state university.<sup>5</sup>

ALLDUAL: Sum of all dual enrollment hours attempted.

ALLTEST: Sum of all acceleration test credit awarded.

CRSMET: Dichotomous variable indicating if student fulfilled the SUS course requirements, as determined by independent analysis (X=1).

WRKTERMS: The number of fall and spring terms students were found enrolled and working. Only students with semester earnings of \$975 or more were included.

DISABLE: Dichotomous variable indicating if student reported a disability (X=1).

EREMNO: Number of areas in which a student was determined by a SUS or CCS institution to need remediation.

AADEGR: Dichotomous variable indicating that a student completed an AA degree at a community college (X=1).

STOPOUTS: Number of fall and spring terms in which a student was not enrolled in the community college or university system.

SUMMER: Number of summer terms in which a student was enrolled in credit hour courses.

DMAJOR: Dichotomous variable indicating whether a student graduated with a double major (X=1).

MAJORNO2: Number of different 2 digit major codes.

STARTERM: Variable indicating whether a student was enrolled in Summer (X=1) or Fall (X=2) 1994.

ALTERMS: Total number of terms (summer, fall and spring) in the tracking period in which the student was enrolled.

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<sup>4</sup> If the student was enrolled in both sectors, the State University System was credited with the student's enrollment.

<sup>5</sup> If the student was enrolled in both sectors, the Fall 1994 GPA from the state university was utilized.

LONGDEGR: Any degree program requiring 128 hours or more to complete.

A multivariate OLS regression model was estimated in order to determine the effects of different variables on students' time to baccalaureate degree completion. Overall, the model developed was statistically significant ( $F=593.60$ ,  $p<.0001$ ) and explained 54% of the variance in students' time to degree completion (**Table 21**). Among the individual variables included in the model, all were statistically significant ( $p<.05$ ) with the exception of CRSMET, DISABLE, and DMAJOR. In addition, average time to degree was determined for each of the variables included in the model and can be found in **APPENDIX C**.

Within the model, the time to degree is increased the most by two variables: STOPOUTS and LONGDEGR. For each fall or spring term a student is not enrolled in classes, his or her time to degree increases by nearly one and one-half terms. Likewise, for students enrolled in baccalaureate degree programs requiring more than 128 semester hours, the time to degree increases by one and one-half semesters.

Among achievement indicators the effect on time to degree was as expected. For example, the higher one's high school and term GPA, the shorter one's time to degree. A similar effect was found for dual enrollment and acceleration credits, with higher amounts decreasing the time to degree. For example, earning 15 hours of dual enrollment or acceleration credit reduces a student's time to degree by about one-half of one term. On the other hand, the number of areas in which a student was determined to need remediation had the effect of increasing the length of time to degree completion. However, the impact was modest, only increasing a student's time to degree by about one quarter of a term if the student was determined to need remediation in three areas.

Beginning one's postsecondary degree in the SUS as opposed to the CCS also decreased the time to degree. However, controlling for other variables included in the model, the time to degree only decreased by approximately a quarter of one semester for SUS starters.

Attendance status also had the expected effect on time to degree. The more part-time terms a student was enrolled, the longer his or her time to degree. However, when all other variables are controlled for, it is only once a student has enrolled for six or more part-time terms that his or her time to degree will increase by one term.

The fact that the model explained only 54% of variance in time to degree completion indicates that there are other factors playing a role. Several of these potential factors, mentioned earlier in the literature review, could not be operationalized using the data available for the current study. For example, as aforementioned, prior studies have found that financial aid has impacted both degree completion and high school to college continuation rates. Unfortunately, financial aid data was not available for the current analysis, but will be incorporated at a later date. In addition, many have proposed that race is a factor in degree completion. According to the 1997 National Center for Education Statistics study *Postsecondary Persistence and Attainment*, regardless of the degree pursued, 1980 high school sophomores from certain minority groups were less likely than others to have obtained a baccalaureate degree by 1992. For example,

students who were white or Asian/Pacific Islander were more likely than black, Hispanic, or American Indian/Alaskan Native students to have attained a baccalaureate degree by 1992. However, a regression model including race variables was estimated for the current study and none of the race variables were found to be statistically significant. The race variables were not included in the final model because diagnostic analyses indicated that they were adversely affecting other variables.

## CONCLUSIONS AND FUTURE ANALYSES

This report on the postsecondary progression of 1993-94 public high school graduates represents two major enhancements from the Commission's first cohort follow-up study, published in 1998. First, it utilized statistical techniques that enabled the researchers to estimate statistical models that controlled for the presence of other predictor variables. Therefore, the impact of a given variable on the likelihood of degree completion or the time to degree could be estimated *in the presence of other variables*. Even so, two qualifications are in order: a) it is unrealistic to expect that all sources of variation in the degree completion outcome between the community college and state university matriculant groups could ever be controlled for; and b) the application of statistical controls does not mean the two groups are equivalent in all respects.

Second, it extended the tracking period to six years, a common time frame for state and national studies of graduation rates and time to degree. Even so, it should be noted that a six-year tracking period likely biases the analysis against students who a) enter postsecondary education under-prepared and are required to take remedial courses, b) enroll part-time, or c) transfer between institutions. Such students are more likely to be found in the Community College System given its demographic profile, its open door admissions policy, and the transfer aspect of its mission. It is likely that the negative effect of these variables on students who possess such characteristics will be somewhat mitigated as the tracking period is extended beyond six years. Given these caveats and the earlier discussion of study limitations, the following conclusions are drawn from the data.

### *Conclusions*

#### With regard to the likelihood of bachelor's degree completion:

- High school academic preparation and achievement matter. Among student demographic and secondary performance factors, high school grade point average had the strongest effect on baccalaureate degree completion. Although community college matriculants were predicted less likely to earn a bachelor's degree in a six-year period, community college starters with better high school grade point averages closed the gap on SUS starters. The impact of the number of acceleration credits (i.e., dual enrollment or credits by examination) was rather modest.
- Although where a student initially enrolls may be dictated by academic, financial, or geographical considerations, there *are* things students can do to enhance the likelihood of completing the bachelor's degree. Among the postsecondary enrollment factors, starting at a state university, full-time enrollment, and first-term grade point average appeared to have

the strongest effect on the likelihood of earning the degree within six years. Also, the more a student transfers, the less likely he or she is to earn a baccalaureate in the time frame specified here.

However, the reader must keep in mind the interactive nature of the model derived, as was illustrated by Table 19. Although degree completion within six years was more likely for state university matriculants than for community college starters, in both cases the negative effect of being enrolled a greater number of part-time terms was mitigated by having an above average high school record.

With regard to the number of terms to the first baccalaureate degree:

Within the model derived, the time to degree was increased the most by two variables: pursuit of a longer-than-average academic major and the number of “stopouts” within the tracking period. For students enrolled in baccalaureate degree programs requiring more than 128 semester hours, the time to degree increased by 1.5 semesters. Likewise, for each fall or spring term a student was not enrolled in classes, his or her time to degree increased by nearly 1.5 semesters. Beginning one’s postsecondary education in the SUS as opposed to the CCS decreased the time to degree. However, controlling for other variables included in the model, the time to degree only decreased by approximately a quarter of a semester for SUS starters.

Policy Responses

To date, Florida’s policy responses to improving bachelor’s degree productivity have fallen into two categories: 1) efforts to improve students’ high school preparation and 2) efforts to improve students’ proximity and access to baccalaureate degree opportunities. With regard to academic preparation at the high school level, in the mid-1990s the Legislature raised the requirements for a standard high school diploma by increasing the cumulative grade point average needed and including Algebra I among the course distribution requirements. More recently, the Legislature established a generous merit-based statewide scholarship that covers at least three-fourths tuition for students with a minimum 970 SAT score and 3.0 weighted GPA on the core college preparatory credits required for SUS admission.

Florida’s second set of policy responses represents the State’s exploration of options for increasing access to bachelor’s degree programs. For over twenty years Florida has provided a tuition subsidy to state residents who attend selected private institutions and has contracted with private institutions to provide, at commensurate public sector costs, educational programs that meet needs unfulfilled by the public system. Legislation from the mid-1990s sought to improve the “two-plus-two” system of articulation by capping general education requirements at 36 credit hours, limiting the Associate in Arts degree to 60 hours and most bachelor’s degrees to 120 hours, leveling commonly-numbered courses, and establishing common prerequisite courses for academic majors. More recently, the State has sought to enhance access through two-year/four-year joint use arrangements, has taken steps to allow community colleges to provide limited four-year degree offerings, and has studied the feasibility of establishing a new system of public four-year teaching colleges. So, even prior to the passage of Senate Bill 1162, the watershed higher education governance reorganization legislation of the 2001 Session, there was evidence that Florida’s policy responses to improve postsecondary access were evolving from articulation-based policies to incremental structural reforms.

The data showed that the classic “two-plus-two” pattern of articulation was far from the norm among students who earned a bachelor’s degree within six years. Of the students in the cohort who had earned a bachelor’s degree from the SUS within six years, only 17% had done so by taking the traditional “two-plus-two” path of starting at a community college, earning the A.A., transferring to the SUS and earning the bachelor’s degree. Another 2% were community college starters who transferred to the SUS prior to earning the A.A. The great majority of those who earned the bachelor’s degree had matriculated to a state university and maintained continuous enrollment in the SUS throughout the tracking period. The “two-plus-two” system of articulation is still a major and valuable component of Florida’s mix of policies designed to provide access to the bachelor’s degree. However, there are signs of its evolution from the path of choice to a protection for baccalaureate-seeking community college students who do not avail themselves of bachelor’s degree opportunities via early transfer or any of the developing structural reforms cited above.

It is not surprising that community college and state university baccalaureate degree attainment rates differ, given the differing natures of their populations when they arrive and their differing attendance patterns when they enroll. Perhaps the more appropriate question is, “Under what conditions does the “two-plus-two” system of articulation work best?” The results of this study point to some conclusions on that question as well.

- Students should arrive academically prepared. This is true for all students. High school performance had the strongest influence of all pre-college student characteristics.
- Students should maintain continuous enrollment, full-time if possible. This is especially true for community college students. The lack of targeted, need-based financial aid for part-time students, who predominate in the Community College System, has long been a gap in the State’s financial assistance policies. The 2001 legislature took a tentative first step toward redressing this situation by appropriating \$3.8 million for a need-based financial assistance grant for part-time students. However, for students whose part-time attendance is related to their ability to pay, the Commission once again sounds its familiar call for a restoration of the balance between merit-based and need-based aid.
- Community college students should complete the associate’s degree. For community college starters, the probability of bachelor’s degree completion within six years was nearly three times greater for those who earned the A.A. at a community college as compared to those who did not.

### ***Future Analyses***

The analyses reported in this study have been limited to just two outcomes, albeit important ones: the probability of baccalaureate degree completion and the time to baccalaureate degree completion. Admittedly, important variables that are likely predictive of baccalaureate completion were omitted from the current study. Factors that would require survey-based techniques for data collection, such as students’ academic or social integration, intensity of degree commitment, and perceived barriers to degree completion, will never be a part of this study. However, other data elements such as receipt of financial aid and detailed aspects of the

high school or college transcript are now at the Commission's disposal and can be incorporated in future analyses of the outcomes studied here.

Furthermore, introductory and intermediate steps in the postsecondary completion process, such as continuation from high school to college and earning the associate's degree, have yet to be considered outcomes worthy of study in their own right. Research questions to be addressed in future studies utilizing these data include:

1. Net of other factors already modeled in the current study, what contribution is made by the amount and type of financial aid (i.e., need-based and non-need-based) to the prediction of degree completion? How does the type and amount of student employment concurrent with postsecondary enrollment affect the likelihood of degree completion?
2. What factors are important predictors of whether high school graduates continue into postsecondary education or not?
3. Among students who began at a community college, what is the relative contribution of factors that are predictive of earning the A.A. degree?
4. What are the long-term impacts of any of the factors discussed in the model on post-graduate job placement and earnings?

The Commission plans to follow the current cohort through the Spring term of 2002, or eight years following high school graduation. Although the Commission's next official report on the 1993-94 Florida public high school graduates is not due until May 31, 2002, Commission staff plans to release brief reports on the above topics in the interim.

## **TABLES AND FIGURES**

**Table 1**  
**Race/Ethnicity and Gender of the Fall 1994 Cohorts**

RACE/GENDER	1993-94 High School Graduates <i>n</i> = 82,787	Community College System <i>n</i> = 23,862	State University System <i>n</i> = 12,383	Independent Colleges and Universities of Florida <sup>1</sup> <i>n</i> = 2,580
Asian	2.7% 2,255	3.0% 705	5.2% 639	4.1% 105
Black	18.9% 16,463	14.9% 3,545	15.9% 1,963	24.1% 622
Hispanic	12.8% 11,142	15.1% 3,603	11.3% 1,402	11.7% 302
American Indian	0.2% 137	0.2% 38	0.1% 14	0.2% 5
White	60.5% 52,790	66.9% 15,971	67.6% 8,365	59.9% 1,546
Female	52.5% 43,438	57.3% 13,681	57.8% 7,161	62.4% 1,611
Male	47.5% 39,349	42.7% 10,181	42.2% 5,222	37.6% 969

<sup>1</sup>Only includes students who received the Florida Resident Access Grant (FRAG) and enrolled in eligible private colleges and universities in Florida

**Table 2**  
**Estimated Family Income of the Fall 1994 Cohorts**

Income Range	1993-94 High School Graduates	Community College System	State University System	Independent Colleges and Universities of Florida <sup>1</sup>
% of cohort with data	38.2%	42.3%	81.2%	74.3%
Total with data	31,584	10,104	10,058	1,916
Total in cohort	82,787	23,862	12,383	2,580
Less Than \$10,000	5.9% 1,874	5.9% 598	4.3% 430	7.5% 143
\$10,000 - \$14,999	6.7% 2,118	7.4% 745	5.0% 507	6.7% 129
\$15,000 - \$19,999	7.7% 2,421	8.2% 831	6.1% 615	8.5% 162
\$20,000 - \$24,999	8.2% 2,584	8.9% 904	7.0% 706	8.9% 170
\$25,000 - \$29,999	8.3% 2,625	8.8% 892	7.3% 734	8.8% 169
\$30,000 - \$34,999	8.3% 2,621	9.5% 959	7.8% 789	8.0% 154
\$35,000 - \$39,999	9.3% 2,925	10.3% 1,042	8.7% 875	9.1% 175
\$40,000 - \$49,999	12.2% 3,843	13.1% 1,322	12.4% 1,244	12.4% 238
\$50,000 - \$59,999	9.8% 3,092	10.0% 1,015	11.1% 1,114	9.3% 178
\$60,000 - \$69,999	7.0% 2,216	6.3% 638	8.5% 853	5.6% 107
\$70,000 and over	16.7% 5,265	11.5% 1,158	21.8% 2,191	15.2% 291

**Table 3**  
**Average Performance Indicators of 1993-94 Florida Public High School Graduates, by Sector**

	Community College System	State University System	Independent Colleges and Universities of Florida
All			
High School GPA	2.53	3.40	3.24
SAT Score	793.3	968.4	948.7
ACT Score*	17.9	20.9	18.6
SUS Course Requirements Met	10,882	10,784	1,957
High School GPA	2.86	3.43	3.46
SAT Score	835.6	973.7	977.2
ACT Score*	19.2	21.1	20.2
SUS Course Requirements not Met	12,372	1,286	623
High School GPA	2.23	3.17	2.52
SAT Score	710.1	918.3	803.8
ACT Score*	16.8	20.0	16.5

\*Only students with an ACT score and no SAT score are considered when computing this average

**Table 4**  
**Tracking the Progress of Fall 1994 State University and Community College**  
**System Matriculants, Spring 1995 through Spring 2000**

		Began in SUS, Fall 1994 N = 12,383										
		Enrolled But Not Degreed								Earned Bachelors Degree in SUS		
YEAR	TERM	SUS		CCS		ICUF <sup>1</sup>		Not Found <sup>2</sup>		Cumulative		TOTAL <sup>3</sup>
		No.	%	No.	%	No.	%	No.	%	No.	%	
94-95	Spring	11,646	94.0%	654	5.3%	171	1.4%	380	3.1%		0.0%	12,851
95-96	Summer	4,078	32.9%	2,404	19.4%	0	0.0%	6,095	49.2%		0.0%	12,577
	Fall	10,371	83.8%	1,189	9.6%	107	0.9%	1,014	8.2%		0.0%	12,681
	Spring	9,807	79.2%	1,359	11.0%	107	0.9%	1,393	11.2%	8	0.1%	12,674
96-97	Summer	5,852	47.3%	1,499	12.1%	1	0.0%	5,226	42.2%	16	0.1%	12,594
	Fall	9,342	75.4%	1,442	11.6%	124	1.0%	1,735	14.0%	32	0.3%	12,675
	Spring	9,038	73.0%	1,415	11.4%	133	1.1%	1,949	15.7%	194	1.6%	12,729
97-98	Summer	6,190	50.0%	1,103	8.9%	1	0.0%	5,009	40.5%	294	2.4%	12,597
	Fall	8,799	71.1%	1,157	9.3%	150	1.2%	1,818	14.7%	712	5.7%	12,636
	Spring	8,337	67.3%	1,032	8.3%	153	1.2%	1,67	1.3%	2,922	23.6%	12,611
98-99	Summer	4,646	37.5%	831	6.7%	0	0.0%	3,263	26.4%	3,782	30.5%	12,522
	Fall	5,704	46.1%	935	7.6%	84	0.7%	866	7.0%	4,931	39.8%	12,520
	Spring	4,537	36.6%	847	6.8%	84	0.7%	956	7.7%	6,083	49.1%	12,507
99-00	Summer	2,550	20.6%	590	4.8%	0	0.0%	2,736	22.1%	6,573	53.1%	12,449
	Fall	3,014	24.3%	779	6.3%	50	0.4%	1,598	12.9%	7,028	56.8%	12,469
	Spring	2,537	20.5%	684	5.5%	50	0.4%	1,778	14.4%	7,405	59.8%	12,454

		Began in CCS, Fall 1994 N = 23,862										
		Enrolled But Not Degreed								Earned Bachelors Degree in SUS		
YEAR	TERM	SUS		CCS		ICUF <sup>1</sup>		Not Found <sup>2</sup>		Cumulative		TOTAL <sup>3</sup>
		No.	%	No.	%	No.	%	No.	%	No.	%	
94-95	Spring	122	0.5%	19,568	82.0%	38	0.2%	4,169	17.5%		0.0%	23,897
95-96	Summer	80	0.3%	10,176	42.6%	3	0.0%	13,618	57.1%		0.0%	23,877
	Fall	349	1.5%	16,118	67.5%	89	0.4%	7,352	30.8%		0.0%	23,908
	Spring	446	1.9%	14,492	60.7%	91	0.4%	8,886	37.2%	1	0.0%	23,916
96-97	Summer	376	1.6%	8,400	35.2%	1	0.0%	15,156	63.5%	1	0.0%	23,934
	Fall	2,231	9.3%	10,978	46.0%	279	1.2%	10,633	44.6%	7	0.0%	24,128
	Spring	2,849	11.9%	9,085	38.1%	310	1.3%	11,910	49.9%	28	0.1%	24,182
97-98	Summer	1,996	8.4%	5,464	22.9%	7	0.0%	16,480	69.1%	52	0.2%	23,999
	Fall	3,996	16.7%	6,994	29.3%	441	1.8%	12,706	53.2%	108	0.5%	24,245
	Spring	4,229	17.7%	5,863	24.6%	455	1.9%	13,098	54.9%	565	2.4%	24,210
98-99	Summer	2,804	11.8%	3,622	15.2%	16	0.1%	16,740	70.2%	869	3.6%	24,051
	Fall	4,042	16.9%	4,727	19.8%	381	1.6%	13,693	57.4%	1,338	5.6%	24,181
	Spring	3,728	15.6%	4,048	17.0%	381	1.6%	14,035	58.8%	1,955	8.2%	24,147
99-00	Summer	2,348	9.8%	2,605	10.9%	0	0.0%	16,830	70.5%	2,235	9.4%	24,018
	Fall	3,125	13.1%	3,580	15.0%	298	1.2%	14,404	60.4%	2,699	11.3%	24,106
	Spring	2,735	11.5%	3,187	13.4%	298	1.2%	14,744	61.8%	3,109	13.0%	24,073

- Notes: 1. The ICUF enrollment files from Fall 1998 forward were annual, not term. For these years, Fall and Spring term enrollments were assumed equivalent and Summer enrollment was assumed 0.  
2. "Not Found" = students who had not graduated by the end of the current term or were not enrolled in the current term.  
3. Each term total allows for dual enrollment between sectors.

**Table 5**  
**Public Postsecondary Enrollment and Working Patterns of 1993-94 Florida Public High School Graduates**

Term	Enrolled <sup>(a)</sup>			Enrolled and Working <sup>(b)</sup>			Percent of Enrolled Working		
	SUS	CCS	Either	SUS	CCS	Either	SUS	CCS	Either
Summer 1994	2,508	4,996	7,135						
Fall 1994	12,383	24,539	36,277	1,230	8,012	9,173	9.9%	32.7%	25.3%
Spring 1995	12,042	24,791	36,486	1,261	8,575	9,779	10.5%	34.6%	26.8%
Summer 1995	4,540	16,417	20,734						
Fall 1995	11,353	22,805	33,869	1,746	9,152	10,832	15.4%	40.1%	32.0%
Spring 1996	10,902	21,319	31,933	1,736	9,003	10,661	15.9%	42.2%	33.4%
Summer 1996	6,824	13,437	19,937						
Fall 1996	12,525	17,608	29,550	2,995	8,787	11,587	23.9%	49.9%	39.2%
Spring 1997	12,930	15,247	27,500	3,244	7,937	10,914	25.1%	52.1%	39.7%
Summer 1997	9,055	9,729	18,338						
Fall 1997	14,128	12,621	26,113	4,418	7,171	11,306	31.3%	56.8%	43.3%
Spring 1998	13,928	10,866	24,235	4,859	6,935	11,503	34.9%	63.8%	47.5%
Summer 1998	8,466	7,059	15,125						
Fall 1998	11,452	9,491	20,396	5,117	6,744	11,535	44.7%	71.1%	56.6%
Spring 1999	9,954	8,566	18,012	3,995	5,546	9,291	40.1%	64.7%	51.6%
Summer 1999	6,067	5,568	11,340						
Fall 1999	7,840	7,621	15,039	3,883	5,320	8,952	49.5%	69.8%	59.5%
Spring 2000	6,935	6,974	13,532	n/a	n/a	n/a	n/a	n/a	n/a

NOTES:

(a) Indicates enrollment in credit hour or clock hour courses.

(b) Fall term enrollment corresponds to employment information for the fourth quarter of the year (October to December).

Spring term enrollment corresponds to employment information for the first quarter of the year (January to March).

**Table 6**  
**Number of SUS and CCS Starters by Number of Terms Enrolled While Working**

**SUS Starters**

Number of Terms Working	Number of Students	Percentage of Students
0	4,976	40.2%
1	2,028	16.4%
2	1,487	12.0%
3	1,086	8.8%
4	808	6.5%
5	629	5.1%
6	475	3.8%
7	370	3.0%
8	238	1.9%
9	139	1.1%
10	102	0.8%
11	49	0.4%

**CCS Starters**

Number of Terms Working	Number of Students	Percentage of Students
0	6,432	27.0%
1	3,878	16.3%
2	3,346	14.0%
3	2,488	10.4%
4	2,090	8.8%
5	1,636	6.9%
6	1,271	5.3%
7	960	4.0%
8	743	3.1%
9	508	2.1%
10	330	1.4%
11	180	0.8%

NOTE: Number of terms working only includes Fall and Spring term enrollment.

**Table 7**  
**Fall 1994 Term Attendance Status of the CCS and SUS Cohorts**

Attendance Status	Community College System <i>n</i> = 23,862	State University System <i>n</i> = 12,383
Full-time	66.1% 15,765	95.2% 11,788
Part-time	33.9% 8,097	4.8% 595

**Table 8**  
**Determination of the Need for Remediation Among  
 1993-94 Florida Public High School Graduates**

	1993-94 Florida Public High School Graduates	
	N= 82,787	
	#	%
<b>Determined Need for Remediation in:</b> <sup>1</sup>		
Reading	12,752	15.4%
Math	16,266	19.6%
Writing	13,253	16.0%
Any Remediation	22,424	27.1%
<b>Determined Need for Remediation in:</b>		
1 Area	9,278	11.2%
2 Areas	6,445	7.8%
3 Areas	6,701	8.1%

<sup>1</sup>Remediation determination for High School Graduates was made in either the CCS or SUS, when students enrolled in either sector.

**Table 9**  
**Determination of the Need for Remediation  
 Among CCS and SUS Starters**

	CCS Starters		SUS Starters	
	N= 23,862		N= 12,383	
	#	%	#	%
<b>Determined Need for Remediation in:</b> <sup>1</sup>				
Reading	7,481	31.4%	576	4.7%
Math	9,211	38.6%	512	4.1%
Writing	7,946	33.3%	583	4.7%
<b>Determined Need for Remediation in:</b>				
1 Area	5,306	22.2%	758	6.1%
2 Areas	3,792	15.9%	320	2.6%
3 Areas	3,916	16.4%	91	0.7%

<sup>1</sup>Remediation determination for CCS Starters was made by the community college.  
 Remediation determination for SUS Starters was made by the state university.

**Table 10**  
**Acceleration Credit Awarded to**  
**1993-94 Florida Public High School Graduates**

1993-94 Florida Public High School Graduates			
N= 82,787			
	Number of Students	Percentage of High School Graduates	Average Credit Amount
CC Dual Enrollment Hours Attempted	11,769	14.2%	10.45
SUS Dual Enrollment Hours Attempted	474	0.6%	6.13
Any Dual Enrollment Credit Hours	12,109	14.6%	10.39
Advanced Placement Credit	2,761	3.3%	8.75
International Baccalaureate Credit	158	0.2%	21.63
CLEP Credit	455	0.5%	8.57
Other Test Credit	1,306	1.6%	5.01
Any Test Credit Awarded <sup>1</sup>	4,133	5.0%	9.23
Any Test Credit Awarded or Dual Enrollment Credit Attempted	14,938	18.0%	10.98

NOTE: Test credit is only reported for students who enrolled in the SUS or CCS following high school graduation.

<sup>1</sup>Test credit refers to Advanced Placement, International Baccalaureate, CLEP, or other.

**Table 11**  
**Dual Enrollment Hours Attempted Among CCS and SUS Starters**

	CCS Starters			SUS Starters		
	N= 23,862			N= 12,383		
	Number of Students	Percentage of CCS Starters	Average Credit Amount	Number of Students	Percentage of SUS Starters	Average Credit Amount
SUS Dual Enrollment Hours Attempted	59	0.2%	4.41	250	2.0%	6.98
CCS Dual Enrollment Hours Attempted	3,857	16.2%	10.04	3,803	30.7%	11.11
All Dual Enrollment Hours Attempted	3,904	16.4%	9.98	3,971	32.1%	11.08

**Table 12**  
**Acceleration Credit Awarded (Non-Dual Enrollment) to CCS and SUS Starters**

	CCS Starters			SUS Starters		
	N= 23,862			N= 12,383		
	Number of Students	Percentage of CCS Starters	Average Credit Amount	Number of Students	Percentage of SUS Starters	Average Credit Amount
Advanced Placement	338	1.4%	6.75	2238	18.1%	8.90
International Baccalaureate	0	0.0%	N/A	143	1.2%	20.79
CLEP	261	1.1%	8.36	85	0.7%	8.26
Other <sup>1</sup>	213	0.9%	7.14	944	7.6%	3.31
Acceleration Credit (Non-Dual Enrollment) <sup>2</sup>	805	3.4%	8.09	2906	23.5%	9.23

Note: Credits Awarded Respectively by CCS and SUS

<sup>1</sup>Other includes other methods, other exams, institutional exams, and experience.

<sup>2</sup>For CCS starters, only credit awarded by a community college is calculated. For SUS starters only credit awarded by a state university is calculated.

**Table 13a**  
**Degrees/Certificates Granted to 1993-94 Florida Public High School Graduates, 1994-2000**

<b>Degree/Completion Type</b>	<b>Number</b>	<b>Percentage of Total Degrees/Credentials Granted</b>
Vocational Certificate	1,392	5.5%
Associate in Science Certificate	463	1.8%
Apprenticeship	3	0.0%
Associate in Science	1,018	4.0%
Associate in Arts (CCS)	8,881	35.2%
Associate in Arts (SUS)	1,622	6.4%
Bachelor's	11,364	45.0%
Master's	463	1.8%
Specialist	1	0.0%
Professional Degrees		
PharmD	45	0.2%
Law	13	0.1%
M.D.	1	0.0%
<b>Total</b>	<b>25,266</b>	<b>100.0%</b>

**Table 13b**  
**Degrees/Certificates Granted for Fall 1994 CCS and SUS Starters, 1994-95 to 1999-2000**

	<b>CCS Starters</b>	<b>SUS Starters</b>
<b><i>Degrees/Certificates Granted in the Community College System</i></b>		
Associate in Arts Degree	6,756	842
Associate in Science Degree	751	71
Associate in Arts and Associate in Science	193	17
Vocational Certificate	645	64
Associate of Science Certificate	218	43
Any Degree/Certificate Granted in the CCS	8,563	930
<b><i>Degrees Granted in the State University System</i></b>		
Associate in Arts Degree	38	1,524
Bachelor's Degree	3,101	7,363
Master's Degree <sup>1</sup>	87	327
Doctoral Degree	0	0
First Professional Degree <sup>2</sup>	0	47
Any Degree/Certificate Granted in the SUS	3,226	9,261
Any Degree/Certificate Granted, Total	11,789	10,191

NOTE: Duplicated Headcount -- One person may have received multiple degrees/certificates during the tracking period

<sup>1</sup>One Specialist Degree (granted to a SU Starter in Fall 1999) is included in the Master's Degree Total

<sup>2</sup>First Professional Degrees include Law, Medical, and PharmD Degrees

**Table 14a**  
**Degrees/Certificates Granted for Fall 1994 CCS Starters**  
**by Degree Type and Term, Summer 1994 to Spring 2000**

	AA Degree (CCS)		AS Degree		Certificates <sup>1</sup>		AA Degree (SUS)		Bachelor's Degree		Master's Degree	
	N= 6,756		N= 751		N= 863		N= 38		N= 3,101		N= 87	
	#	Cumulative Percent	#	Cumulative Percent	#	Cumulative Percent	#	Cumulative Percent	#	Cumulative Percent	#	Cumulative Percent
Summer 1994	1	0.0%	0	0.0%	10	1.2%	0	0.0%	0	0.0%	0	0.0%
Fall 1994	13	0.2%	0	0.0%	62	8.3%	0	0.0%	0	0.0%	0	0.0%
Spring 1995	36	0.7%	1	0.1%	46	13.7%	0	0.0%	0	0.0%	0	0.0%
Summer 1995	65	1.7%	1	0.3%	56	20.2%	0	0.0%	0	0.0%	0	0.0%
Fall 1995	117	3.4%	3	0.7%	65	27.7%	0	0.0%	0	0.0%	0	0.0%
Spring 1996	963	17.7%	24	3.9%	50	33.5%	0	0.0%	1	0.0%	0	0.0%
Summer 1996	948	31.7%	44	9.7%	60	40.4%	1	2.6%	0	0.0%	0	0.0%
Fall 1996	866	44.5%	48	16.1%	62	47.6%	8	23.7%	6	0.2%	0	0.0%
Spring 1997	763	55.8%	82	27.0%	66	55.3%	7	42.1%	21	0.9%	0	0.0%
Summer 1997	721	66.5%	47	33.3%	50	61.1%	5	55.3%	24	1.7%	0	0.0%
Fall 1997	491	73.8%	47	39.5%	58	67.8%	3	63.2%	56	3.5%	0	0.0%
Spring 1998	393	79.6%	95	52.2%	57	74.4%	6	78.9%	457	18.2%	0	0.0%
Summer 1998	364	85.0%	62	60.5%	48	80.0%	3	86.8%	304	28.0%	2	2.3%
Fall 1998	270	89.0%	54	67.6%	42	84.8%	1	89.5%	468	43.1%	1	3.4%
Spring 1999	249	92.7%	80	78.3%	28	88.1%	2	94.7%	616	63.0%	16	21.8%
Summer 1999	186	95.4%	47	84.6%	39	92.6%	2	100.0%	280	72.0%	16	40.2%
Fall 1999	168	97.9%	35	89.2%	28	95.8%	0	100.0%	462	86.9%	12	54.0%
Spring 2000	142	100.0%	81	100.0%	36	100.0%	0	100.0%	406	100.0%	40	100.0%

NOTE: Duplicated Headcount -- One person may have received multiple degrees/certificates during the tracking period

<sup>1</sup>Includes Vocational and AS Certificates.

**Table 14b**  
**Degrees/Certificates Granted for Fall 1994 SUS Starters**  
**by Degree Type and Term, Summer 1994 to Spring 2000**

	AA Degree (CCS or SUS)		AS Degree		Certificates <sup>1</sup>		Bachelor's Degree		Master's Degree <sup>2</sup>		First Professional Degree <sup>3</sup>	
	N= 2,366		N= 71		N= 107		N= 7,363		N= 327		N= 47	
	#	Cumulative Percent	#	Cumulative Percent	#	Cumulative Percent	#	Cumulative Percent	#	Cumulative Percent	#	Cumulative Percent
Summer 1994	9	0.4%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Fall 1994	2	0.5%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Spring 1995	7	0.8%	0	0.0%	2	1.9%	0	0.0%	0	0.0%	0	0.0%
Summer 1995	17	1.5%	0	0.0%	6	7.5%	0	0.0%	0	0.0%	0	0.0%
Fall 1995	54	3.8%	0	0.0%	3	10.3%	0	0.0%	0	0.0%	0	0.0%
Spring 1996	256	14.6%	0	0.0%	10	19.6%	8	0.1%	0	0.0%	0	0.0%
Summer 1996	295	27.0%	1	1.4%	9	28.0%	8	0.2%	0	0.0%	0	0.0%
Fall 1996	338	41.3%	0	1.4%	7	34.6%	16	0.4%	0	0.0%	0	0.0%
Spring 1997	366	56.8%	2	4.2%	7	41.1%	161	2.6%	1	0.3%	0	0.0%
Summer 1997	246	67.2%	4	9.9%	7	47.7%	100	4.0%	1	0.6%	0	0.0%
Fall 1997	198	75.6%	2	12.7%	10	57.0%	418	9.7%	0	0.6%	0	0.0%
Spring 1998	122	80.7%	10	26.8%	3	59.8%	2,210	39.7%	7	2.8%	0	0.0%
Summer 1998	149	87.0%	7	36.6%	4	63.6%	858	51.3%	14	7.0%	0	0.0%
Fall 1998	93	91.0%	4	42.3%	9	72.0%	1,146	66.9%	7	9.2%	0	0.0%
Spring 1999	80	94.3%	10	56.3%	8	79.4%	1,145	82.4%	72	31.2%	2	4.3%
Summer 1999	49	96.4%	7	66.2%	9	87.9%	481	89.0%	60	49.5%	0	4.3%
Fall 1999	38	98.0%	9	78.9%	8	95.3%	450	95.1%	61	68.2%	0	4.3%
Spring 2000	47	100.0%	15	100.0%	5	100.0%	362	100.0%	104	100.0%	45	100.0%

NOTE: Duplicated Headcount -- One person may have received multiple degrees/certificates during the tracking period

<sup>1</sup>Includes Vocational and AS Certificates.

<sup>2</sup>One Specialist Degree (granted in Fall 1999) is included in the Master's Degree Total

<sup>3</sup>Includes Law, Medical, and PharmD Degrees

**Table 15**  
**Highest Degree/Certificate Held By Spring 2000, for SUS and CCS Starters**

**SUS Starters**

Degree/Credential	Number of Students	Percentage of Students
Certificates, Apprenticeship	43	0.3%
Associate in Arts/Associate in Science	879	7.1%
Bachelor's Degree	7,037	56.8%
Master's Degree	326	2.6%
Advanced Degree <sup>1</sup>	1	0.0%
First Professional Degree <sup>2</sup>	47	0.4%
No Degree	4,054	32.7%

**CCS Starters**

Degree/Credential	Number of Students	Percentage of Students
Certificates, Apprenticeship	669	2.8%
Associate in Arts/Associate in Science	4,574	19.2%
Bachelor's Degree	3,024	12.7%
Master's Degree	87	0.4%
First Professional Degree <sup>2</sup>	5	0.0%
No Degree	15,495	65.0%

<sup>1</sup>Advanced Degree includes Advanced Master's, Specialist, and Engineering Degrees

<sup>2</sup>First Professional Degree includes MD, DVM, DDS, PharmD, and Law Degrees

**Baccalaureate Graduation Rates by Term in Which Degree was Granted**

Term Degree Granted	Students in the Cohort	
	N= 27,659	
	Number of Graduates	Cumulative Graduation Rate
Spring 1995	0	0.00
Summer 1995	0	0.00
Fall 1995	0	0.00
Spring 1996	8	0.03
Summer 1996	8	0.06
Fall 1996	19	0.13
Spring 1997	167	0.73
Summer 1997	112	1.14
Fall 1997	445	2.74
Spring 1998	2,569	12.03
Summer 1998	1,114	16.06
Fall 1998	1,524	21.57
Spring 1999	1,654	27.55
Summer 1999	709	30.11
Fall 1999	832	33.12
Spring 2000	688	35.61
<b>Total</b>	<b>9,849</b>	<b>35.61</b>

**Table 16b**  
**Baccalaureate Graduation Rates by Term in Which Degree was Granted**

**SUS Starters**

Term Degree Granted	Students in the Cohort	
	N= 12,070	
	Number of Graduates	Cumulative Graduation Rate
Spring 1995	0	0.00
Summer 1995	0	0.00
Fall 1995	0	0.00
Spring 1996	7	0.06
Summer 1996	8	0.12
Fall 1996	14	0.24
Spring 1997	151	1.49
Summer 1997	97	2.29
Fall 1997	402	5.63
Spring 1998	2,187	23.74
Summer 1998	847	30.76
Fall 1998	1,119	40.03
Spring 1999	1,120	49.31
Summer 1999	467	53.18
Fall 1999	444	56.86
Spring 2000	344	59.71
<b>Total</b>	<b>7,207</b>	<b>59.71</b>

**CCS Starters**

Term Degree Granted	Students in the Cohort	
	N= 15,589	
	Number of Graduates	Cumulative Graduation Rate
Spring 1995	0	0.00
Summer 1995	0	0.00
Fall 1995	0	0.00
Spring 1996	1	0.01
Summer 1996	0	0.01
Fall 1996	5	0.04
Spring 1997	16	0.14
Summer 1997	15	0.24
Fall 1997	43	0.51
Spring 1998	382	2.96
Summer 1998	267	4.68
Fall 1998	405	7.27
Spring 1999	534	10.70
Summer 1999	242	12.25
Fall 1999	388	14.74
Spring 2000	344	16.95
<b>Total</b>	<b>2,642</b>	<b>16.95</b>

**Table 17a**  
**Probit Model - Analysis of Parameter Estimates**

Variable	Estimate	Std. Error	Chi-Square	Pr > ChiSq
Intercept	-5.0803	0.3671	191.488	<.0001
ALTERMS	0.2628	0.0048	2956.536	<.0001
TERMGPA	0.2935	0.0175	282.109	<.0001
HSGPA	0.2131	0.0245	75.364	<.0001
CRSMET	0.1366	0.0356	14.694	.0001
INSTS	-0.1244	0.0191	42.563	<.0001
PFTERMS	-0.3421	0.0077	1985.749	<.0001
WHITE	-0.0347	0.3489	0.010	.9208
BLACK	-0.6896	0.3505	3.870	.0492
ASIAN	-0.5021	0.3532	2.020	.1552
HISP	-0.2871	0.3504	0.671	.4126
FEMALE	0.2642	0.0253	109.161	<.0001
SUSTART	0.9205	0.0493	348.742	<.0001
RETAINED	0.5153	0.0721	51.043	<.0001
WRKTERMS	-0.0124	0.0048	6.571	.0104
ALLDUAL	0.0147	0.0019	60.580	<.0001
ALLTEST	0.0155	0.0030	26.892	<.0001
DISABLE	-0.2098	0.1636	1.644	.1998
EREMEDW	-0.2253	0.0498	20.499	<.0001
EREMEDR	-0.1072	0.0479	5.006	.0253
EREMEDM	0.0823	0.0436	3.560	.0592
AADEGREE	0.7162	0.0476	226.215	<.0001

	DF	Value	Pr > ChiSq
Pearson Chi-Square	25391	28793.36	<.0001

**Table 17b**  
**Probit Model - Classification Table**

		<i>Actual</i>		
		1	0	
<i>Predicted</i>	1	14,054	1,349	15,403
	0	1,838	8,172	10,010
Total		15,892	9,521	25,413

\*\*MODEL correctly predicts 87.5% of the cases.

A simple model based on case values of BAEARNED in the dataset would predict 62.5% correctly.

**Table 18**  
**Descriptive Statistics for Variables in Probit Model**

*n = 25,413*

Variable	N	Mean	Std. Dev.	Min	Max
BAEARNED (0=yes) <sup>(1)</sup>	27,659	0.644	0.479	0.000	1.000
ALTERMS	27,657	9.884	4.232	1.000	18.000
TERMGPA	25,741	2.509	0.966	0.000	4.000
HSGPA	27,300	2.953	0.764	0.890	5.000
CRSMET	27,659	0.691	0.462	0.000	1.000
INSTS	27,657	1.498	0.682	1.000	5.000
PTTERMS	27,657	2.227	2.359	0.000	12.000
WHITE	27,659	0.669	0.471	0.000	1.000
BLACK	27,659	0.141	0.348	0.000	1.000
ASIAN	27,659	0.039	0.195	0.000	1.000
HISP	27,659	0.150	0.357	0.000	1.000
FEMALE	27,659	0.572	0.495	0.000	1.000
SUSTART	27,659	0.436	0.496	0.000	1.000
RETAINED	27,659	0.857	0.350	0.000	1.000
WRKTERMS	27,659	2.640	2.713	0.000	11.000
ALLDUAL	27,659	2.420	6.266	0.000	98.000
ALLTEST	27,659	1.168	4.171	0.000	59.000
DISABLE	27,659	0.013	0.111	0.000	1.000
EREMEDW	27,659	0.195	0.396	0.000	1.000
EREMEDR	27,659	0.183	0.387	0.000	1.000
EREMEDM	27,659	0.222	0.415	0.000	1.000
AADEGREE	27,659	0.207	0.405	0.000	1.000

NOTES (1): Normal processing of a probit model in SAS requires that the  
yes=0 and no=1.

**Table 19**  
**Analysis of the Impact of Independent Variables on Baccalaureate Degree Completion**

VARIABLE VALUES <sup>1</sup>	Probability of Degree		VARIABLE VALUES	Probability of Degree	
	Model xBeta	Completion		Model xBeta	Completion
Means of Continuous IVs / Modes of Dichotomous Ivs	-1.1630	0.1224			
<b>Impact of HIGH SCHOOL GPA</b>			<b>Impact of PART-TIME ENROLLMENT</b>		
HSGPA=2.0	-1.3661	0.0859	PFTERMS=0	-0.4014	0.3441
HSGPA=2.5	-1.2596	0.1039	PFTERMS=1	-0.7434	0.2286
HSGPA=3.0	-1.1531	0.1244	PFTERMS=2	-1.0855	0.1389
HSGPA=3.5	-1.0465	0.1477	PFTERMS=3	-1.4275	0.0767
HSGPA=4.0	-0.9400	0.1736	PFTERMS=4	-1.7696	0.0384
<b>Impact of # INSTITUTIONS ATTENDED</b>			<b>Impact of 1st TERM GPA</b>		
INSTS=1	-1.1010	0.1354	TERMGPA=2.0	-1.3124	0.0947
INSTS=2	-1.2254	0.1102	TERMGPA=2.5	-1.1656	0.1219
INSTS=3	-1.3499	0.0885	TERMGPA=3.0	-1.0189	0.1541
INSTS=4	-1.4743	0.0702	TERMGPA=3.5	-0.8721	0.1916
INSTS=5	-1.5987	0.0549	TERMGPA=4.0	-0.7254	0.2341
<b>Impact of SUS REQUIRED COURSES MET</b>			<b>Impact of 1st YEAR RETENTION</b>		
CRSMET=0	-1.2996	0.0969	RETAINED=0	-1.6783	0.0466
CRSMET=1	-1.1630	0.1224	RETAINED=1	-1.1630	0.1224
<b>Impact of GENDER</b>			<b>Impact of EARNING AN AA DEGREE in the CCS</b>		
FEMALE=0	-1.4272	0.0768	AADEGREE=0	-1.1630	0.1224
FEMALE=1	-1.1630	0.1224	AADEGREE=1	-0.4468	0.3275
<b>Impact of Initial SUS ENROLLMENT</b>			<b>Impact of NEEDING REMEDIATION IN READING</b>		
SUSTART=0	-1.1630	0.1224	EREMEDR=0	-1.1630	0.1224
SUSTART=1	-0.2425	0.4042	EREMEDR=1	-1.2702	0.1020
<b>Impact of NEEDING REMEDIATION IN WRITING</b>			<b>Impact of ACCELERATION TEST CREDIT</b>		
EREMEDW=0	-1.1630	0.1224	ALLTEST=0	-1.1811	0.1188
EREMEDW=1	-1.3883	0.0825	ALLTEST=6	-1.0883	0.1382
<b>Impact of DUAL ENROLLMENT</b>			ALLTEST=12	-0.9954	0.1598
ALLDUAL=0	-1.1986	0.1153	ALLTEST=18	-0.9026	0.1834
ALLDUAL=7	-1.0956	0.1366	ALLTEST=24	-0.8098	0.2090
ALLDUAL=14	-0.9927	0.1604	ALLTEST=30	-0.7170	0.2367
ALLDUAL=21	-0.8897	0.1868	ALLTEST=36	-0.6242	0.2663
ALLDUAL=28	-0.7867	0.2157	ALLTEST=42	-0.5313	0.2976
ALLDUAL=35	-0.6838	0.2471	ALLTEST=48	-0.4385	0.3305
ALLDUAL=42	-0.5808	0.2807	ALLTEST=54	-0.3457	0.3648
ALLDUAL=49	-0.4778	0.3164	ALLTEST=59	-0.2683	0.3942
ALLDUAL=56	-0.3748	0.3539	<b>Impact of TERMS FOUND WORKING WHILE ENROLLED</b>		
ALLDUAL=63	-0.2719	0.3929	WRKTERMS=0	-1.1303	0.1292
ALLDUAL=70	-0.1689	0.4329	WRKTERMS=1	-1.1427	0.1266
ALLDUAL=77	-0.0659	0.4737	WRKTERMS=2	-1.1551	0.1240
ALLDUAL=84	0.0370	0.5148	WRKTERMS=3	-1.1675	0.1215
ALLDUAL=91	0.1400	0.5557	WRKTERMS=4	-1.1798	0.1190
ALLDUAL=98	0.2430	0.5960	WRKTERMS=5	-1.1922	0.1166
			WRKTERMS=6	-1.2046	0.1142
			WRKTERMS=7	-1.2170	0.1118
			WRKTERMS=8	-1.2294	0.1095
			WRKTERMS=9	-1.2417	0.1072
			WRKTERMS=10	-1.2541	0.1049
			WRKTERMS=11	-1.2665	0.1027

NOTES: 1) Unless otherwise specified, variables are held constant at the mean for continuous variables and at the mode for dichotomous variables.

Table 20

Estimated Probability of Bachelor's Degree Completion by Student Achievement Type for CCS and SUS Starters

VARIABLE VALUES <sup>1</sup>	Probability of Degree Completion					
	CCS Starters			SUS Starters		
	Above Average <sup>2</sup>	Average <sup>3</sup>	Below Average <sup>4</sup>	Above Average <sup>2</sup>	Average <sup>3</sup>	Below Average <sup>4</sup>
Means of Continuous IVs / Modes of Dichotomous Ivs	0.3607	0.1347	0.0208	0.7136	0.4269	0.1318
<b>Impact of PART-TIME ENROLLMENT</b>						
PTTERMS=0	0.6573	0.3658	0.1009	0.9075	0.7182	0.3609
PTTERMS=1	0.5251	0.2466	0.0528	0.8373	0.5931	0.2425
PTTERMS=2	0.3901	0.1522	0.0250	0.7394	0.4575	0.1491
PTTERMS=3	0.2672	0.0855	0.0106	0.6177	0.3268	0.0834
PTTERMS=4	0.1677	0.0435	0.0041	0.4830	0.2145	0.0423
PTTERMS=5	0.0959	0.0200	0.0014	0.3502	0.1286	0.0194
PTTERMS=6	0.0497	0.0083	0.0004	0.2337	0.0701	0.0080
PTTERMS=7	0.0233	0.0031	0.0001	0.1426	0.0346	0.0030
PTTERMS=8	0.0099	0.0010	0.0000	0.0791	0.0154	0.0010
PTTERMS=9	0.0038	0.0003	0.0000	0.0398	0.0062	0.0003
PTTERMS=10	0.0013	0.0001	0.0000	0.0181	0.0022	0.0001
PTTERMS=11	0.0004	0.0000	0.0000	0.0074	0.0007	0.0000
PTTERMS=12	0.0001	0.0000	0.0000	0.0027	0.0002	0.0000
<b>Impact of TERMS FOUND WORKING WHILE ENROLLED</b>						
WRKTERMS=0	0.3730	0.1419	0.0224	0.7246	0.4398	0.1389
WRKTERMS=1	0.3683	0.1391	0.0218	0.7204	0.4349	0.1362
WRKTERMS=2	0.3637	0.1364	0.0212	0.7163	0.4301	0.1335
WRKTERMS=3	0.3590	0.1337	0.0205	0.7121	0.4252	0.1309
WRKTERMS=4	0.3544	0.1310	0.0199	0.7078	0.4203	0.1283
WRKTERMS=5	0.3498	0.1284	0.0193	0.7035	0.4155	0.1257
WRKTERMS=6	0.3452	0.1258	0.0188	0.6993	0.4107	0.1231
WRKTERMS=7	0.3407	0.1233	0.0182	0.6949	0.4059	0.1206
WRKTERMS=8	0.3362	0.1208	0.0177	0.6906	0.4011	0.1182
WRKTERMS=9	0.3316	0.1183	0.0171	0.6862	0.3963	0.1157
WRKTERMS=10	0.3272	0.1159	0.0166	0.6818	0.3915	0.1133
WRKTERMS=11	0.3227	0.1135	0.0161	0.6774	0.3868	0.1110

NOTES:

<sup>1</sup>Unless otherwise specified, the independent variables not being manipulated are held constant at the mean for continuous variables and at the mode for dichotomous variables.

<sup>2</sup>Above Average Students were those with 3.5 high school and term GPAs, had met the SUS course requirements, and had 15 hours of dual enrollment and acceleration credit

<sup>3</sup>Average Students were those with 2.5 high school and term GPAs, had met the SUS course requirements, and had 7 hours of dual enrollment and acceleration credit

<sup>4</sup>Below Average Students were those with 2.0 high school and term GPAs, had not met the SUS course requirements, had no dual enrollment and acceleration credit, and were determined to need remediation in reading and writing

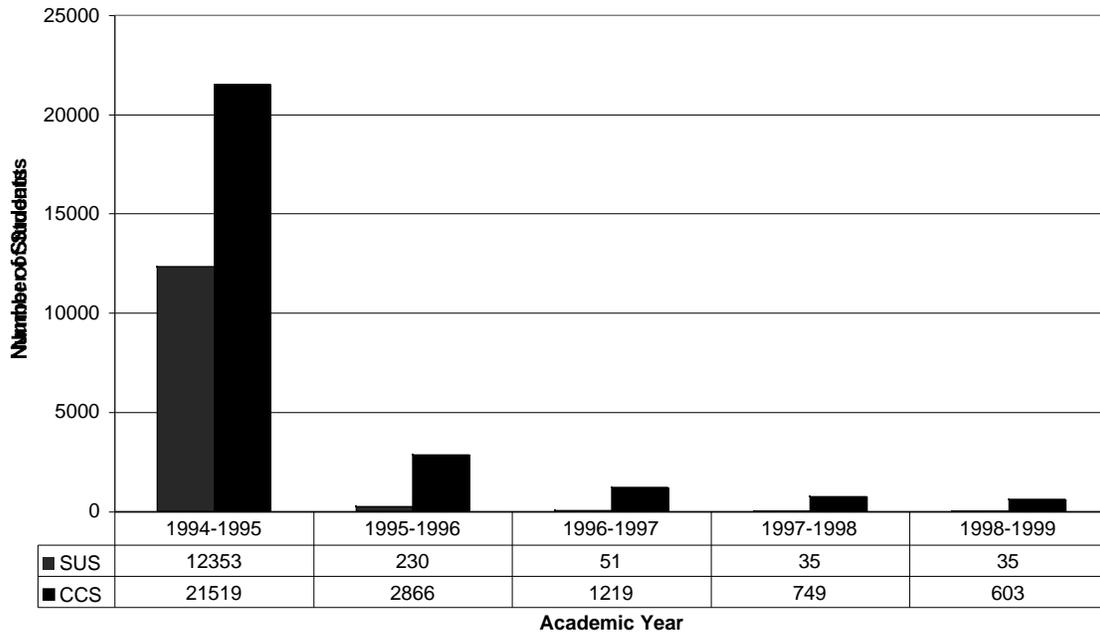
**Table 21**  
**OLS Regression Model- Analysis of Parameter Estimates**

Variable	Estimate	Std. Error	t-value	Pr > ChiSq
Intercept	8.9154	0.1810	49.250	<.0001
HSGPA	-0.2786	0.0316	-8.830	<.0001
PFTERMS	0.1508	0.0117	12.880	<.0001
FEMALE	-0.4775	0.0317	-15.040	<.0001
SUSTART	-0.2329	0.0680	-3.430	.0006
TERMGPA	-0.2470	0.0245	-10.090	<.0001
ALLDUAL	-0.0340	0.0022	-15.200	<.0001
ALLTEST	-0.0306	0.0029	-10.460	<.0001
CRSMET	0.0570	0.0507	1.120	.2612
WRKTERMS	0.0534	0.0062	8.680	<.0001
DISABLE	-0.1515	0.2397	-0.630	.5275
EREMNO	0.0849	0.0258	3.290	.0010
AADEGR	0.2267	0.0651	3.480	.0005
STOPOUTS	1.3769	0.0351	39.210	<.0001
SUMMER	-0.1020	0.0186	-5.500	<.0001
DMAJOR	0.1117	0.1142	0.980	.3282
MAJORNO2	0.1518	0.0222	6.840	<.0001
STARTERM	-0.3796	0.0426	-8.910	<.0001
ALTERMS	0.4463	0.0101	44.060	<.0001
LONGDEGR	1.5223	0.0777	19.610	<.0001

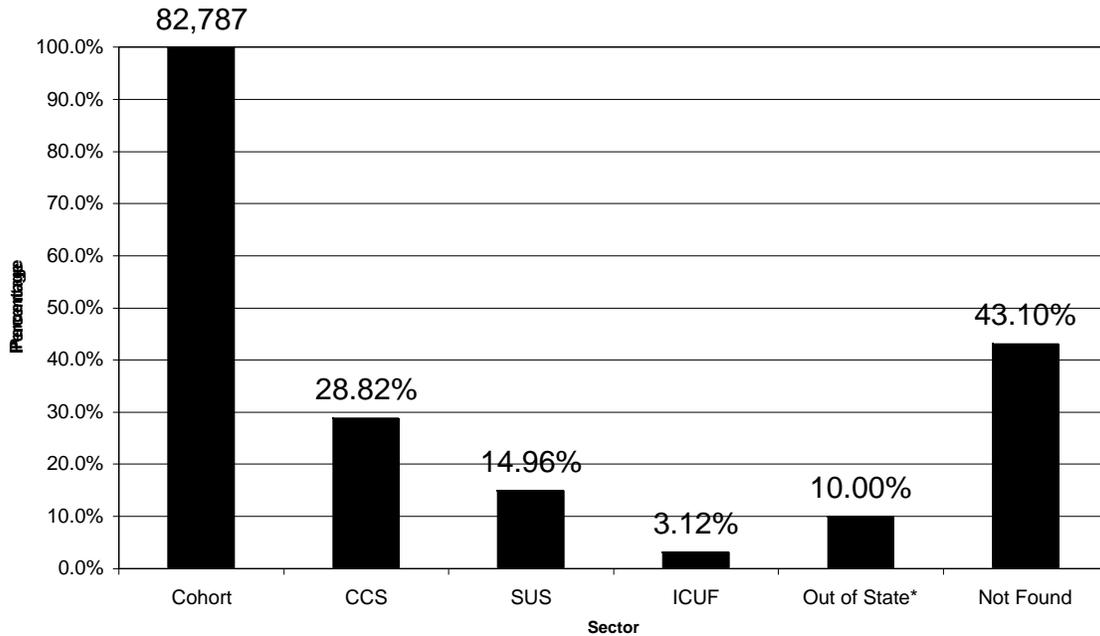
DF	Sum of Squares	Mean Square	F Value	Pr > ChiSq
19	24974	1314.44213	593.60	<.0001

R-Squared	Adjusted R-Squared
0.5362	0.5353

**Figure 1**  
**1993-94 Florida Public High School Graduates by Year of Entry and Sector**

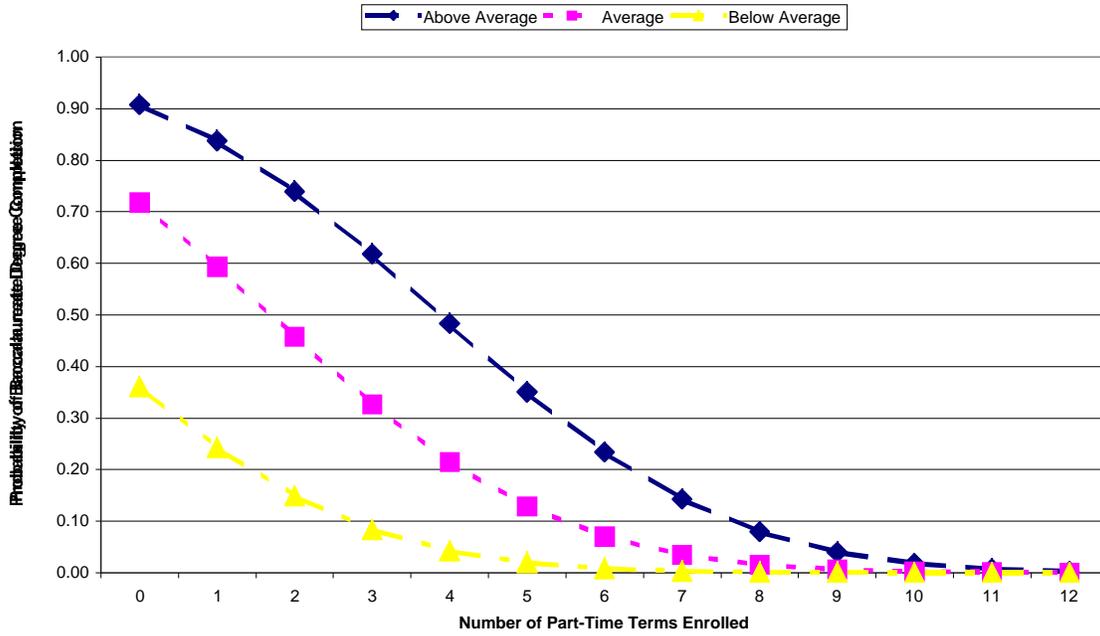


**Figure 2**  
**Percentage of 1993-94 Public High School Graduates at by Sector of Initial Enrollment**

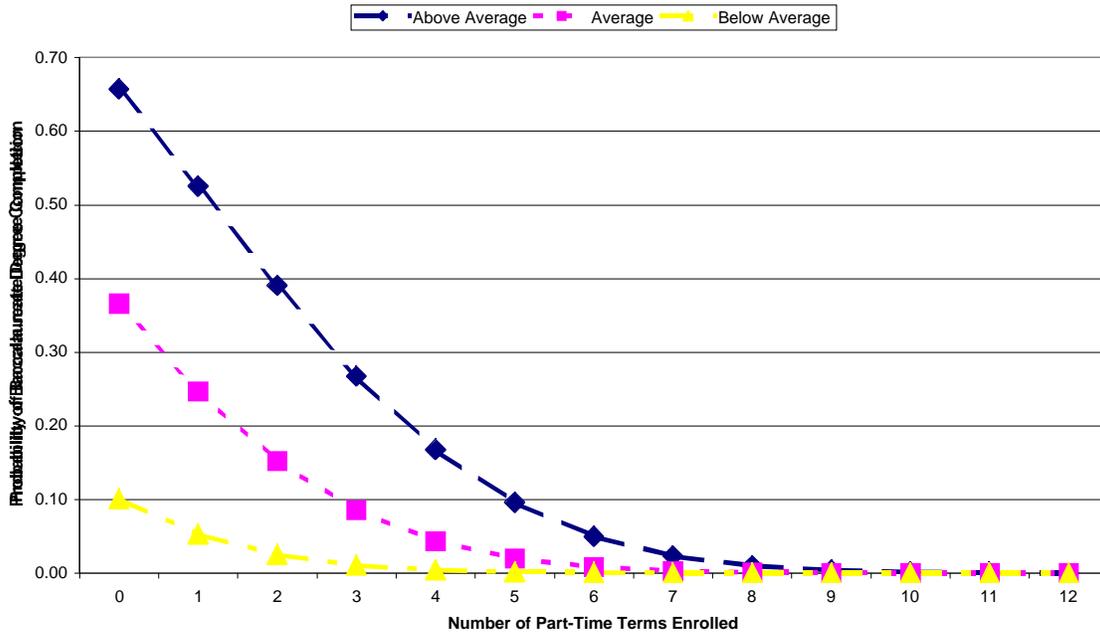


\*Assumes that 10% of high school graduates enroll out of state and does not include adult postsecondary vocational enrollment

**Figure 3**  
**The Probability of Baccalaureate Degree Completion for Different Types of SUS Starters, by Number of Part-Time Terms Enrolled**



**Figure 4**  
**The Probability of Baccalaureate Degree Completion for Different Types of CCS Starters, by Number of Part-Time Terms Enrolled**



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**APPENDIX A**

**FLORIDA STATUTES REGARDING REMEDIAL  
TESTING REQUIREMENTS AND ACCELERATION  
MECHANISMS**

## **Florida Statutes Regarding Remedial Testing Requirements and Acceleration Mechanisms**

### **Florida Statutes, 240.117 Common placement testing for public postsecondary education.--**

(1) The State Board of Education shall develop and implement a common placement test for the purpose of assessing the basic computation and communication skills of students who intend to enter a degree program at any public community college or state university. The State Board of Education shall adopt rules which enable the community colleges and state universities to implement appropriate modifications of the test instruments or test procedures for students with disabilities.

(2) The common placement testing program shall include at a minimum the following: the capacity to diagnose basic competencies in the areas of English, reading, and mathematics which are essential to perform college-level work; prerequisite skills that relate to progressively advanced instruction in mathematics, such as algebra and geometry; prerequisite skills that relate to progressively advanced instruction in language arts, such as English composition and literature; prerequisite skills which relate to the College Level Academic Skills Test (CLAST); and provision of test information to students on the specific deficiencies.

(3) The Articulation Coordinating Committee shall recommend and the State Board of Education shall adopt rules that would require high schools to give the common placement test prescribed in this section, or an equivalent test identified by the State Board of Education, at the beginning of the tenth grade year before enrollment in the eleventh grade year in public high school for the purpose of obtaining remedial instruction prior to entering public postsecondary education.

### **Florida Statutes, 240.116 Articulated acceleration.--**

(1) It is the intent of the Legislature that a variety of articulated acceleration mechanisms be available for secondary and postsecondary students attending public educational institutions. It is intended that articulated acceleration serve to shorten the time necessary for a student to complete the requirements associated with the conference of a high school diploma and a postsecondary degree, broaden the scope of curricular options available to students, or increase the depth of study available for a particular subject. It is the intent of the Legislature that students who meet the eligibility requirements of this subsection and who choose to participate in dual enrollment programs be exempt from the payment of registration, matriculation, and laboratory fees. Such fees for dually enrolled students shall be reimbursed to participating postsecondary institutions as provided annually in the General Appropriations Act; however, a postsecondary institution that earns dual enrollment FTE funds from the Florida Education Finance Program as a charter school shall not be eligible for the tuition reimbursement. Articulated acceleration mechanisms shall include, but not be limited to, dual enrollment,

early admission, advanced placement, credit by examination, and the International Baccalaureate Program. The State Board of Education shall adopt rules for any dual enrollment programs involving requirements for high school graduation.

(2) (a) 1. The dual enrollment program is the enrollment of an eligible secondary student in a postsecondary course creditable toward a vocational certificate or an associate or baccalaureate degree. For the purpose of this subparagraph, an eligible secondary student is a student who is enrolled in a Florida public secondary school or in a Florida nonpublic secondary school which is in compliance with s. 229.808 and conducts a secondary curriculum pursuant to s. 232.246. Students enrolled in postsecondary instruction that is not creditable toward the high school diploma shall not be classified as dual enrollments. Students who are eligible for dual enrollment pursuant to this section shall be permitted to enroll in dual enrollment courses conducted during school hours, after school hours, and during the summer term. Instructional time for such enrollment may exceed 900 hours; however, the school district may only report the student for a maximum of 1.0 FTE, as provided in s. 236.013(5). Any student so enrolled is exempt from the payment of registration, matriculation, and laboratory fees. With the exception of vocational-preparatory instruction, college-preparatory instruction and other forms of precollegiate instruction, as well as physical education courses that focus on the physical execution of a skill rather than the intellectual attributes of the activity, are ineligible for inclusion in the dual enrollment program. Recreation and leisure studies courses shall be evaluated individually in the same manner as physical education courses for potential inclusion in the program.

2. The Department of Education shall adopt guidelines designed to achieve comparability across school districts of both student qualifications and teacher qualifications for dual enrollment courses. Student qualifications must demonstrate readiness for college-level coursework if the student is to be enrolled in college courses. Student qualifications must demonstrate readiness for vocational-level coursework if the student is to be enrolled in vocational courses. In addition to the common placement examination, student qualifications for enrollment in college credit dual enrollment courses must include a 3.0 unweighted grade point average, and student qualifications for enrollment in vocational certificate dual enrollment courses must include a 2.0 unweighted grade point average. Exceptions to the required grade point averages may be granted if the educational entities agree and the terms of the agreement are contained within the dual enrollment interinstitutional articulation agreement. Community college boards of trustees may establish additional admissions criteria, which shall be included in the district interinstitutional articulation agreement developed according to s. 240.1161, to ensure student readiness for postsecondary instruction. Additional requirements included in the agreement shall not arbitrarily prohibit students who have demonstrated the ability to master advanced courses from participating in dual enrollment courses. School districts may not refuse to enter into an agreement with a local community college if that community college has the capacity to offer dual enrollment courses.

(b) Vocational dual enrollment shall be provided as a curricular option for secondary students to pursue in order to earn a series of elective credits toward the high

school diploma. However, vocational dual enrollment shall not supplant student acquisition of the diploma. Vocational dual enrollment shall be available for secondary students seeking a degree or certificate from a complete job-preparatory program, but shall not sustain student enrollment in isolated vocational courses. It is the intent of the Legislature that vocational dual enrollment be implemented as a positive measure. The provision of a comprehensive academic and vocational dual enrollment program within the vocational-technical center or community college is supportive of legislative intent; however, such provision is not mandatory.

(c)1. Each school district shall inform all secondary students of dual enrollment as an educational option and mechanism for acceleration. Students shall be informed of eligibility criteria, the option for taking dual enrollment courses beyond the regular school year, and the 24 minimum academic credits required for graduation. School districts shall annually assess the demand for dual enrollment and other advanced courses, and the district school board shall consider strategies and programs to meet that demand.

2. The Articulation Coordinating Committee shall develop a statement on transfer guarantees which will inform students, prior to enrollment in a dual enrollment course, of the potential for the dual enrollment course to articulate as an elective or a general education course into a postsecondary education certificate or degree program. The statement shall be provided to each district superintendent of schools, who shall include the statement in the information provided to all secondary students as required pursuant to this paragraph. The statement may also include additional information including, but not limited to, dual enrollment options, guarantees, privileges, and responsibilities.

(3) Early admission shall be a form of dual enrollment through which eligible secondary students enroll in a postsecondary institution on a full-time basis in courses that are creditable toward the high school diploma and the associate or baccalaureate degree. Students enrolled pursuant to this subsection shall be exempt from the payment of registration, matriculation, and laboratory fees.

(4) Advanced placement shall be the enrollment of an eligible secondary student in a course offered through the Advanced Placement Program administered by the College Board. Postsecondary credit for an advanced placement course shall be limited to students who score a minimum of 3, on a 5-point scale, on the corresponding Advanced Placement Examination. The specific courses for which students receive such credit shall be determined by the community college or university that accepts the student for admission. Students enrolled pursuant to this subsection shall be exempt from the payment of any fees for administration of the examination.

(5) Credit by examination shall be the program through which secondary and postsecondary students generate postsecondary credit based on the receipt of a specified minimum score on nationally standardized general or subject-area examinations. For the purpose of statewide application, such examinations and the corresponding minimum scores required for an award of credit shall be delineated by the State Board of Education

in the statewide articulation agreement. The maximum credit generated by a student pursuant to this subsection shall be mitigated by any related postsecondary credit earned by the student prior to the administration of the examination. This subsection shall not preclude community colleges and universities from awarding credit by examination based on student performance on examinations developed within and recognized by the individual postsecondary institutions.

(6) The International Baccalaureate Program shall be the curriculum in which eligible secondary students are enrolled in a program of studies offered through the International Baccalaureate Program administered by the International Baccalaureate Office. The State Board of Education shall establish rules which specify the cutoff scores and International Baccalaureate Examinations which will be used to grant postsecondary credit at community colleges and universities. Any such rules, which have the effect of raising the required cutoff score or of changing the International Baccalaureate Examinations which will be used to grant postsecondary credit, shall only apply to students taking International Baccalaureate Examinations after such rules are adopted by the State Board of Education. Students shall be awarded a maximum of 30 semester credit hours pursuant to this subsection. The specific course for which a student receives such credit shall be determined by the community college or university that accepts the student for admission. Students enrolled pursuant to this subsection shall be exempt from the payment of any fees for administration of the examinations. During the 1997-1998, 1998-1999, and 1999-2000 school years, the Department of Education shall assist up to three school districts in conducting a pilot of the Advanced International Certificate of Education Program administered by the University of Cambridge Local Examinations Syndicate. The department shall produce an evaluation report and recommendations regarding the comparability of the Advanced International Certificate of Education Program to the International Baccalaureate Program and submit the report to the President of the Senate and the Speaker of the House of Representatives on or before October 1, 2000.

**APPENDIX B**

**BACCALAUREATE GRADUATION RATES**

**Table B-1a**  
**Baccalaureate Graduation Rates by Race/Ethnicity**

Race/Ethnicity	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
Asian	466	1,090	42.75
Black	990	3,889	25.46
Hispanic	1,008	4,149	24.30
American Indian	13	32	40.63
White	7,372	18,499	39.85
<b>Total</b>	<b>9,849</b>	<b>27,659</b>	<b>35.61</b>

**Table B-1b**  
**Baccalaureate Graduation Rates by Race/Ethnicity**

**SUS Starters**

Race/Ethnicity	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
Asian	378	618	61.17
Black	840	1,886	44.54
Hispanic	721	1,397	51.61
American Indian	8	13	61.54
White	5,260	8,156	64.49
<b>Total</b>	<b>7,207</b>	<b>12,070</b>	<b>59.71</b>

**CCS Starters**

Race/Ethnicity	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
Asian	88	472	18.64
Black	150	2,003	7.49
Hispanic	287	2,752	10.43
American Indian	5	19	26.32
White	2,112	10,343	20.42
<b>Total</b>	<b>2,642</b>	<b>15,589</b>	<b>16.95</b>

**Table B-2a  
Baccalaureate Graduation Rates by Gender**

Gender	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
Female	6,162	15,815	38.96
Male	3,687	11,844	31.13
<b>Total</b>	<b>9,849</b>	<b>27,659</b>	<b>35.61</b>

**Table B-2b  
Baccalaureate Graduation Rates by Gender**

***SUS Starters***

Gender	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
Female	1,661	8,831	18.81
Male	981	6,758	14.52
<b>Total</b>	<b>2,642</b>	<b>15,589</b>	<b>16.95</b>

***CCS Starters***

Gender	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
Female	4,501	6,984	64.45
Male	2,706	5,086	53.20
<b>Total</b>	<b>7,207</b>	<b>12,070</b>	<b>59.71</b>

**Table B-3a**  
**Baccalaureate Graduation Rates by Estimated Family Income**

Estimated Family Income	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
Less Than \$10,000	289	854	33.84
\$10,000 -- \$19,999	751	2,265	33.16
\$20,000 -- \$29,999	1,035	2,691	38.46
\$30,000 -- \$39,999	1,273	3,085	41.26
\$40,000 -- \$49,999	1,009	2,220	45.45
\$50,000 -- \$59,999	886	1,855	47.76
\$60,000 -- \$69,999	692	1,326	52.19
\$70,000 and Above	1,757	3,068	57.27
<b>Total</b>	<b>7,692</b>	<b>17,364</b>	<b>44.30</b>

**Table B-3b**  
**Baccalaureate Graduation Rates by Estimated Family Income**

***SUS Starters***

Estimated Family Income	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
Less Than \$10,000	222	422	52.61
\$10,000 -- \$19,999	553	1,103	50.14
\$20,000 -- \$29,999	781	1,412	55.31
\$30,000 -- \$39,999	931	1,616	57.61
\$40,000 -- \$49,999	766	1,222	62.68
\$50,000 -- \$59,999	673	1,099	61.24
\$60,000 -- \$69,999	565	830	68.07
\$70,000 and Above	1,495	2,155	69.37
<b>Total</b>	<b>5,986</b>	<b>9,859</b>	<b>60.72</b>

***CCS Starters***

Estimated Family Income	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
Less Than \$10,000	67	432	15.51
\$10,000 -- \$19,999	198	1,162	17.04
\$20,000 -- \$29,999	254	1,279	19.86
\$30,000 -- \$39,999	342	1,469	23.28
\$40,000 -- \$49,999	243	998	24.35
\$50,000 -- \$59,999	213	756	28.17
\$60,000 -- \$69,999	127	496	25.60
\$70,000 and Above	262	913	28.70
<b>Total</b>	<b>1,706</b>	<b>7,505</b>	<b>22.73</b>

**Table B-4a**  
**Baccalaureate Graduation Rates by High School GPA**

High School GPA	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
Less Than 2.0	128	2,955	4.33
2.00 -- 2.49	686	5,255	13.05
2.50 -- 2.99	1,692	6,255	27.05
3.00 -- 3.49	2,501	5,780	43.27
3.50 -- 3.99	2,536	4,225	60.02
4.00 and Above	2,213	2,830	78.20
<b>Total</b>	<b>9,756</b>	<b>27,300</b>	<b>35.74</b>

**Table B-4b**  
**Baccalaureate Graduation Rates by High School GPA**

***SUS Starters***

High School GPA	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
Less Than 2.0	8	101	7.92
2.00 -- 2.49	209	786	26.59
2.50 -- 2.99	1,040	2,402	43.30
3.00 -- 3.49	1,898	3,387	56.04
3.50 -- 3.99	2,054	2,955	69.51
4.00 and Above	1,943	2,336	83.18
<b>Total</b>	<b>7,152</b>	<b>11,967</b>	<b>59.76</b>

***CCS Starters***

High School GPA	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
Less Than 2.0	120	2,854	4.20
2.00 -- 2.49	477	4,469	10.67
2.50 -- 2.99	652	3,853	16.92
3.00 -- 3.49	603	2,393	25.20
3.50 -- 3.99	482	1,270	37.95
4.00 and Above	270	494	54.66
<b>Total</b>	<b>2,604</b>	<b>15,333</b>	<b>16.98</b>

**Table B-5a**  
**Baccalaureate Graduation Rates by Whether or Not Student Met SUS Course Requirements**

Required Courses Met	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
Yes	8,566	19,115	44.81
No	1,283	8,544	15.02
<b>Total</b>	<b>9,849</b>	<b>27,659</b>	<b>35.61</b>

**Table B-5b**  
**Baccalaureate Graduation Rates by Whether or Not Student Met SUS Course Requirements**

***SUS Starters***

Required Courses Met	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
Yes	6,600	10,784	61.20
No	607	1,286	47.20
<b>Total</b>	<b>7,207</b>	<b>12,070</b>	<b>59.71</b>

***CCS Starters***

Required Courses Met	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
Yes	1,966	8,331	23.60
No	676	7,258	9.31
<b>Total</b>	<b>2,642</b>	<b>15,589</b>	<b>16.95</b>

**Table B-6a**  
**Baccalaureate Graduation Rates by Number of Institutions Attended**

Number of Institutions Attended	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
1	5,579	16,529	33.75
2	3,445	8,777	39.25
3	754	2,072	36.39
4	67	256	26.17
5	4	23	17.39
<b>Total</b>	<b>9,849</b>	<b>27,657</b>	<b>35.61</b>

**Table B-6b**  
**Baccalaureate Graduation Rates by Number of Institutions Attended**

***SUS Starters***

Number of Institutions Attended	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
1	5,579	7,954	70.14
2	1,282	3,135	40.89
3	312	855	36.49
4	30	110	27.27
5	4	14	28.57
<b>Total</b>	<b>7,207</b>	<b>12,068</b>	<b>59.72</b>

***CCS Starters***

Number of Institutions Attended	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
1	0	8,575	0.00
2	2,163	5,642	38.34
3	442	1,217	36.32
4	37	146	25.34
5	0	9	0.00
<b>Total</b>	<b>2,642</b>	<b>15,589</b>	<b>16.95</b>

**Table B-7a**  
**Baccalaureate Graduation Rates by Number of Terms Working While Enrolled**

Number of Terms Working	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
0	1,724	4,319	39.92
1	1,042	3,042	34.25
2	1,186	3,783	31.35
3	973	3,174	30.66
4	1,040	3,082	33.74
5	874	2,544	34.36
6	787	2,250	34.98
7	672	1,769	37.99
8	669	1,520	44.01
9	428	1,044	41.00
10	304	734	41.42
11	150	398	37.69
<b>Total</b>	<b>9,849</b>	<b>27,659</b>	<b>35.61</b>

**Table B-7b**  
**Baccalaureate Graduation Rates by Number of Terms Working While Enrolled**

**SUS Starters**

Number of Terms Working	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
0	1,492	2,379	62.72
1	875	1,512	57.87
2	968	1,622	59.68
3	753	1,313	57.35
4	756	1,257	60.14
5	623	1,054	59.11
6	509	887	57.38
7	436	719	60.64
8	370	597	61.98
9	209	364	57.42
10	149	244	61.07
11	67	122	54.92
<b>Total</b>	<b>7,207</b>	<b>12,070</b>	<b>59.71</b>

**CCS Starters**

Number of Terms Working	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
0	232	1,940	11.96
1	167	1,530	10.92
2	218	2,161	10.09
3	220	1,861	11.82
4	284	1,825	15.56
5	251	1,490	16.85
6	278	1,363	20.40
7	236	1,050	22.48
8	299	923	32.39
9	219	680	32.21
10	155	490	31.63
11	83	276	30.07
<b>Total</b>	<b>2,642</b>	<b>15,589</b>	<b>16.95</b>

**Table B-8a**  
**Baccalaureate Degrees by Number of Terms Enrolled**

Number of Terms	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
1	0	155	0.00
2	0	1,328	0.00
3	0	1,321	0.00
4	2	1,368	0.15
5	3	1,437	0.21
6	13	1,405	0.93
7	52	1,298	4.01
8	188	1,406	13.37
9	509	1,679	30.32
10	1,113	2,251	49.44
11	1,540	2,594	59.37
12	1,575	2,594	60.72
13	1,511	2,560	59.02
14	1,324	2,307	57.39
15	1,003	1,857	54.01
16	673	1,313	51.26
17	292	672	43.45
18	51	112	45.54
<b>Total</b>	<b>9,849</b>	<b>27,657</b>	<b>35.61</b>

**Table B-8b**  
**Baccalaureate Graduation Rates by Number of Terms Enrolled**

**SUS Starters**

Number of Terms	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
1	0	106	0.00
2	0	299	0.00
3	0	248	0.00
4	2	270	0.74
5	3	302	0.99
6	12	337	3.56
7	44	334	13.17
8	174	471	36.94
9	431	741	58.16
10	923	1,272	72.56
11	1,194	1,498	79.71
12	1,149	1,477	77.79
13	1,055	1,421	74.24
14	907	1,264	71.76
15	668	991	67.41
16	424	656	64.63
17	188	319	58.93
18	33	62	53.23
<b>Total</b>	<b>7,207</b>	<b>12,068</b>	<b>59.72</b>

**CCS Starters**

Number of Terms	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
1	0	49	0.00
2	0	1,029	0.00
3	0	1,073	0.00
4	0	1,098	0.00
5	0	1,135	0.00
6	1	1,068	0.09
7	8	964	0.83
8	14	935	1.50
9	78	938	8.32
10	190	979	19.41
11	346	1,096	31.57
12	426	1,117	38.14
13	456	1,139	40.04
14	417	1,043	39.98
15	335	866	38.68
16	249	657	37.90
17	104	353	29.46
18	18	50	36.00
<b>Total</b>	<b>2,642</b>	<b>15,589</b>	<b>16.95</b>

**Table B-9a**  
**Baccalaureate Graduation Rates by Term GPA**

Term GPA <sup>1</sup>	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
Less Than 2.0	858	5,096	16.84
2.00 -- 2.49	1,407	4,868	28.90
2.50 -- 2.99	2,123	5,136	41.34
3.00 -- 3.49	2,713	5,692	47.66
3.50 -- 3.99	1,931	2,972	64.97
4.00 and Above	557	1,153	48.31
<b>Total</b>	<b>9,589</b>	<b>24,917</b>	<b>38.48</b>

<sup>1</sup> Fall 1994 term grade point average

**Table B-9b**  
**Baccalaureate Graduation Rates by Term GPA**

***SUS Starters***

Term GPA <sup>1</sup>	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
Less Than 2.0	669	2,303	29.05
2.00 -- 2.49	1,106	2,068	53.48
2.50 -- 2.99	1,599	2,513	63.63
3.00 -- 3.49	1,967	2,578	76.30
3.50 -- 3.99	1,426	1,711	83.34
4.00 and Above	359	429	83.68
<b>Total</b>	<b>7,126</b>	<b>11,602</b>	<b>61.42</b>

***CCS Starters***

Term GPA <sup>1</sup>	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
Less Than 2.0	189	2,793	6.77
2.00 -- 2.49	301	2,800	10.75
2.50 -- 2.99	524	2,623	19.98
3.00 -- 3.49	746	3,114	23.96
3.50 -- 3.99	505	1,261	40.05
4.00 and Above	198	724	27.35
<b>Total</b>	<b>2,463</b>	<b>13,315</b>	<b>18.50</b>

<sup>1</sup> Fall 1994 term grade point average

**Table B-10a**  
**Baccalaureate Graduation Rates by Number of Part-Time Terms Enrolled**

Number of Part-Time Terms	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
0	4,654	8,216	56.65
1	2,408	5,563	43.29
2	1,292	3,989	32.39
3	717	3,041	23.58
4	377	2,244	16.80
5	210	1,599	13.13
6	95	1,137	8.36
7	59	786	7.51
8	26	513	5.07
9	9	300	3.00
10	1	171	0.58
11	0	67	0.00
12	1	31	3.23
<b>Total</b>	<b>9,849</b>	<b>27,657</b>	<b>35.61</b>

**Table B-10b**  
**Baccalaureate Graduation Rates by Number of Part-Time Terms Enrolled**

**SUS Starters**

Number of Part-Time Terms	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
0	3,837	5,384	71.27
1	1,775	2,796	63.48
2	825	1,537	53.68
3	409	945	43.28
4	186	556	33.45
5	91	359	25.35
6	40	216	18.52
7	27	146	18.49
8	14	80	17.50
9	3	33	9.09
10	0	13	0.00
11	0	2	0.00
12	0	1	0.00
<b>Total</b>	<b>7,207</b>	<b>12,068</b>	<b>59.72</b>

**CCS Starters**

Number of Part-Time Terms	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
0	817	2,832	28.85
1	633	2,767	22.88
2	467	2,452	19.05
3	308	2,096	14.69
4	191	1,688	11.32
5	119	1,240	9.60
6	55	921	5.97
7	32	640	5.00
8	12	433	2.77
9	6	267	2.25
10	1	158	0.63
11	0	65	0.00
12	1	30	3.33
<b>Total</b>	<b>2,642</b>	<b>15,589</b>	<b>16.95</b>

**Table B-11a**  
**Baccalaureate Graduation Rates by Whether or Not the Student was Retained**  
**Between Fall 1994 and Spring 1995 Semesters**

Retained	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
Yes	9,732	23,710	41.05
No	117	3,949	2.96
<b>Total</b>	<b>9,849</b>	<b>27,659</b>	<b>35.61</b>

**Table B-11b**  
**Baccalaureate Graduation Rates by Whether or Not the Student was Retained**  
**Between Fall 1994 and Spring 1995 Semesters**

***SUS Starters***

Retained	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
Yes	7,150	11,080	64.53
No	57	990	5.76
<b>Total</b>	<b>7,207</b>	<b>12,070</b>	<b>59.71</b>

***CCS Starters***

Retained	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
Yes	2,582	12,630	20.44
No	60	2,959	2.03
<b>Total</b>	<b>2,642</b>	<b>15,589</b>	<b>16.95</b>

**Table B-12a**  
**Baccalaureate Graduation Rates by SAT Equivalent Score**

SAT Equivalent Score	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
Less Than 800	399	2,894	13.79
800 -- 899	895	3,312	27.02
900 -- 999	1,812	4,822	37.58
1000 -- 1099	1,864	3,991	46.71
1100 -- 1199	2,012	3,624	55.52
1200 -- 1299	1,335	2,059	64.84
1300 -- 1399	752	1,070	70.28
1400 -- 1499	177	235	75.32
1500 -- 1600	41	52	78.85
<b>Total</b>	<b>9,287</b>	<b>22,059</b>	<b>42.10</b>

**Table B-12b**  
**Baccalaureate Graduation Rates by SAT Equivalent Score**

***SUS Starters***

SAT Equivalent Score	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
Less Than 800	164	474	34.60
800 -- 899	453	1,018	44.50
900 -- 999	1,235	2,243	55.06
1000 -- 1099	1,435	2,448	58.62
1100 -- 1199	1,658	2,611	63.50
1200 -- 1299	1,189	1,693	70.23
1300 -- 1399	703	947	74.23
1400 -- 1499	173	222	77.93
1500 -- 1600	41	52	78.85
<b>Total</b>	<b>7,051</b>	<b>11,708</b>	<b>60.22</b>

***CCS Starters***

SAT Equivalent Score	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
Less Than 800	235	2,420	9.71
800 -- 899	442	2,294	19.27
900 -- 999	577	2,579	22.37
1000 -- 1099	429	1,543	27.80
1100 -- 1199	354	1,013	34.95
1200 -- 1299	146	366	39.89
1300 -- 1399	49	123	39.84
1400 -- 1499	4	13	30.77
1500 -- 1600	0	0	0.00
<b>Total</b>	<b>2,236</b>	<b>10,351</b>	<b>21.60</b>

**Table B-13a**  
**Baccalaureate Graduation Rates by Whether or Not the Student Was Determined to Need Writing, Reading, and Math Remediation in the SUS or CCS**

	Students in the Cohort		
Remediation in Writing	Number of Graduates	Number in Cohort	Graduation Rate
No	9,172	22,266	41.19
Yes	677	5,393	12.55
<b>Total</b>	<b>9,849</b>	<b>27,659</b>	<b>35.61</b>

	Students in the Cohort		
Remediation in Reading	Number of Graduates	Number in Cohort	Graduation Rate
No	9,199	22,589	40.72
Yes	650	5,070	12.82
<b>Total</b>	<b>9,849</b>	<b>27,659</b>	<b>35.61</b>

	Students in the Cohort		
Remediation in Math	Number of Graduates	Number in Cohort	Graduation Rate
No	9,058	21,523	42.09
Yes	791	6,136	12.89
<b>Total</b>	<b>9,849</b>	<b>27,659</b>	<b>35.61</b>

NOTE: Need for remediation was determined by either the CCS or SUS.

**Table B-13b**  
**Baccalaureate Graduation Rates by Whether or Not the Student Was Determined to Need**  
**Writing, Reading, and Math Remediation in the SUS or CCS**

**SUS Starters**

Remediation in Writing	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
No	7,005	11,492	60.96
Yes	202	578	34.95
<b>Total</b>	<b>7,207</b>	<b>12,070</b>	<b>59.71</b>

**CCS Starters**

Remediation in Writing	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
No	2,167	10,774	20.11
Yes	475	4,815	9.87
<b>Total</b>	<b>2,642</b>	<b>15,589</b>	<b>16.95</b>

Remediation in Reading	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
No	7,001	11,484	60.96
Yes	206	586	35.15
<b>Total</b>	<b>7,207</b>	<b>12,070</b>	<b>59.71</b>

Remediation in Reading	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
No	2,198	11,105	19.79
Yes	444	4,484	9.90
<b>Total</b>	<b>2,642</b>	<b>15,589</b>	<b>16.95</b>

Remediation in Math	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
No	6,996	11,537	60.64
Yes	211	533	39.59
<b>Total</b>	<b>7,207</b>	<b>12,070</b>	<b>59.71</b>

Remediation in Math	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
No	2,062	9,986	20.65
Yes	580	5,603	10.35
<b>Total</b>	<b>2,642</b>	<b>15,589</b>	<b>16.95</b>

NOTE: Need for remediation was determined by either the CCS or SUS.

**Table B-14**  
**Baccalaureate Graduation Rates by Whether or Not the Student Earned an Associate in Arts Degree at a Community College (CCS Starters only)**

Earned an AA Degree	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
No	292	9,858	2.96
Yes	2,350	5,731	41.01
<b>Total</b>	<b>2,642</b>	<b>15,589</b>	<b>16.95</b>

**Table B-15a**  
**Baccalaureate Graduation Rates by Dual Enrollment Attempted**

Dual Enrollment Hours Attempted	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
0	6,576	21,297	30.88
1 -- 15	2,589	5,119	50.58
16 -- 30	511	902	56.65
31 -- 45	127	228	55.70
46 -- 60	21	49	42.86
Over 61	12	17	70.59
<b>Total</b>	<b>9,836</b>	<b>27,612</b>	<b>35.62</b>

**Table B-15b**  
**Baccalaureate Graduation Rates by Dual Enrollment Attempted**

**SUS Starters**

Dual Enrollment Hours Attempted	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
0	4,692	8,259	56.81
1 -- 15	1,976	3,018	65.47
16 -- 30	404	591	68.36
31 -- 45	97	143	67.83
46 -- 60	18	27	66.67
Over 61	12	15	80.00
<b>Total</b>	<b>7,199</b>	<b>12,053</b>	<b>59.73</b>

**CCS Starters**

Dual Enrollment Hours Attempted	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
0	1,884	13,038	14.45
1 -- 15	613	2,101	29.18
16 -- 30	107	311	34.41
31 -- 45	30	85	35.29
46 -- 60	3	22	13.64
Over 61	0	2	0.00
<b>Total</b>	<b>2,637</b>	<b>15,559</b>	<b>16.95</b>

**Table B-16a**  
**Baccalaureate Graduation Rates by Acceleration Test Credit**

Acceleration Test Credit <sup>1</sup>	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
0	7,433	24,080	30.87
1 -- 15	2,007	3,025	66.35
16 -- 30	347	448	77.46
31 -- 45	49	71	69.01
46 -- 60	7	14	50.00
<b>Total</b>	<b>9,843</b>	<b>27,638</b>	<b>35.61</b>

<sup>1</sup> Test credit refers to Advanced Placement, International Baccalaureate, CLEP, or other.

**Table B-16b**  
**Baccalaureate Graduation Rates by Acceleration Test Credit**

***SUS Starters***

Acceleration Test Credit	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
0	5,035	9,195	54.76
1 -- 15	1,779	2,389	74.47
16 -- 30	336	414	81.16
31 -- 45	49	59	83.05
46 -- 60	7	10	70.00
<b>Total</b>	<b>7,206</b>	<b>12,067</b>	<b>59.72</b>

***CCS Starters***

Acceleration Test Credit <sup>1</sup>	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
0	2,398	14,885	16.11
1 -- 15	228	636	35.85
16 -- 30	11	34	32.35
31 -- 45	0	12	0.00
46 -- 60	0	4	0.00
<b>Total</b>	<b>2,637</b>	<b>15,571</b>	<b>16.94</b>

<sup>1</sup> Test credit refers to Advanced Placement, International Baccalaureate, CLEP, or other.

**Table B-17a**  
**Baccalaureate Graduation Rates by Disability Status**

Reported a Disability	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
No	9,806	27,312	35.90
Yes	43	347	12.39
<b>Total</b>	<b>9,849</b>	<b>27,659</b>	<b>35.61</b>

**Table B-17b**  
**Baccalaureate Graduation Rates by Disability Status**

**SUS Starters**

Reported a Disability	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
No	7,186	12,030	59.73
Yes	21	40	52.50
<b>Total</b>	<b>7,207</b>	<b>12,070</b>	<b>59.71</b>

**CCS Starters**

Reported a Disability	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
No	2,620	15,282	17.14
Yes	22	307	7.17
<b>Total</b>	<b>2,642</b>	<b>15,589</b>	<b>16.95</b>

**Table B-18**  
**Baccalaureate Graduation Rates by Whether or Not a Student Started in the State University System**

Started in the SUS	Students in the Cohort		
	Number of Graduates	Number in Cohort	Graduation Rate
Yes	7,207	12,070	59.71
No	2,642	15,589	16.95
<b>Total</b>	<b>9,849</b>	<b>27,659</b>	<b>35.61</b>

## **APPENDIX C**

### **AVERAGE TIME TO BACCALAUREATE DEGREE COMPLETION**

**Table C-1**  
**Average Time to the Completion of a Baccalaureate Degree by Acceleration Credit Earned**

Dual Enrollment Hours Attempted	Average Time-to-Degree (in terms)	Number of Observations
0	12.4	6,753
1 -- 15	11.8	2,738
16 -- 30	10.9	544
31 -- 45	10.2	133
46 -- 60	9.2	24
Over 60	7.2	12

Acceleration Test Credit Attempted <sup>1</sup>	Average Time-to-Degree (in terms)	Number of Observations
0	12.4	7,766
1 -- 15	11.4	2,036
16 -- 30	10.6	352
31 -- 45	10.1	49
46 -- 60	11.0	7

<sup>1</sup> Test credit refers to Advanced Placement, International Baccalaureate, CLEP, or other.

**Table C-2**  
**Average Time to the Completion of a Baccalaureate Degree by the Number of Areas in Which the Student was Determined to Need Remediation by Either the CCS or SUS**

Total Number of Areas in Which Student Needed Remediation	Average Time-to-Degree (in terms)	Number of Observations
0	11.9	8,595
1	13.0	970
2	13.3	384
3	13.2	268

NOTE: Need for remediation was determined by either the CCS or SUS.

**Table C-3**  
**Average Time to the Completion of a Baccalaureate Degree by Race/Ethnicity and Gender**

Race/Ethnicity	Average Time-to-Degree (in terms)	Number of Observations
Asian	12.3	482
Black	12.6	1,009
Hispanic	12.6	1,028
American Indian	12.6	14
White	12.0	7,684

Gender	Average Time-to-Degree (in terms)	Number of Observations
Male	12.5	3,801
Female	11.9	6,416

**Table C-4**  
**Average Time to the Completion of a Baccalaureate Degree by Whether or Not the Student Started in the State University System (SUS)**

Started in the SUS	Average Time-to-Degree (in terms)	Number of Observations
No	13.0	3,010
Yes	11.8	7,207

**Table C-5**  
**Average Time to the Completion of a Baccalaureate Degree by Whether or Not the Student was Retained between Fall 1994 and Spring 1995 Semesters**

Retained	Average Time-to-Degree (in terms)	Number of Observations
No	13.4	127
Yes	12.1	10,090

**Table C-6**  
**Average Time to the Completion of a Baccalaureate Degree by High School GPA**

High School GPA	Average Time-to-Degree (in terms)	Number of Observations
Less Than 2.0	13.8	137
2.00 -- 2.49	13.5	736
2.50 -- 2.99	12.9	1,769
3.00 -- 3.49	12.4	2,603
3.50 -- 3.99	11.7	2,617
4.00 and Above	11.1	2,258

**Table C-7**  
**Average Time to the Completion of a Baccalaureate Degree by Estimated Family Income**

Estimated Family Income	Average Time-to-Degree (in terms)	Number of Observations
Less Than \$10,000	12.7	301
\$10,000 -- \$19,999	12.4	776
\$20,000 -- \$29,999	12.2	1,077
\$30,000 -- \$39,999	12.1	1,328
\$40,000 -- \$49,999	11.9	1,040
\$50,000 -- \$59,999	11.9	914
\$60,000 -- \$69,999	11.8	710
\$70,000 and Above	11.8	1,794

**Table C-8**  
**Average Time to the Completion of a Baccalaureate Degree by Stopouts**

Stopouts <sup>1</sup>	Average Time-to-Degree (in terms)	Number of Observations
0	11.9	9,235
1	13.9	740
2	14.4	185
3	14.9	34
4	14.5	18
5	15.0	4
6	16.0	1

<sup>1</sup>Stopouts were students who were not enrolled for either a fall or spring at any point during the tracking period.

**Table C-9**  
**Average Time to the Completion of a Baccalaureate Degree by the Number of 2-Digit Majors**

Number of 2-dig Majors	Average Time-to-Degree (in terms)	Number of Observations
1	12.1	5,887
2	12.1	3,266
3	12.4	919
4	12.6	127
5	13.1	16
6	17.0	1

**Table C-10**  
**Average Time to the Completion of a Baccalaureate Degree by STARTERM**

STARTERM <sup>1</sup>	Average Time-to-Degree (in terms)	Number of Observations
1	12.8	1,858
2	12.0	8,359

<sup>1</sup> Starterm was 1 if the student began in Summer 1994 and 2 if they began in Fall 1994.

**Table C-11**  
**Average Time to the Completion of a Baccalaureate Degree by**  
**Whether or Not the Student's Major Required More Than 128 Hours**

Required More Than 128 Hours	Average Time-to-Degree (in terms)	Number of Observations
No	12.1	9,807
Yes	13.3	410

**Table C-12**  
**Average Time to the Completion of a Baccalaureate Degree by Number of 6-Digit Majors**

Number of 6-dig Majors	Average Time-to-Degree (in terms)	Number of Observations
1	12.0	4,071
2	12.1	3,778
3	12.4	1,760
4	12.5	490
5	13.1	97
6	13.3	16
7	15.0	3
8	15.0	1

**Table C-13**  
**Average Time to the Completion of a Baccalaureate Degree**  
**by Number of Summer Terms Enrolled**

Number of Summer Terms	Average Time-to-Degree (in terms)	Number of Observations
0	11.3	185
1	11.0	907
2	11.2	2,312
3	11.9	3,361
4	12.9	2,359
5	14.2	971
6	15.5	122

**Table C-14**  
**Average Time to the Completion of a Baccalaureate Degree by Whether or Not**  
**the Student Earned an Associate in Arts Degree at a Community College**  
**(CCS Starters only)**

Earned an AA Degree	Average Time-to-Degree (in terms)	Number of Observations
No	11.8	7,274
Yes	13.0	2,943

**Table C-15**  
**Average Time to the Completion of a Baccalaureate Degree by Earned**  
**Whether or Not the Student Had a Double Major**

Double Major	Average Time-to-Degree (in terms)	Number of Observations
No	12.1	10,031
Yes	12.6	186

**Table C-16**  
**Average Time to the Completion of a Baccalaureate Degree by Disability Status**

Reported a Disability	Average Time-to-Degree (in terms)	Number of Observations
No	12.1	10,169
Yes	12.7	48

**Table C-17**  
**Average Time to the Completion of a Baccalaureate Degree**  
**by Number of Terms Working While Enrolled**

Number of Terms Working	Average Time-to-Degree (in terms)	Number of Observations
0	11.6	3,851
1	11.9	1,485
2	12.1	1,131
3	12.4	890
4	12.4	716
5	12.7	563
6	12.9	453
7	12.9	396
8	12.9	304
9	13.8	215
10	13.8	136
11	14.7	77

**Table C-18**  
**Average Time to the Completion of a Baccalaureate Degree by**  
**Whether or Not a Student Met the SUS Course Requirements**

Required Courses Met	Average Time-to-Degree (in terms)	Number of Observations
Yes	12.1	8,843
No	12.3	1,283

**Table C-19**  
**Average Time to the Completion of a Baccalaureate Degree**  
**by Number of Part-Time Terms Enrolled**

Number of Part-Time Terms	Average Time-to-Degree (in terms)	Number of Observations
0	11.3	4,378
1	12.2	2,602
2	12.8	1,467
3	13.1	830
4	13.5	452
5	14.0	258
6	14.6	119
7	15.2	65
8	14.8	32
9	15.7	11
10	15.5	2
11	N/A	0
12	16.0	1

**Table C-20**  
**Average Time to the Completion of a Baccalaureate Degree by Term GPA**

Term GPA <sup>1</sup>	Average Time-to-Degree (in terms)	Number of Observations
Less Than 2.0	13.1	897
2.00 -- 2.49	12.7	1,455
2.50 -- 2.99	12.3	2,178
3.00 -- 3.49	11.9	2,809
3.50 -- 3.99	11.5	1,996
4.00 and Above	11.4	586

<sup>1</sup> Fall 1994 term grade point average

**Table C-21**  
**Average Time to the Completion of a Baccalaureate Degree by SAT Equivalent Score**

SAT Equivalent Score	Average Time-to-Degree (in terms)	Number of Observations
Less Than 800	13.4	430
800 -- 899	13.0	946
900 -- 999	12.5	1,890
1000 -- 1099	12.1	1,939
1100 -- 1199	11.8	2,060
1200 -- 1299	11.4	1,358
1300 -- 1399	11.1	763
1400 -- 1499	10.6	178
1500 -- 1600	10.1	41

**Table C-22**  
**Average Time to the Completion of a Baccalaureate Degree by Number of Institutions Attended**

Number of Institutions Attended	Average Time-to-Degree (in terms)	Number of Observations
1	11.6	5,051
2	12.5	4,085
3	13.0	959
4	13.4	115
5	13.7	7