



Credit Creep and the Hours Cap: The Effects on Total Credit Hours Earned by Baccalaureate and Master's Degree Recipients

Beginning in Fall 1998, the University System switched from a quarter calendar to a semester calendar.¹ In conjunction with the semester conversion, the System also took the opportunity to re-evaluate the curriculum. This examination resulted in fundamental changes in curriculum and degree structures which were implemented along with the semester conversion. The planned effects of the curriculum and degree structure changes may have been somewhat masked by the effects of the concurrent semester conversion. This research brief provides an analysis of one area that these policy changes may have affected. Specifically, this brief focuses on the total credit hours students had earned by the time they graduated and examines whether any effects on student behavior may be related to the changes in curriculum and degree structure policies.

The changes implemented at the time of semester conversion included a complete re-structuring of the Core Curriculum (the courses delivering the general education component of an undergraduate degree) and a focus on capping the number of credit hours required for receiving a degree. Over the years as disciplines changed, additional credit hour requirements had been added to some major areas. This phenomenon came to be called "credit creep." For example, many baccalaureate degrees required 200 to 220 quarter hours (well above an earlier cap of 180 quarter hours). To address this, the System proposed requiring that baccalaureate degrees be capped at 120 semester hours (equivalent to 180 quarter hours), that associate degrees be capped at 60 semester hours (90 quarter-hour equivalents), and that master's degrees be capped at 36 semester hours (54 quarter-hour equivalents).

Due to accreditation requirements, some baccalaureate programs must continue to exceed 120 semester hours. Outside these restrictions, however, most program faculties were asked to restructure degree delivery in accordance with the 120 semester hour requirement. The specified credit hour caps simply denote the requirements for degree completion. Students certainly may take more hours than necessary, especially when they change majors. However, the act of capping degree programs meant that students could finish programs more quickly, saving costs for both the students and the state.

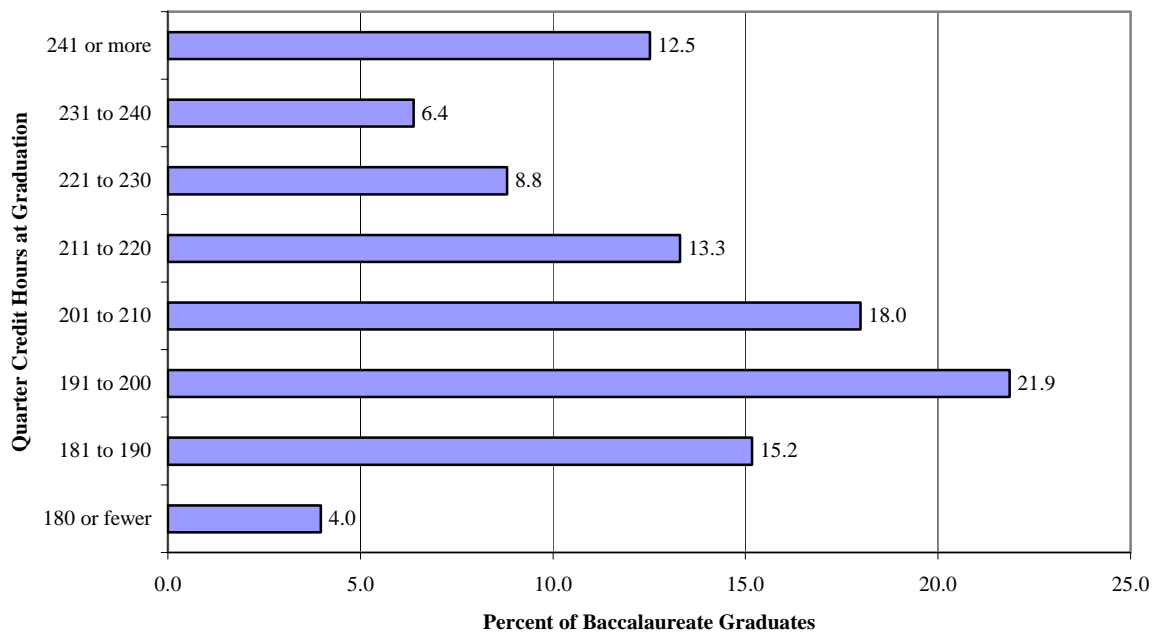
The change in policy was deliberately designed to cause a shift in student behavior, but it was not known how long it would take for students to begin graduating with fewer hours. This report describes changes in total credit hours earned prior to and following implementation of these policies. Quarter-hour data from the year prior to semester conversion (FY 1998) are compared to semester-hour data from the most recent year for which the System has complete data (FY 2000).

¹ Georgia Institute of Technology changed calendars at the beginning of the following academic year.

FY 1998 Baccalaureate Degree Recipients

Students graduating with a baccalaureate degree in FY 1998 had been on the quarter system for the entire time they were enrolled in the University System. The number of quarter hour credits earned by these students while pursuing their degree varied considerably. In Figure 1, students receiving a baccalaureate degree in FY 1998 are shown as a function of total number of quarter credit hours earned and transferred² by these students. Only four percent of the graduates received a degree after earning 180 (or fewer³) credit hours.

Figure 1. Percent of Students Graduating with Baccalaureates in FY 1998 as a Function of Number of Quarter Hours Earned at Graduation



Of the FY 1998 baccalaureate graduates, 96 percent had earned more than 180 hours. Over 55 percent of the graduates had earned between 181 and 210 hours. The remaining 40.9 percent of students far exceeded the 180 hour degree specification, with 12.5 percent having earned more than 240 hours at graduation.

FY 2000 Baccalaureate Degree Recipients

The baccalaureate degree recipients in FY 2000 began pursuing their degree under the quarter system but finished under the semester system. The FY 2000 graduates also showed considerable variability in the number of hours at graduation. However, a greater percentage of students

² Data are from the Student Information Reporting System (SIRS). "Total hours earned and transferred" is the number of college-level credit hours earned at the current institution plus the total number of college-level credit hours accepted from transfer colleges; credits awarded for advanced placement courses (e.g., AP, IB) taken in high school are not included. Total hours earned and transferred represents only the total number of credit hours awarded while in pursuit of a specific degree; total number of hours attempted may be greater.

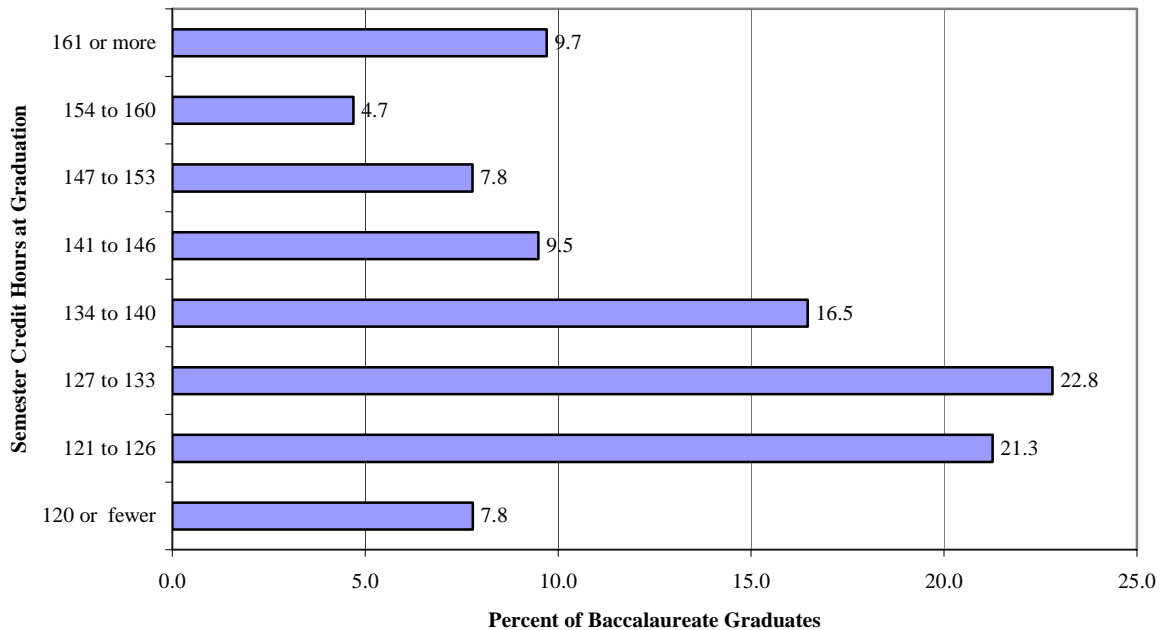
³ Some students may appear to graduate with fewer than the required number of hours. These students may have earned credit for advanced placement courses taken in high school or may be enrolled in a graduate program which requires undergraduate coursework.

graduated with hours closer to the 120 semester-hour degree requirement. (This comparison is examined in more detail in a subsequent section.)

Figure 2 shows the total number of semester hours earned and transferred by the FY 2000 baccalaureate degree graduates. Hours earned under the quarter system were converted to semester-equivalents. Figure 2 is directly comparable to Figure 1; the ranges of hours earned shown in the two figures show the same span in hours, just expressed in quarters in Figure 1 and semesters in Figure 2. Recall that 120 *semester* hours is equivalent to 180 *quarter* hours.

By FY 2000, the percent of students earning 120 or fewer hours had increased to 7.8 (up from the 4.0 percent in the equivalent group from FY 1998). Over 60 percent had earned between 121 and 140 semester hours (up from the 55.1 percent in the equivalent groups from FY 1998). The remaining 31.6 percent of students far exceeded the 120 hour degree specification (but was significantly reduced compared to the 40.9 percent in the equivalent groups from FY 1998). The percent of students in the highest credit hour group was 9.7 percent (down from the 12.5 percent in the equivalent group from 1998).

Figure 2. Percent of Students Graduating with Baccalaureates in FY 2000 as a Function of Number of Semester Hours Earned at Graduation



Note: The semester hours categories for FY2000 are equivalent to the quarter hour categories in the previous graph.

Comparing FY 2000 and FY 1998 Baccalaureates

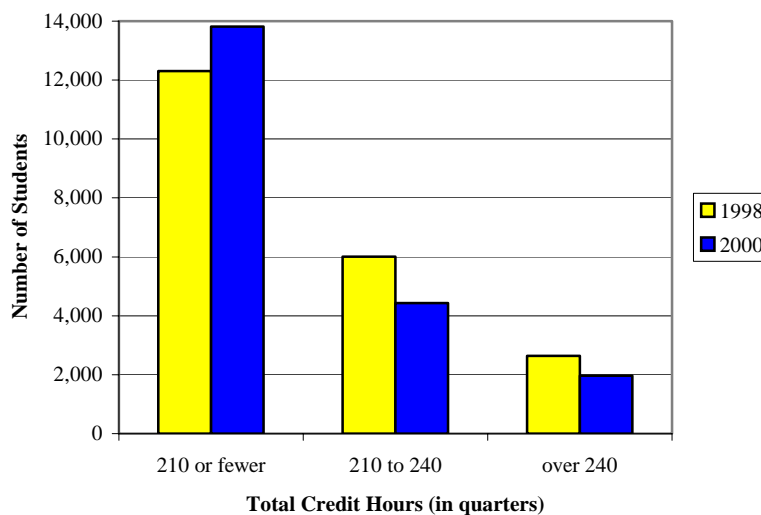
Given the apparent downward shift in total hours at graduation for the FY 2000 baccalaureates, a closer comparison of the two graduating classes was undertaken. The comparison groups were composed of baccalaureate degree recipients from institutions that granted such degrees in FY

1998 as well as in FY 2000.⁴ The FY 1998 graduates included in these analyses totaled 20,947 students who earned baccalaureate degrees. At graduation these students averaged 210.5 quarter hours earned and transferred, a figure well above the 180 quarter hour requirement for a baccalaureate degree. In total, these students earned 4,409,491 quarter credit hours in earning their degrees.

The 20,210 baccalaureate graduates in FY 2000 acquired a total of 4,152,817 quarter hours by the time they graduated. This group of students demonstrated a statistically significant reduction in total hours earned by time of graduation; the FY 2000 average dropped to 205.5 quarter hours⁵ earned. This represents a 2.4 percent decrease in the average number of hours earned by graduation.

From FY 1998 to FY 2000 there was a clear shift in the distribution of hours earned by students graduating with a baccalaureate degree in those two years. This can be seen in the following two charts. Figure 3 shows the actual number of graduates grouped by the total number of quarter credit hours earned by graduation. For comparison purposes, all data for FY 2000 are expressed in quarter-hour equivalents. More students graduated with fewer hours (the '210 or fewer' group) in FY 2000 than in FY 1998; more 1998 graduates fell in the middle (the '210 to 240' group) and higher (the 'over 240' group) hour ranges than did the FY 2000 degree recipients.

Figure 3. Number of Students and Total Quarter Hours at Graduation for FY 1998 Baccalaureate Recipients Compared to FY 2000 Baccalaureate Recipients

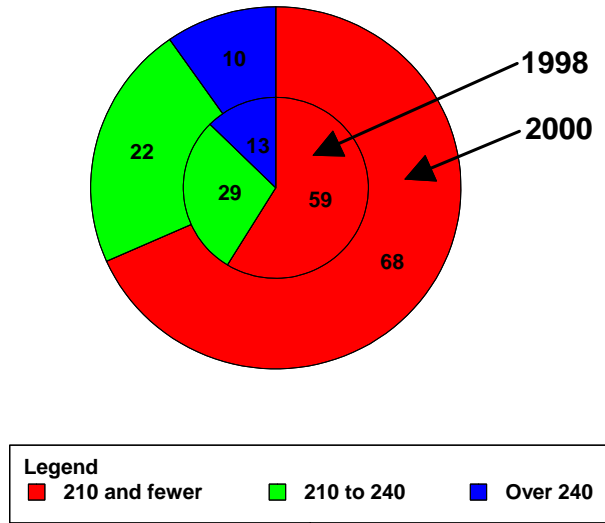


The relative proportion of students in each category is shown in Figure 4. To emphasize the differences between years, FY 1998 is overlaid onto FY 2000.

⁴ Macon State College granted baccalaureate degrees in FY 2000 but not in FY 1998; as a result, Macon State College is excluded from these analyses. Since these analyses are based on subsets of the total graduates for FY 1998 and FY 2000, the number of baccalaureate degree recipients referred to here will be less than the System-wide counts cited in other USG reports.

⁵ All semester hours have been converted to quarter hour equivalents for this analysis since the formula is calculated in the quarter metric. Quarter hour equivalents were obtained by multiplying semester hours by a 1.5 factor.

Figure 4. Percentage of Students by Total Hours at Graduation for FY 1998 Baccalaureate Recipients Compared to FY 2000 Baccalaureate Recipients



Comparing the relative proportions of the inner pie to the relative proportions of the outer pie, it is clear that there has been a shift toward students graduating with fewer hours earned and transferred. The proportion of students in the ‘210 or fewer’ group increased from about 59 percent in 1998 to roughly 68 percent in 2000. The ‘210 to 240’ and ‘over 240’ groups had smaller proportions in 2000 than in 1998.

Figures 3 and 4 demonstrated that there was a shift in number and proportion of *students* earning fewer credits by graduation. To highlight this shift, the actual credit *hours* earned by each student in each of the three groupings were summed across all 1998 graduates in that group and subtracted from the comparable sums for the 2000 graduates. The resulting “change in total hours” by category is shown in Figure 5 below.

Figure 5. Change in Total Hours at Graduation from FY 1998 to FY 2000

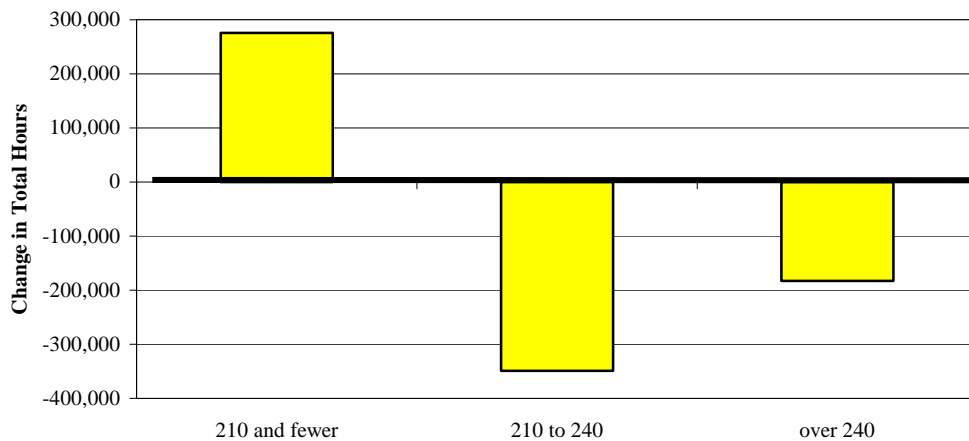


Figure 5 shows the change in *total hours earned* by 1998 and 2000 graduates whereas Figures 3 and 4 illustrated differences in the *number of students*. The heavy horizontal line in Figure 5

indicates zero difference between the number of hours earned by the 1998 and 2000 graduates. Any bar above the horizontal line indicates more hours in 2000 than in 1998; any bar below the line indicates fewer hours in 2000 than in 1998. As Figure 5 illustrates, hours at graduation for the 2000 degree recipients shifted toward the '210 and fewer' group and out of the two higher groups.

As an attempt at further isolating the change that occurred between the two graduating classes, the following assumptions could be made. Assume that the mean number of hours earned at graduation for the 2000 graduates can serve as a "simulation" of the behavior exhibited in earning a baccalaureate degree. Also assume that this simulated behavior can be applied to the 1998 graduating class. The "simulated" total hours for 1998 could then be compared to the actual hours earned by the 1998 graduates.

The 20,210 students in the 2000 graduation cohort averaged 205.48 total hours earned and transferred by the time they received their baccalaureate degree; this amounted to a grand total of 4,152,826.5 hours. If the 205.48 average is applied to the 20,947 students in the 1998 graduation cohort, the resulting "simulated" total hours would be 4,304,189.6 quarter hours. The actual number of hours earned by the 1998 graduation cohort totaled 4,409,491 quarter hours. Applying the student behavior under the new curriculum structure to the 1998 cohort implies that the new structure would have required 105,301.4 fewer quarter hours for degree completion than the old curriculum structure did.

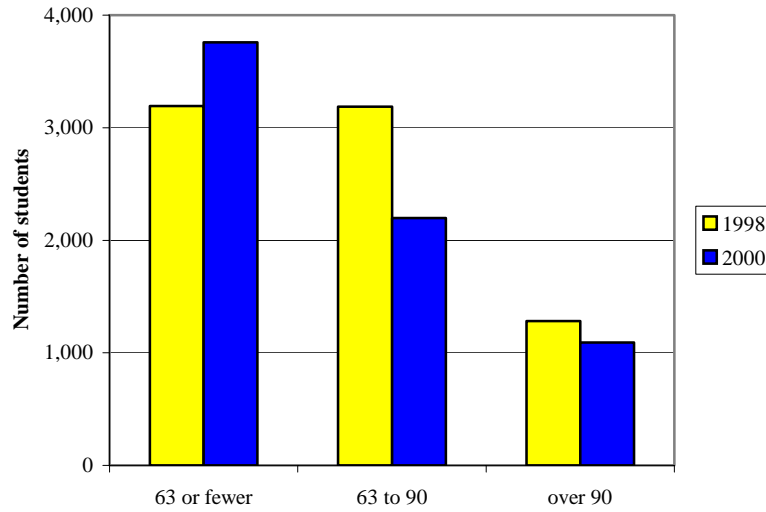
Master's Degrees: FY 1998 and FY 2000

In addition to the baccalaureate degree programs, which comprise the majority of the System's students, similar results were found with master's degree programs. To examine the differences between cohorts of master's degree students, comparison groups were constructed similar to those formed in the analyses of baccalaureate degree recipients. Again, FY 1998 and 2000 were used for the following analyses. Ranges of total hours at graduation were defined for the master's degree students so that they would be analogous to those used in the baccalaureate analyses above. As before, all analyses are expressed in quarter-credit-hour-equivalents.

The 7,665 master's students in the 1998 graduation cohort averaged 75.3 quarter hours at graduation. (Recall that the minimum number of hours to obtain a master's degree was 54 quarter hours, or 36 semester hours.) The 2000 cohort of 7,050 master's graduates averaged 73.3 quarter hours. This 2.7 percent reduction in the number of hours earned by master's degree recipients is comparable to the 2.4 percent reduction demonstrated by baccalaureate degree recipients.

The master's level graduates exhibited the same overall results as did the baccalaureate graduates. Figure 6 shows the number of master's graduates as a function of the total number of quarter-equivalent credits earned by graduation.

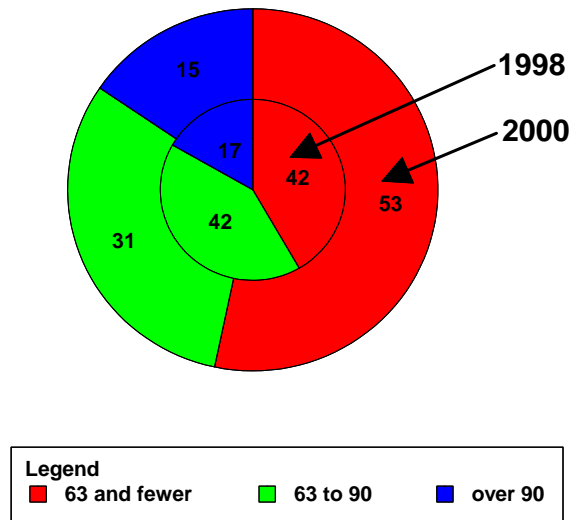
Figure 6. Number of Master's Graduates by Total Hours at Graduation for FY 1998 Degree Recipients Compared to FY 2000 Degree Recipients



Similar to the shift seen with baccalaureates, more FY 2000 master's recipients graduated with fewer hours than did the students receiving a master's in FY 1998. Fewer 2000 degree recipients fell into the '63 to 90' group and the 'over 90' group than did the 1998 graduates.

This shift is also evident when comparing the proportion of students in each group for each cohort. As Figure 7 indicates, the percentage of students in the '63 or fewer' group was much higher for the FY 2000 graduates (53 percent, as compared to 42 percent for the 1998 cohort).

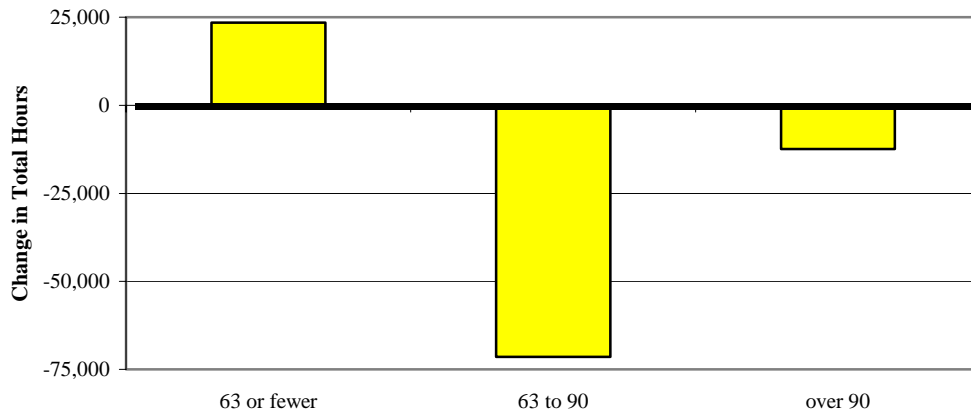
Figure 7. Percentage of Students by Total Hours at Graduation for FY 1998 Master's Recipients Compared to FY 2000 Master's Recipients



As the percentage of students in the '63 or fewer' group increased, the percentages in the other two groups decreased. This was especially notable for the '63 to 90' group, which dropped from 42 percent in 1998 to 31 percent in 2000.

In concert with the results of the baccalaureate graduates, the overall total hours earned also shifted correspondingly. Figure 8 shows the change in total hours earned by 1998 and 2000 master's graduates. As the figure illustrates, hours at graduation shifted toward the '63 and fewer' group and out of the two higher groups.

Figure 8. Change in Total Hours at Graduation from FY 1998 to FY 2000 for Master's Degree Recipients



In sum, master's degree recipients exhibited a downward shift in total hours earned at graduation from 1998 to 2000. Furthermore, analyses of the master's degree recipients indicated results that paralleled those seen with baccalaureate graduates.

Summary

Important curriculum and degree requirement policy changes were implemented by the System at the same time that semester conversion went into effect. In light of concerns over the effect of semester conversion, the results of the curriculum and degree requirements changes have largely been overlooked. As can be seen from the brief analyses above, student behavior has shifted in the direction of fewer total hours earned by the time the student receives a degree. Both baccalaureate and master's degree graduates receiving their degree in FY 2000 demonstrated a reduction in the total number of quarter-equivalent hours earned by graduation as compared to the graduates of FY 1998.

The reduced number of total credit hours earned by the FY 2000 graduates is consistent with the intent of the degree cap policy changes. Realigning degree programs to eliminate credit creep should mean that the total number of credits earned at graduation would shift in the direction of the specified cap. This shift toward fewer credits required for degree completion represents savings to both the state and its students. To the extent that the reduction in total credits earned is

a direct result of the policy change, it appears that realigning degree programs to adhere to degree caps successfully met its intended purpose.

While it is likely that the policy change was the primary determinant of the shift in total credit hours, other factors may have contributed to the resulting shift in student behavior. For example, students in the FY 2000 cohort may have experimented with fewer changes in major; changing major less often could result in fewer credit hours earned at graduation. Advanced Placement (AP) credit is another factor which might have impacted the downward shift in total credit hours. Recall that AP credits are not included as credits earned while at a USG institution. If the FY 2000 cohort had a greater number of students entering the System with greater numbers of AP credits awarded, this may have contributed to the reduction in total credit hours earned. While not analyzed in this report, there is no evidence to suggest that there has been a shift in either majors experimented with or the amount of AP credit granted to students at matriculation.

Additionally, there were several factors that were not controlled in the analyses presented in this research brief and should therefore be kept in mind. The analyses reflect only total hours earned and transferred; the length of time (i.e., number of years or terms) it took these students to earn those hours will vary. The two cohorts also differ in terms of relative exposure to the quarter system: while the 1998 graduates were under the quarter system the entire time, the 2000 graduates were under both the quarter and the semester systems.

A complete identification of the effects of the curriculum and degree program policy changes requires more detailed research studies. Such studies would also serve to dissociate those effects from any semester conversion effects. However, based on the analyses presented here, the differences seen between the two graduation cohorts appear consistent with the intention of the System policy regarding degree requirements.