

## COMMITTEE ON EDUCATIONAL POLICY

### Report on Undergraduate Graduation Rates

To the Academic Senate, Santa Cruz Division:

### Background

This report is submitted to the Santa Cruz Division from the Committee on Educational Policy (CEP) as the result of collaboration and consultation with the Committee on Admissions and Financial Aid (CAFA), the Committee on Planning and Budget (CPB), the Vice Provost and Dean of Undergraduate Education (VPDUE), the campus Office of Institutional Research, and attendees at the Senate's campus forum on retention.

In spring 2005, the Academic Senate expressed its high interest in and commitment to monitoring and improving our campus' graduation rates by passing a unanimous Senate resolution:

The Academic Senate requests that the 2005-06 CEP, in consultation with CPB and CAFA, seek to determine (1) the principal causes that prevent students from completing their degrees at UCSC and (2) whether there are policy changes that could be instituted, without negatively impacting the quality of undergraduate education, which could increase the graduation rate at UCSC. CEP is requested to report on their results at the final meeting of the Academic Senate in the 2005-06 academic year.

Discussion of the resolution also questioned whether or not retention varied among several specific subpopulations of student, and that is also discussed in this report.

Undergraduate retention is one of the most studied areas of higher education research. There are academic and non-academic factors involved in students developing a commitment to a particular institution and its degree. To enable this commitment, students must become socially integrated into the life of a campus, must feel comfortable, and must feel that they have "found a place". To be effective, policy changes must build on the successful efforts by many campus organizations in facilitating students' adjustment and engagement, socially and educationally, outside the classroom. In particular, CEP notes the work of the various resource centers and orientation programs in the colleges and Student Affairs as well as the student-initiated outreach and retention programs associated with the Engaging Education initiative.

This report would not have been possible without the exceptional and dedicated work of VPDUE William Ladusaw and Director of Institutional Research Julian Fernald. Much of the data they have gathered for the Senate are available on the VPDUE's Retention Web site, <http://planning.ucsc.edu/retention/>. This data is used throughout this report without citation.

### Summary of Recommendations

- 1. Adopt a campus goal of achieving a 6-year graduation rate of 80% by 2012.**
- 2. Adopt a campus goal of achieving a 2-year retention rate of 86% by 2010.**
- 3. Create a task force with representation across the campus to ensure continuing focus on retention, graduation, and their improvement.**

## Definitions and Data

There exists a broad range of quantitative measures for assessing programmatic and institutional success in undergraduate education. As students attend school to successfully complete degrees, measures based on graduation rate and, by extension, retention are the most widely used, and are the focus of this study. Many other measures are possible, such as the success of an institution in educating first-generation undergraduates.

## Graduation Rates

Freshman graduation rates refer to the percentage of first-time, first-year students who matriculated in a given fall term who go on to graduate within a specific number of years. The six-year graduation rate is commonly used in national and other rankings (e.g., US News & World Report and collegeresults.org). The six-year graduation rate of the 1999 cohort of entering freshmen, for example, measures the percentage of students who have graduated within 6 academic years, or before fall 2005. For the 1999 cohort, UCSC's six-year graduation rate was 70%, while the University of California system-wide average was 80%. For the 1994 cohort, the national average six-year graduation rate for public institutions was 58%.

Among the University of California campuses and institutions across the country, retention and graduation rates show a high correlation with selectivity. Santa Cruz is in its expected place among our campuses. Statistical modeling of graduation rates indicates that UCSC's is similar to that of other institutions with similar first-year student characteristics.

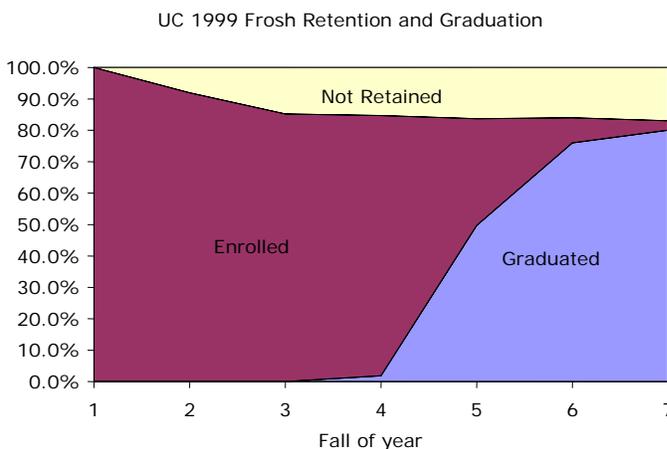
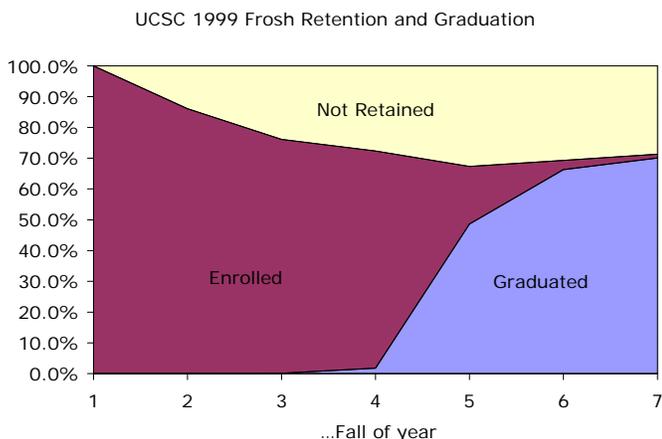
A concerted multifaceted effort will enable us to affect the six-year graduation rate of the fall 2006 entering class.

**Our first goal should be to achieve an 80% six-year graduation rate by 2012.**

## Retention Rates

A student who leaves our campus will not graduate from UCSC, and hence will not positively contribute to our six-year graduation rate. Retention rates are defined in a manner related to graduation rates. The one-year retention rate is the percentage of a cohort that is enrolled in the fall of the second year, and similarly for the two-year retention rate.

For the 1999 cohort, our campus' one-year retention rate was 86%, while the UC average was 92%. Similarly, the two-year retention rate was 76%, while the UC average was 85%. The differences between UCSC and UC retention and graduation rates can be shown graphically as three components: retained students, graduated students, and lost students. The diagrams below show the effects of UCSC's early difference in retention on the 6-year graduation rate measured in the fall of the seventh year.



Increases in retention rate present multiple feedback effects. As long as retained students complete their degree within six years, they will positively contribute to the graduation rate. An increase in the graduation rate will be noticed in various national indicators, increasing the reputation of the campus, which may increase the likelihood that students will remain at UCSC for their degree. Similarly, an increase in first-year retention of, for example, 100 students would allow the following year's entering class to be reduced by that amount. At current acceptance rates on offers of admission, this corresponds to well over 500 admissions, contributing to an increasing degree of selectivity. As selectivity increases, the reputation of the campus is also likely to increase, with a similar positive effect on future retention rates.

The first-year and second-year retention rates are improving. For the 2001 cohort, UCSC's one-year retention rate was 86%, and the two-year rate was 76%. For the 2002 cohort, these numbers are 87% and 77%, for the 2003 cohort 89% and 79%, and for the 2004 cohort, the one-year retention rate was 89%.

This is a promising trend, and bodes well for the campus' six-year graduation rate. To achieve success with respect to six-year graduation rates, we provide a second goal for the campus.

**Our second goal should be to achieve an 86% two-year retention rate by 2010.**

### Subpopulations

The Office of Institutional Research has extensively analyzed the 94-98 cohorts. It is possible to statistically model graduation rates based on student characteristics reported nationwide, including high school GPA, standardized test scores, gender, and ethnicity. Using these models and UCSC student characteristics, it is possible to determine subpopulations for which UCSC is doing better than expected or worse than expected, in comparison to national data. The analysis, summarized here, is available at <http://planning.ucsc.edu/retention/>.

It is unfortunately not feasible to perform this analysis based on family income, high school ranking (e.g., the API or Academic Performance Index), and a variety of other measures, but the available analysis provides many interesting results.

Overall, these models show that UCSC did slightly better than predicted with respect to each of these cohorts, with a predicted six-year graduation rate among all of these students of 64% and an actual graduation rate of 66%.

## **Gender**

Six-year graduation rates are higher for women than for men. Our campus is no exception, though does slightly better than modeled for our female students. These differences do not seem significant.

## **Ethnicity**

According to this model, the campus did very well with Chicano/a students. The data indicates that schools with students similar to ours will see six-year graduation rates for Chicano/a students of 48%, while our actual rate was 60%. Similarly the group of Other Latino/a students graduated at a rate 8% higher than modeled. The campus also performed well with African-American, Latino/a, Native American, and Other.

While all of these graduation rates are below the campus six-year graduation rate for these cohorts, it appears that our many excellent support programs are significantly helping students in the subpopulations, and hence our overall six-year graduation rate.

On the negative side, Asian students nationwide graduate at a rate slightly above average, but at UCSC this group of students graduated at slightly below the campus six-year graduation rate. This difference is primarily due to lower than expected retention rates in the first and second year.

The remaining subpopulations of White and Unknown graduated at rates essentially the same as predicted by the model.

## **GPA and Standardized Tests**

Nationwide, high school GPA is the best single predictor of graduation, and standardized test score also have a high correlation to graduation. To model these predictors, students were divided into quintiles. In the GPA models, UCSC performs 7% *worse* than expected for the top quintile, and 5% *worse* than expected for the second quintile. That is, *UCSC is losing its top students at a rate significantly higher than expected*. There is good news, however, in that UCSC performs 8% better than expected for the bottom quintile, and 7% better than expected for the quintile second from the bottom. That is, *UCSC does quite well in educating and graduating its less well prepared students*.

The standardized test results are similar to the GPA results.

## **Intended Major**

The Office of Institutional Research has studied the graduation rates of the 1996 frosh cohort according to the initial intended major and the final major. These data are prior to the implementation of advising clusters, and thus 36% of the students are undeclared. The graduation rates among students initially intending to pursue a School of Engineering (SOE) major, but graduating in any major, was 49%, and similarly Physical and Biological Sciences (PBS) was 59%, Social Sciences 63%, Humanities 65%, and Arts 71%. Intended SOE and PBS majors were the least likely to graduate with a major within that division (22% and 27%), followed by humanities (33%), Art (39%) and social sciences (41%).

These data are similar to that expected by other schools, but indicate in particular that the SOE and PBS may wish to continue and expand existing efforts to retain students within their majors, and that the SOE and campus should consider ways in which the campus may retain students who initially wished to pursue an engineering major. The Committee is wary, however, of drawing too many conclusions from this data because of the undeclared students and because of the growing selection of engineering programs, which may assist in the internal retention rate of that division.

## **Retention Forum**

CEP, CAFA, and the Academic Senate sponsored a campuswide Forum on Retention on February 10. The goal of the forum was to discuss the graduation rate and retention data and began addressing the questions asked by the Academic Senate at the spring 2005 meeting. The meeting featured review presentations by Director of Institutional Research Julian Fernald, CEP Chair Hughey, and CAFA representative Holly Cordova, (standing in for CAFA Chair Robert Coe, unable to attend due to illness), Vice Chancellor of Student Affairs Francisco Hernandez and several student groups engaged in retention efforts. Following these presentations, VPDUE Ladusaw moderated a forum on retention.

The Forum had approximately 75 attendees, including students, advising staff and student support staff, administration, and a small number of faculty. The audience expressed disappointment in the faculty turnout.

The forum also received written feedback from several attendees, available at <http://planning.ucsc.edu/retention/>.

## **Retention Task Force**

During the current year, the Committee on Educational Policy has focused on understanding the underlying issues and data concerning retention, and considering aspects of educational policy that may be adjusted to help increase our undergraduate retention and graduation rates (discussed in the next section).

Retention is not just a matter for academic programs and faculty, but also involves admissions, financial aid, support services and student life. It must be addressed in myriad ways by students,

program and college advising staff, student support services, residential life, business services, and, potentially, every unit on campus. There is no single approach to increasing retention and improving six-year graduation rates. UCSC's success in retention and graduation requires constant monitoring and innovation. As such, we recommend that the administration, in collaboration with the Senate,

**Create a task force with representation across the campus to ensure continuing focus on retention, graduation, and their improvement.**

The task force, drawing from this preliminary work, would:

- Collect, analyze, and publicize the most important data required for addressing the various issues of retention,
- Develop regular ways of getting information from continuing and departing students bearing on their commitment to graduating from UCSC,
- Develop effective coalitions among campus groups, student, staff, and faculty, involved in undergraduate retention, and
- Determine effective ways in which the campus, academic divisions, colleges, student affairs, departments, and other units may invest in retention experiments.

**Approaches to Retention**

At the same time as studying underlying issues of retention, the Committee on Educational Policy and the Committee on Admissions and Financial Aid, with advice from CPB, have arrived at several philosophies surrounding retention issues and ways in which we may continue the upward trend in retention and graduation rates on our campus. The ideas fall into four categories: admissions and financial aid, academic program preparation and selection, student mentoring, advising and monitoring, and program assessment. CEP has begun addressing many of these items, and expects to continue working on these next year in collaboration with the proposed task force, other Senate committees, and the administration.

**1. Admissions and Financial Aid**

National and UC statistics show a strong correlation between selectivity and retention and graduation rates. A student's commitment to a campus often begins with selection, and over the past several years UCSC's improvement in retention has followed modest increases in selectivity. To increase the number of students who choose Santa Cruz, we need to get the message out ever more widely and effectively about the excellent education and college experience we offer students. Also, for most students, financial aid is a crucial factor in their ability to enroll, remain, and succeed in classes, and to graduate.

- Provide resources to strengthen admissions outreach and yield programs.
- Increase resources available for financial aid.
- Encourage the entire campus community to participate in attracting qualified students to UCSC.

Preliminary enrollment statistics after this season's intense yield effort show that these measures can be very effective.

## 2. Academic program preparation and selection

Students who are committed to UCSC are less likely to leave our campus. One of the first steps in committing oneself to a UCSC bachelor's degree can be engagement in a specific degree program. Of course, many students come to our campus not fully prepared for their selected area of study, and these students may become frustrated taking courses for which they are not ready. Selection of a specific degree program, and future success in that program, requires a combination of education, preparation, and opportunity.

Students must be educated, and be able to educate themselves, in the possible degree options that fit their intellectual strengths and their personal and career goals.

- Consider strengthening the general education system to include a goal of major exploration and education.
- Require programs to clearly articulate their degree objectives and ensure that students are aware of a variety of career opportunities after completion of the degree.
- Encourage programs to examine their curricula to ensure that students can engage with material of interest and challenge in the first year, preferably in small groups.
  - This is particularly important for PBS and SOE majors due to large numbers of prerequisite courses and relatively low retention rates. This is also important for majors with few lower-division requirements, as students may see no need to engage in the major, and hence UCSC, early.
  - Approaches can include low-unit seminars, topical courses, and targeted program advising.

Engagement in a specific major does little good if the student is under-prepared for success in that major. Thus, we need to ensure a high level of commitment to learning support in the fundamental areas of major preparation, both those common to all or many areas as well as those specific to one individual major.

- Investigate how performance in major preparation and gateway courses, including writing, mathematics, languages, and physics and chemistry, is related to retention and graduation.

Students must have the opportunities to engage in their desired majors and major courses. Students, especially those with high preparedness, may leave UCSC because of the scope of our offerings, insufficient capacity in high-demand majors, or insufficient opportunities for engaging challenges within their intended area of study.

- Achieve awareness of developing trends in student major interest and ensure that UCSC has an appropriate and excellent portfolio of degree objectives.
- Monitor curricular bottlenecks and ensure first and second-year students have priority in key lower-division courses (in progress).
- Encourage programs to develop Honors Majors, Intensive Majors, BS/MS, and undergraduate research programs to ensure that top students have an outlet for their excellence. These programs should stretch down into the first and second-year to have an effect on retention of top (and other) students.

### **3. Student mentoring, advising and monitoring**

Students who have connected to UCSC will be more likely to remain committed to completion of the UCSC degree program. In addition to curricular and preparatory foci, we need to ensure that the advising and support system for students encourages their integration in the community. Our advising and monitoring processes and procedures should allow top students to pursue their objectives easily, while at the same time enabling us to closely monitor all students to determine whether or not they need additional help in achieving their objectives.

- Colleges and Student Affairs should actively consider mechanisms for assisting the development of academically-focused communities surrounding degrees or clusters of related degrees.
- Programs should consider development of community-building activities and organizations among their majors, especially first-year and second-year students.
- Maintain and expand the use of advising clusters to ensure that the advisers know a potential degree objective for every entering student (in progress).
- Simplify the major declaration process and advance the major declaration deadline to ensure students receive the advising most appropriate to their goals (in progress).
- Modify the minimum progress standards to catch potential problems early (complete).
- Modify the maximum progress standards to remove administrative hurdles to pursuing credit-intensive majors and double majors (in progress).
- Reconsider the double counting rule for double major and major/minor combinations, as such restrict the opportunities for high-achieving students.
- Reconsider the quarterly exception process for high course loads (in progress).

### **4. Campus unit and program assessment**

Historically, the campus has had an overwhelming focus on raw enrollments, especially at the undergraduate level. While enrollments are arguably what brings resources to our campus, this systemic focus has not assisted us in our desire to graduate students and increase the quality of the undergraduate educational experience. Responsibility for adjusting this system lies primarily with the central administration.

- Automate the collection and distribution of program-specific retention and degree statistics, including comparative benchmarks.
- Incorporate retention and graduation rates as a major part of the external review process.
- Develop tools for analyzing and reporting curricular and other bottlenecks, and engage programs in discovering ways to overcome them.
- Focus annual reports and assessments on BA, BS, and BM degrees granted.
- Assign resources to collect and analyze data relevant to undergraduate retention and graduation rates, including retained and non-retained student surveys, and other data that may assist the proposed task force.

## **Resolution**

**Whereas** the Faculty of the University of California, Santa Cruz, desire all admitted undergraduates to complete their UCSC degree, and

**Whereas** the loss of first and second-year students is a primary cause of lack of degree completion, and

**Whereas** many approaches exist for improving first and second-year retention,

### **Therefore Be it Resolved**

**That** the Santa Cruz Division requests the Chancellor and Executive Vice Chancellor to ensure that issues of retention and graduation are a key component of academic and budgetary planning and evaluation; and

**That** the Santa Cruz Division requests the Chancellor and Executive Vice Chancellor work with the Division to establish a task force on retention that brings together those with interests and with authorities related to retention and graduation; and

**That** the Santa Cruz Division requests each of its programs to consider ways to improve retention and graduation among its students with particular attention to students seeking academic challenge in the lower division.

Respectfully submitted,

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