

## **Section 10. Teaching and Learning**

### **GOALS**

Under the terms of the California Master Plan for Higher Education, the University provides instruction to all freshmen and community college transfer students who meet its eligibility requirements and choose to enroll, and to graduate academic and professional degree students who qualify for admission into its post-baccalaureate programs. UC's students, who number 226,000 in all, receive a distinctive education that provides exposure to academic research and the people who conduct it.

### **MEASURES**

Measuring the quality of instruction is notoriously hard and the subject of considerable debate. At UC, individual academic departments and degree programs are responsible for defining learning objectives and for assessing their progress in meeting them. Objectives and assessments are among items studied in routine academic program reviews conducted by the University. In recent years, they have become a major focus of institutional reviews conducted by the regional accreditation agency (Western Association of Schools and Colleges) as well as reviews by many professional accrediting and related bodies. Information about program learning objectives is available on many departmental websites and each campus posts materials related to accreditation reviews.

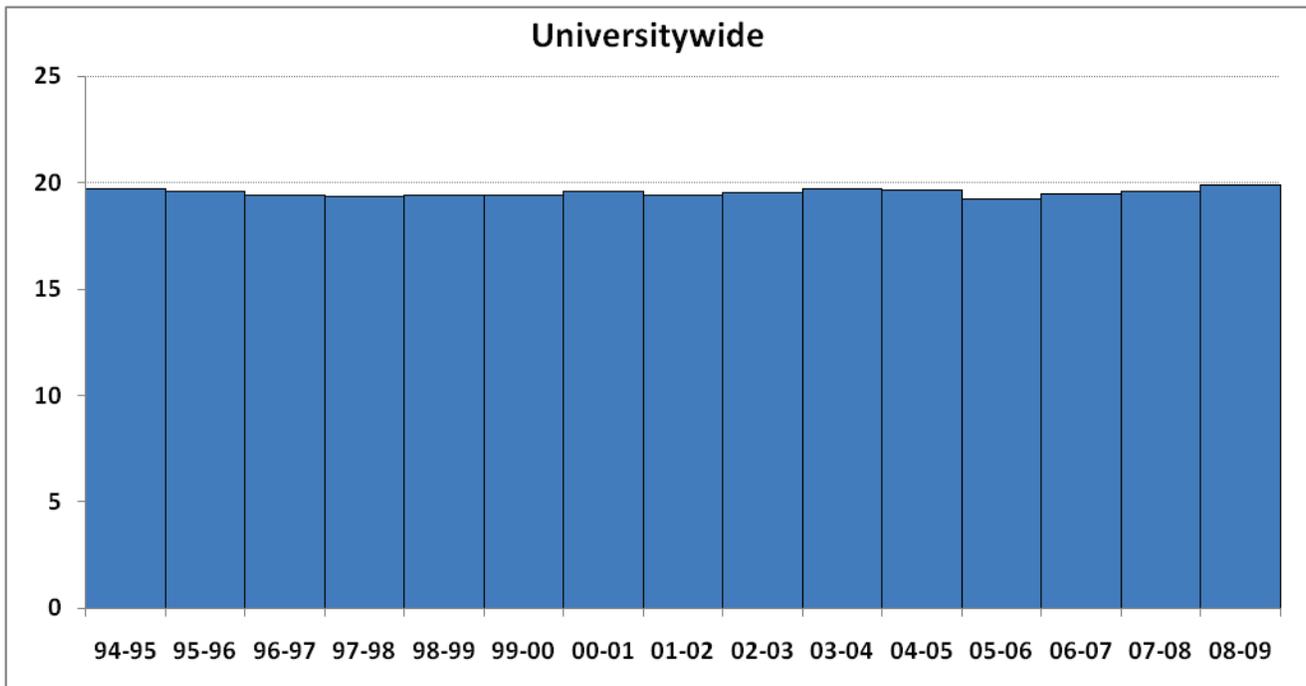
This section provides summary measures that focus on student-faculty ratios, class size and student satisfaction levels. Each of these measures illuminates some aspect of teaching, learning and the student experience, and while any single one is imperfect, together they begin to develop a portrait of the instructional enterprise, its impacts and its effectiveness. They will be supplemented in future reports with additional measures of student learning outcomes.

This section also presents information about UC's extension programs. UC Extension, which is the largest continuing education program in the nation, provides courses with about 300,000 enrollments annually to adult students, typically working professionals with a bachelor's degree or greater. Extension programs, which are completely self-supporting (and thus not directly affected by state budget cuts), complement the University's core mission and extend the University's reach to adult learners at regional, national and international levels.

### **LOOKING FORWARD**

The quality of instruction at UC is threatened by the long-term decline in state funding and the resulting decline in per capita educational expenditures (Section I). In response, UC campuses have adopted a variety of strategies, such as hiring fewer permanent faculty, increasing class size and curtailing student support services, all of which directly impact teaching and learning. Although the impacts are not yet apparent in the data presented here, this section provides important baseline measures against which they can be evaluated in future years.

**Indicator 61**  
**Student-Faculty Ratios, 2002-03 to 2008-09**



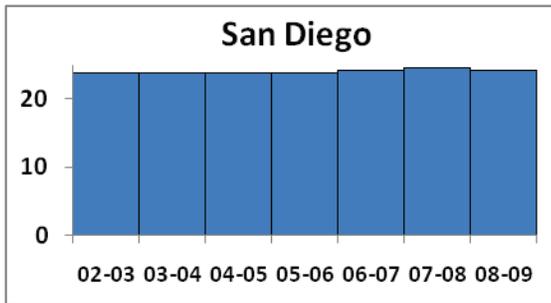
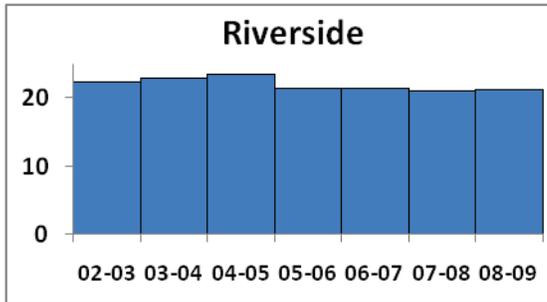
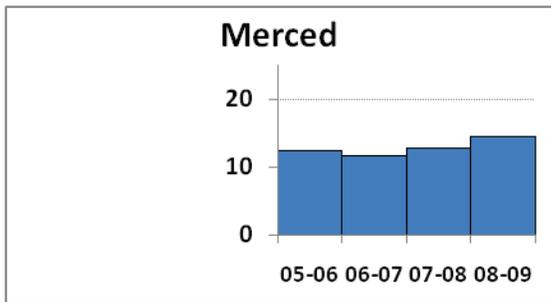
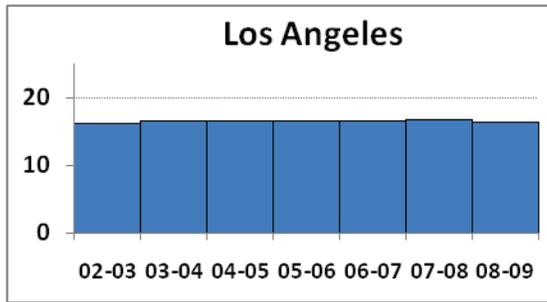
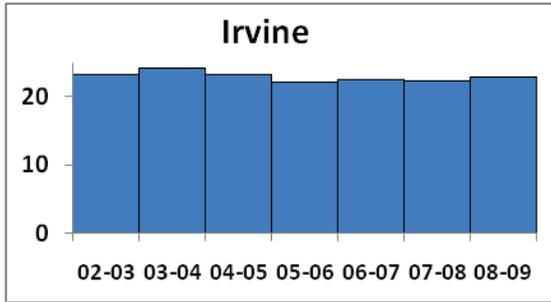
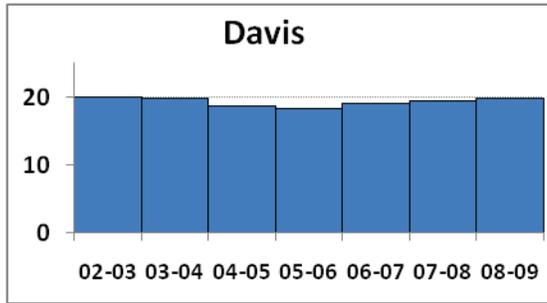
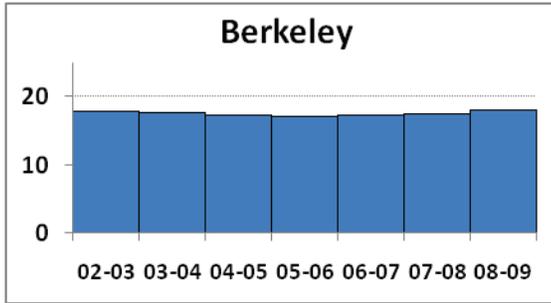
Note: Figures presented here are actual (rather than budgeted) ratios.

- Student-faculty ratio is a metric that can serve as a proxy for either a University’s investment in instruction or the average availability of faculty members for a student.
- Student-faculty ratios can be computed in different ways. The ratios reported here are computed by dividing full-year general campus FTE\* student enrollment by estimated general campus faculty FTE. Faculty counts include ladder-rank faculty as well as lecturers and instructors; health sciences enrollments and faculty are excluded.
- The relative stability of the student-faculty ratios presented here masks underlying changes in the overall composition of the faculty, in particular, a reduction in the proportion of ladder-rank faculty to all faculty (see Indicator 43).
- The National Center for Education Statistics is developing a national standard for computing student-faculty ratios. When those data are available, UC will be able to provide data comparing student-faculty ratios across institutions.

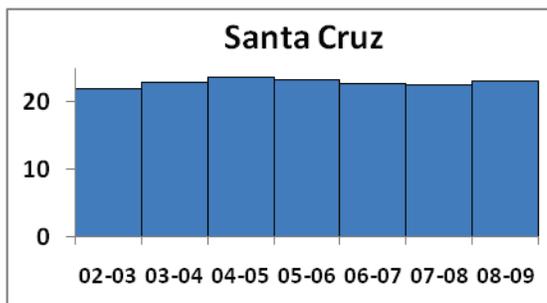
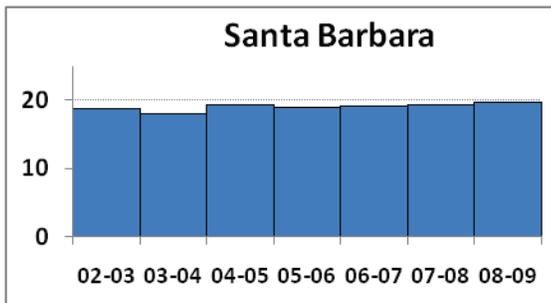
Source: UCOP Budget and Capital Resources

\* FTE refers to “full-time equivalent.” FTE is a standard unit of measurement for standardizing counts of employees and students who may work or study different proportions of time. For example, a full-time employee, or full-time student, constitutes 1.0 FTE; a half-time employee, or half-time student, constitutes .5 FTE. Two employees each working half-time, or two half-time students, together constitute 1.0 FTE.

**Indicator 61 (continued) Student Faculty Ratios, 2002-03 to 2008-09**

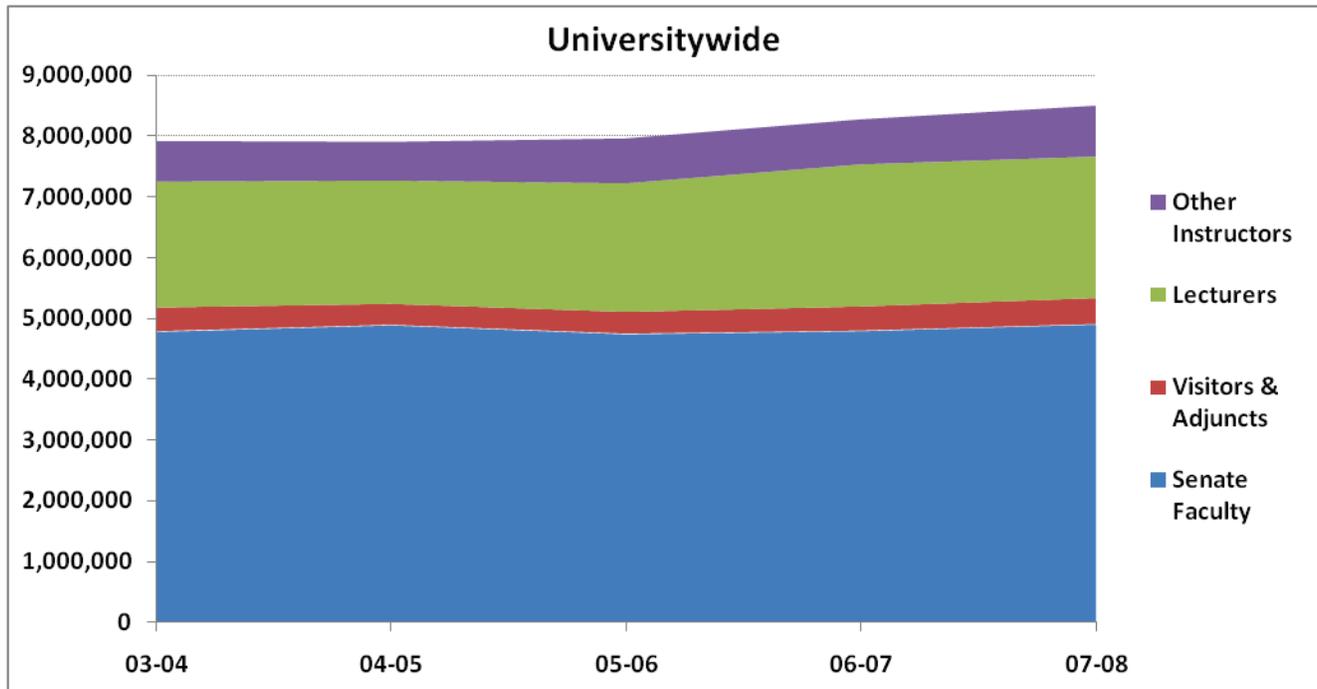


(San Francisco is exclusively a Health Science campus; data presented here are for General Campus only.)



## Indicator 62

### Student Credit Hours by Course Level and Faculty Appointment, 2003-04 to 2007-08

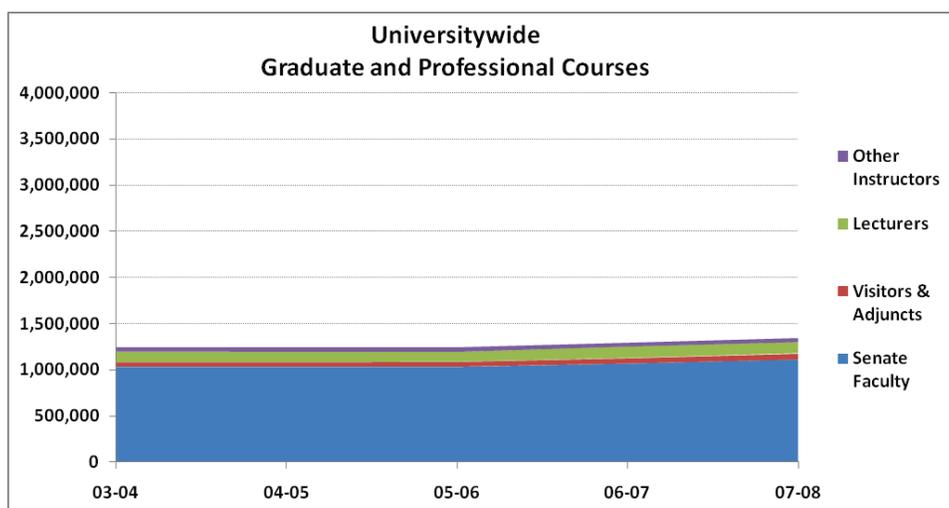
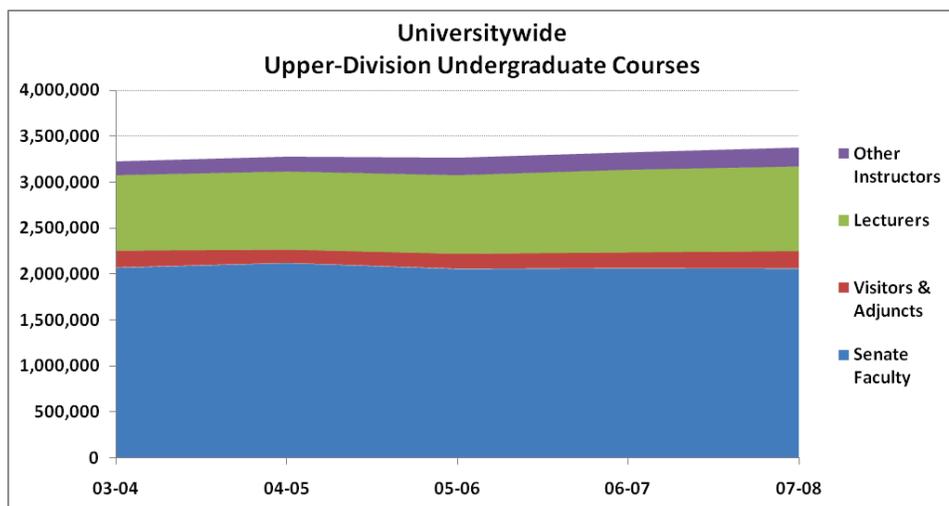
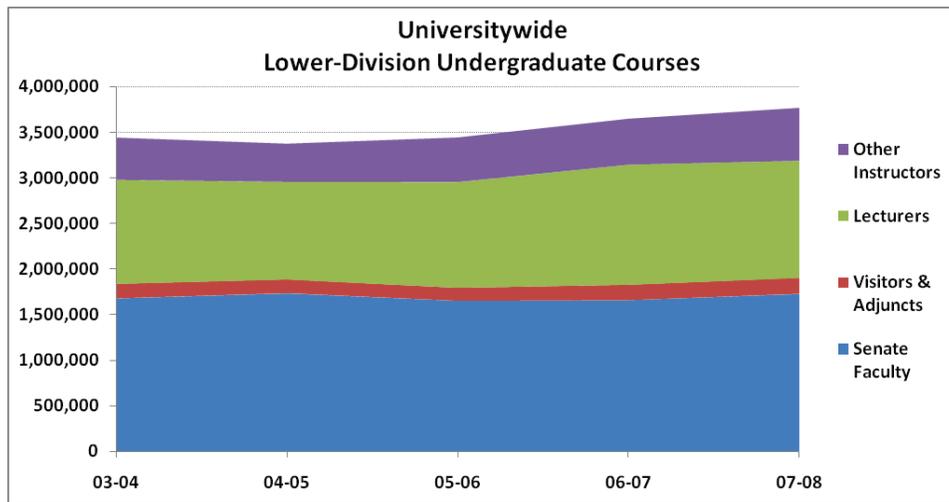


- Student credit hours (SCH) are one measure used to assess faculty teaching workload. Understanding it requires some familiarity with how courses contribute credits toward a degree. The typical undergraduate degree at UC, for example, requires a student to earn 180 credits. To amass these credits, students take courses worth between one and five credits each. The number of credits a course carries is an indicator of its academic intensity and workload for students and faculty alike. Particularly intensive courses are worth five credits, less intensive courses are worth three, two or even one credit.
- SCH is defined as the number of student enrollments in a course times the number of credits available from it. A four-credit class with 50 students generates 200 SCH; a two-credit class of 15 students generates 30 SCH. In this respect, SCH measures how much teaching faculty do across classes where enrollments and credits hours vary.
- The amount of teaching that UC faculty did increased about 7 percent between 2003-04 and 2007-08. In 2007-08, Senate faculty accounted for 58 percent of all teaching; lecturers (the next largest category of faculty) accounted for 27 percent of all teaching.
- Senate faculty are more likely to teach upper-division and graduate and professional courses than lecturers or other faculty. Nonetheless, Senate faculty still accounted for 46 percent of all lower-division SCH in 2007-08; lecturers provided 34 percent.

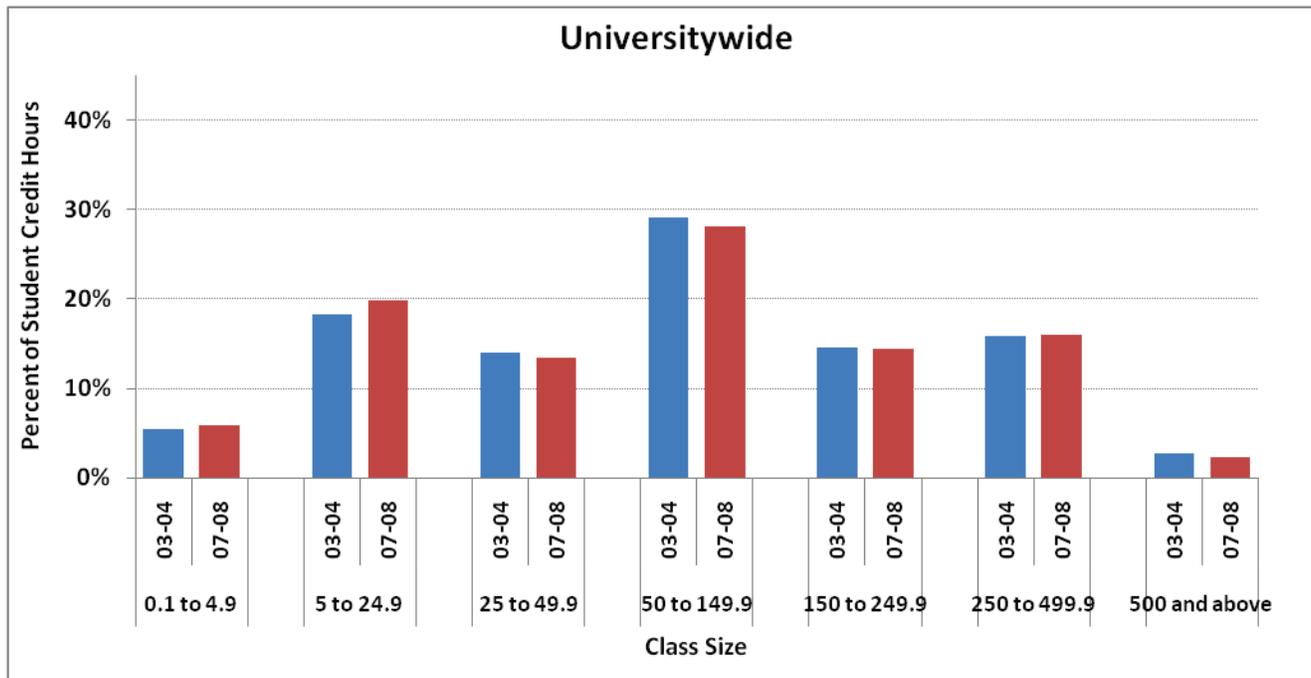
Source: UCOP "TIE" Faculty Workload data collection

Note: Senate faculty includes professorial series faculty (full, associate and assistant professors), lecturers with security of employment or potential security of employment, acting professors and professors in residence; lecturers are non-Senate Unit 18 members; other faculty includes a variety of non-Senate faculty titles, such as acting assistant professors, health sciences clinical professors and other non-student instructional assistants.

**Indicator 62 (continued) Student Credit Hours by Course Level and Faculty Appointment, 2003-04 to 2007-08**



**Indicator 63**  
**Student Credit Hours by Class Size, 2003-04 and 2007-08**

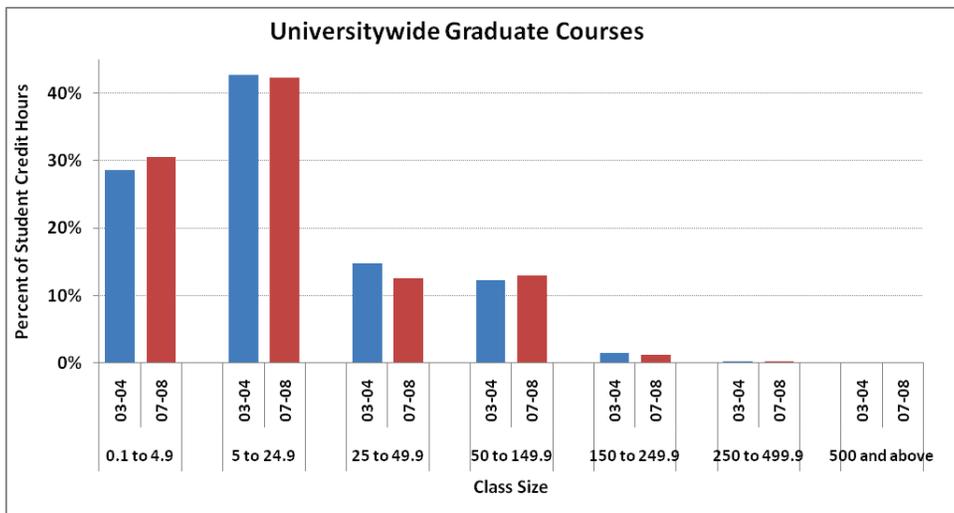
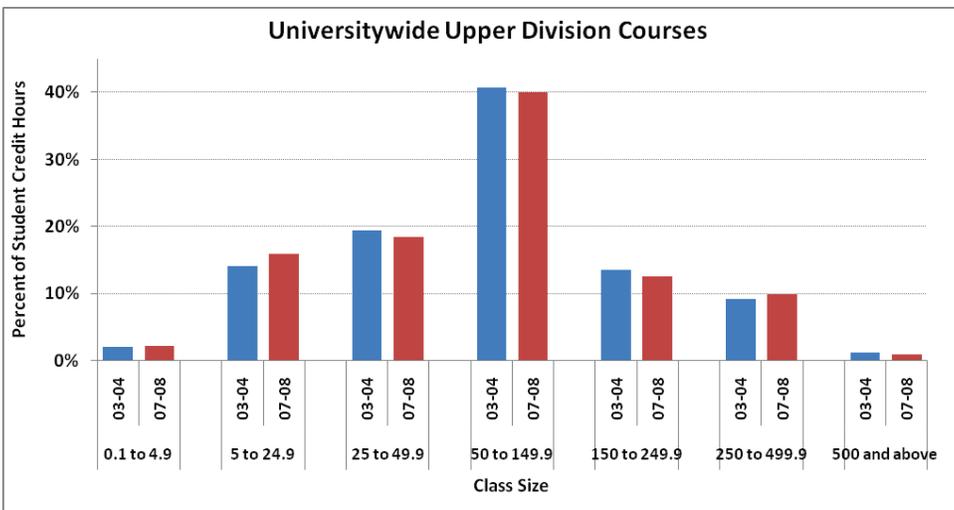
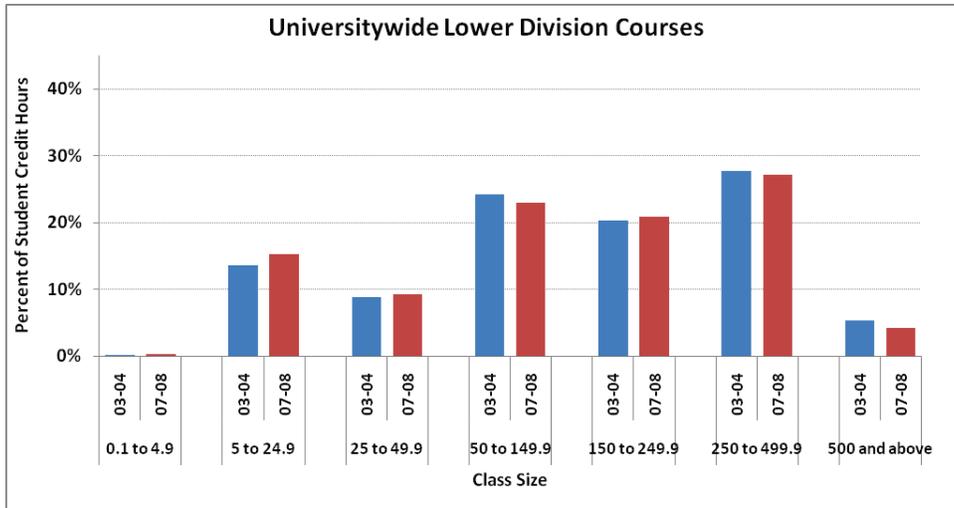


Note: Data shown here are for general campus undergraduate and graduate courses; health sciences classes are excluded.

- This graph shows how the total number of student credit hours earned in 2003-04 and 2007-08 were distributed across classes of varying size. It acts as an indicator of where (that is, in classes of what size) students earn credit towards their degrees.
- The distribution of students' time in class did not change significantly between 2003-04 and 2007-08. In fact, total SCH increased slightly in both small and large classes, reflecting the fact that UC faculty overall taught more classes of all sizes during that period.
- Overall, students earn far more of their credits in large classes than in small ones. For example, 61 percent of the total number of credit hours students earned in 2007-08 were earned in classes with 50 or more students.
- However, lower-division students are more likely to spend more of their instructional time in large classes ranging from 150 to 500 students. Upper-division students are more likely to be found in mid-sized classes (50 to 150 students), and graduate and professional students are more likely to be found in small classes.

Source: UCOP "TIE" Faculty Workload data collection

**Indicator 63 (continued) Student Credit Hours by Class Size, 2003-04 and 2007-08**



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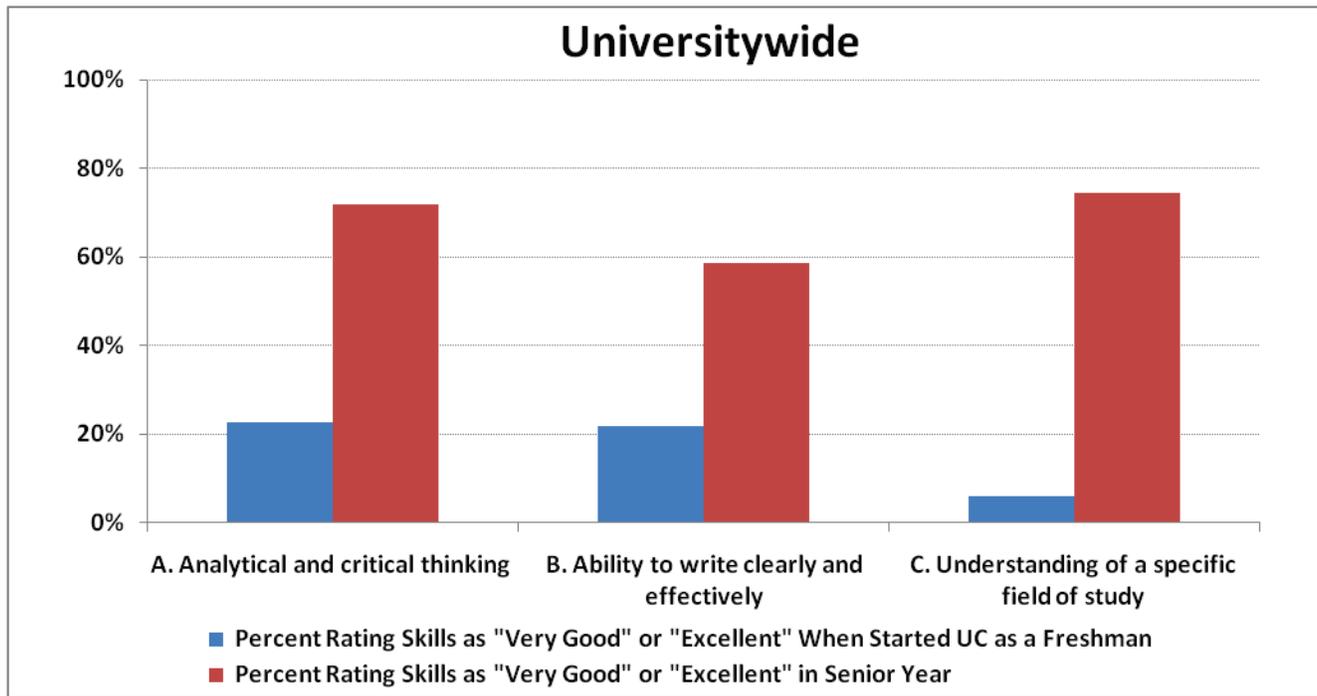
**Indicator 64**  
**Undergraduate Teaching and Learning Experiences of Seniors, Spring 2008**

	University-wide	Berkeley	Davis	Irvine	Los Angeles	Merced	Riverside	San Diego	Santa Barbara	Santa Cruz
Worked outside of class on class projects or studied with classmates	77%	78%	76%	76%	78%	86%	78%	74%	77%	79%
Reported making class presentations	69%	71%	66%	71%	69%	78%	78%	56%	69%	76%
Enrolled in at least one independent research course	49%	50%	48%	57%	45%	62%	44%	39%	51%	61%
Participated in a study-abroad program	25%	27%	24%	24%	28%	13%	16%	23%	29%	29%
Participated in an internship	49%	51%	64%	46%	47%	41%	34%	51%	42%	47%
Assisted faculty with research or a creative activity	53%	53%	56%	54%	51%	68%	51%	52%	52%	55%
Participated in community service in 2007-08	64%	62%	63%	65%	70%	--	69%	65%	60%	49%
Were satisfied with the availability of courses needed for graduation	78%	84%	80%	78%	73%	51%	70%	76%	83%	75%
Were satisfied with their overall academic experience	85%	87%	85%	85%	84%	88%	83%	79%	90%	86%
Talked with an instructor outside of class about course material	63%	60%	63%	61%	63%	85%	65%	56%	65%	73%

Note: Data are for seniors in spring 2008.

- Data in the chart above come from the University of California Undergraduate Experience Survey (UCUES), which is conducted every two years.
- Data from the 2008 survey show that undergraduate students are highly satisfied with their UC education and feel they have benefited greatly from it. The forthcoming Spring 2010 UCUES survey will provide data about whether UC been able to deliver a high-quality educational experience and maintain high levels of student satisfaction amid continuing cuts to its budget and academic programs.

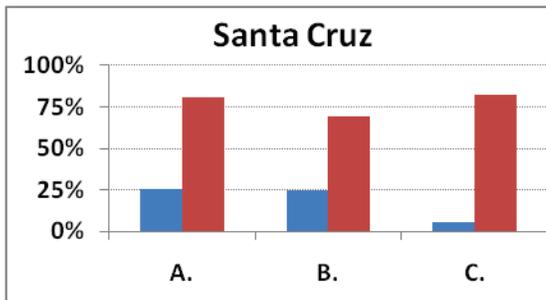
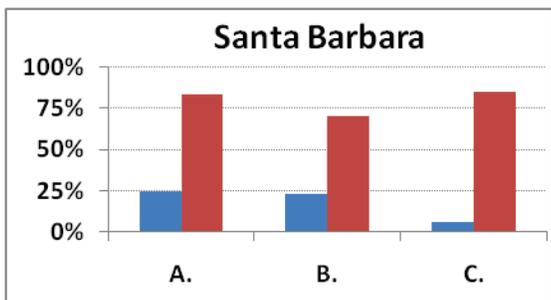
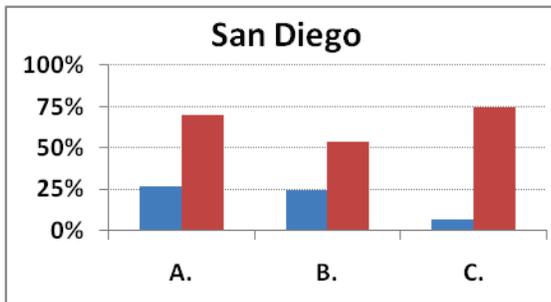
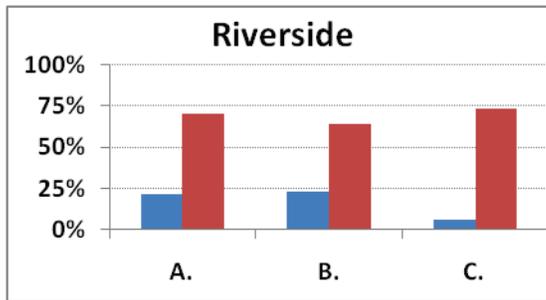
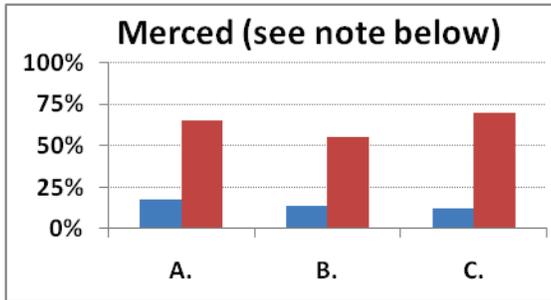
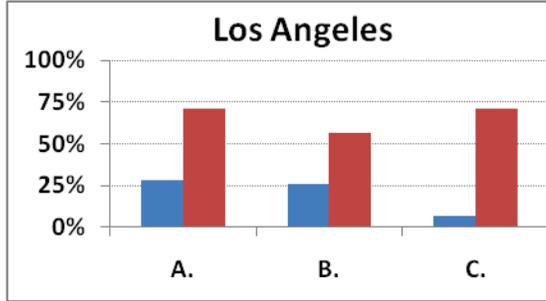
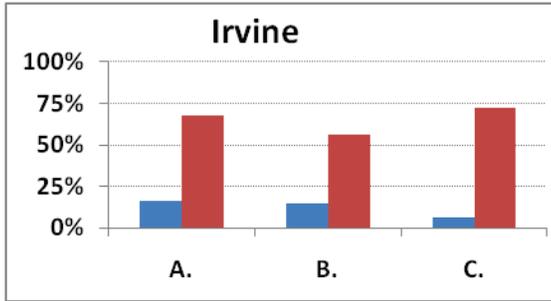
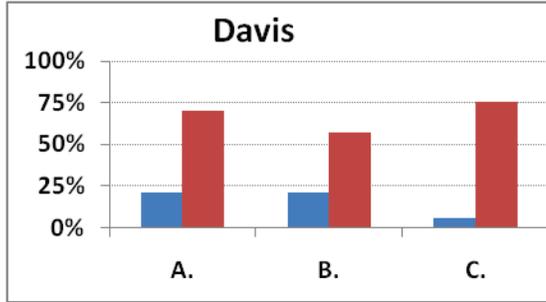
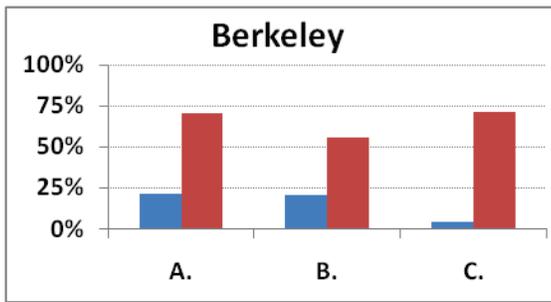
**Indicator 65**  
**Gains in Critical Thinking Skills, Writing Skills and Understanding a Field of Study,**  
**Spring 2008**



- When responding to the question, “Please rate your level of proficiency in the following areas when you started at this campus and now,” UC seniors overwhelmingly rated their analytic and critical thinking skills, their ability to write clearly and effectively and especially their understanding of a specific field of study as very good or excellent compared to their skill levels as freshmen.

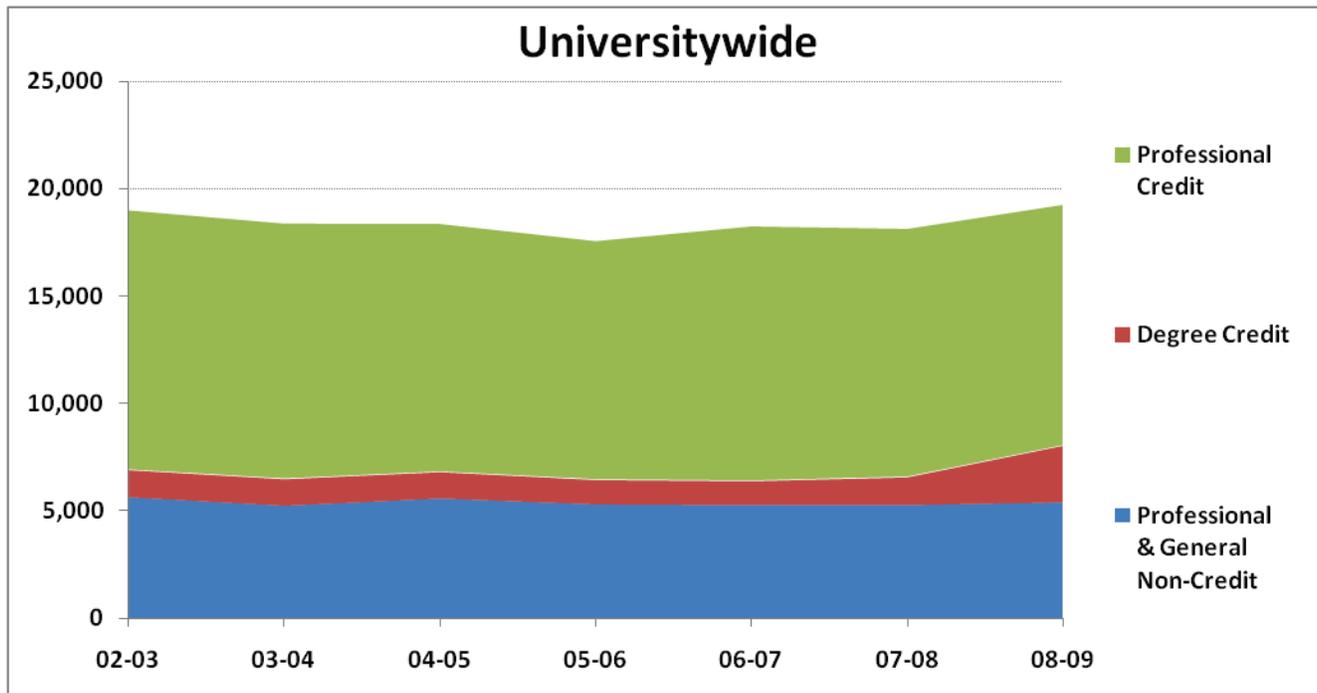
Source: University of California Undergraduate Experience Survey, Spring 2008

**Indicator 65 (continued) Gains in Critical Thinking Skills, Writing Skills and Understanding a Field of Study, Spring 2008**



Note: Merced results for senior year actually are for the junior year.

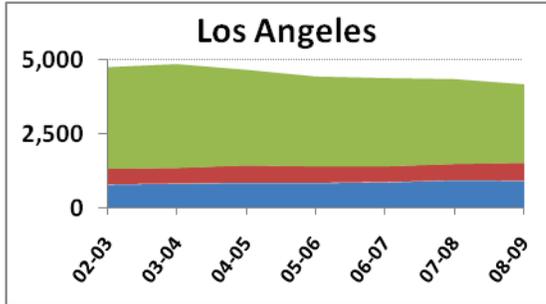
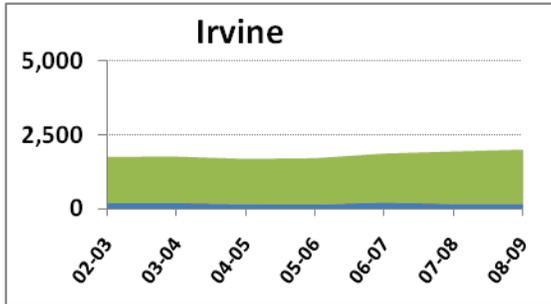
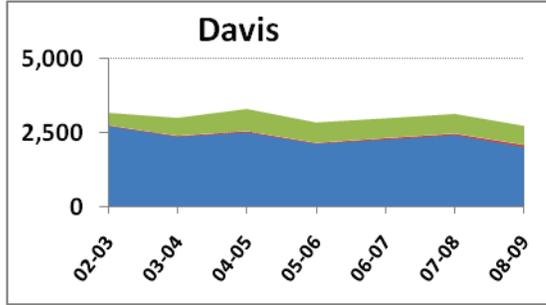
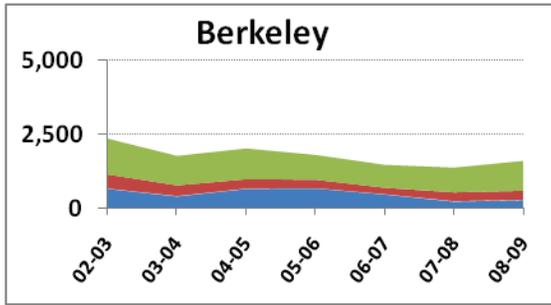
**Indicator 66**  
**Continuing Education Programs, 2002-03 to 2008-09**



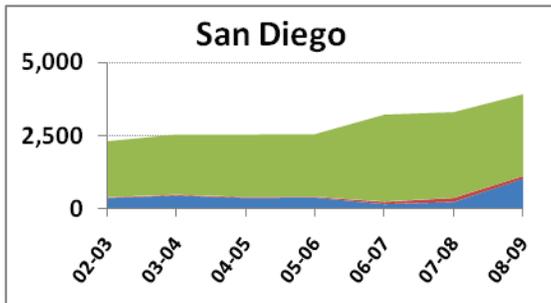
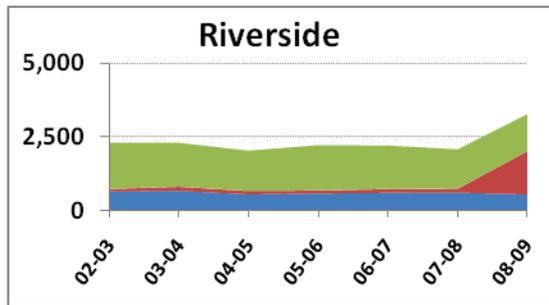
- The University offered its first extension courses to students beyond the immediate campus community more than 100 years ago.
- Today, there are extension divisions at eight of UC’s nine general campuses. In 2009, UC Merced also launched an extension program in partnership with UC Berkeley. Altogether, UC Extension offers almost 20,000 different courses, programs, seminars, conferences and field studies throughout California and in a number of foreign countries.
- Extension’s offerings, which are highly diverse, are designed to serve the continuing education needs of working professionals through both credit and non-credit programs:
  - Professional Credit: Programs that provide Senate-approved academic credit, most often in the X400 and X300 professional course series.
  - Degree Credit: Programs leading to formal UC degree credit, developed and presented in partnership with campus faculty and graduate degree programs.
  - Professional & General Non-Credit: High-quality continuing education courses and workshops; these programs may satisfy continuing education requirements of public agencies and professional associations but do not convey UC Senate-approved academic credit.

Source: UC Extension Financial Statements

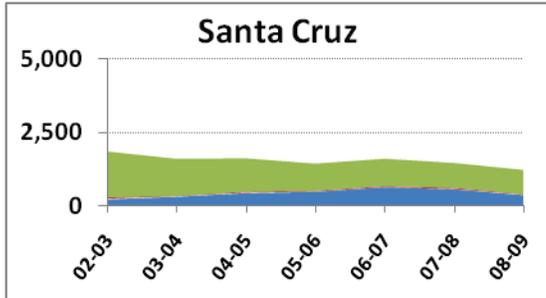
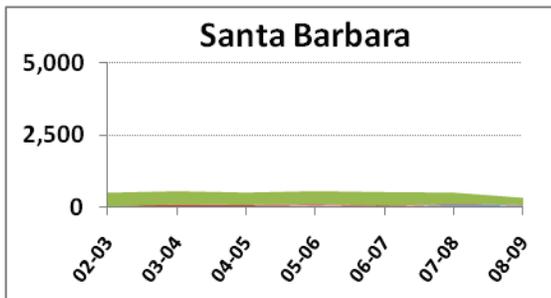
**Indicator 66 (continued) Continuing Education Programs, 2002-03 to 2008-09**



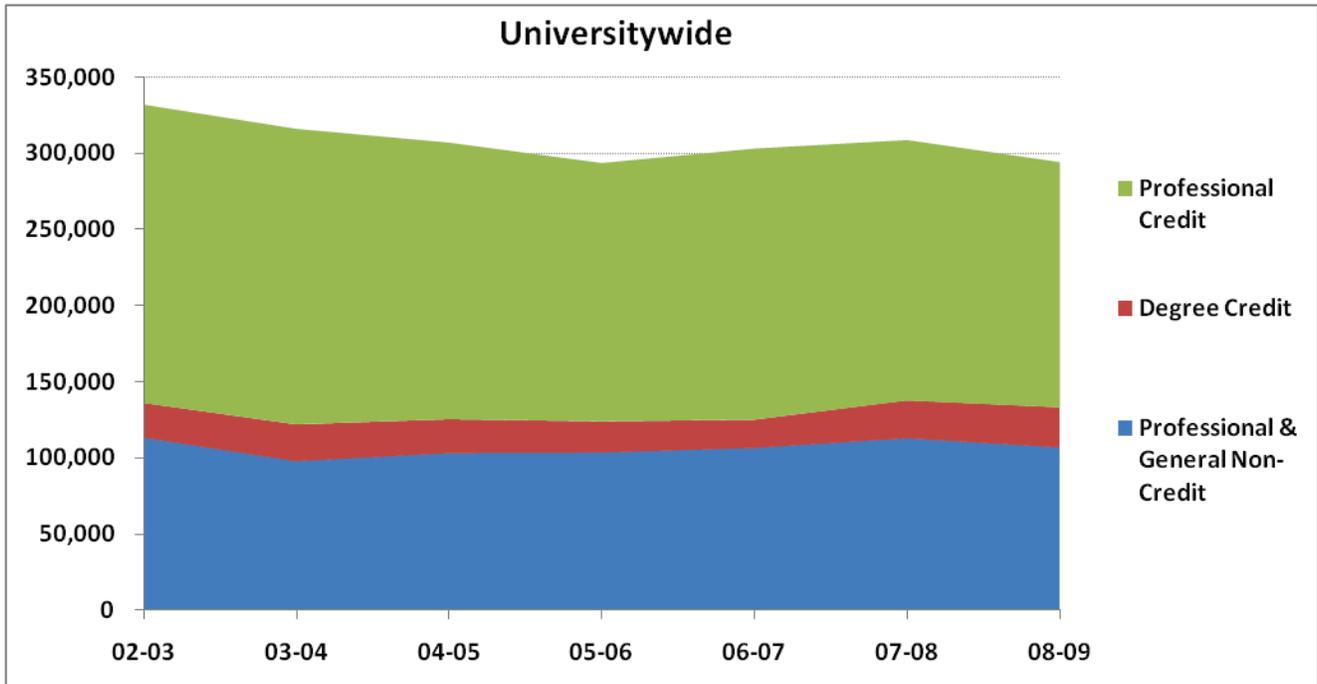
(Merced established Extension in 2009-10.)



(San Francisco does not operate general campus Extension activities.)



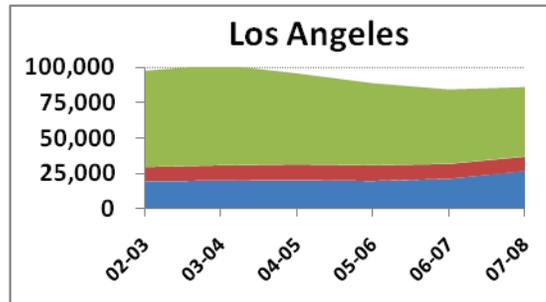
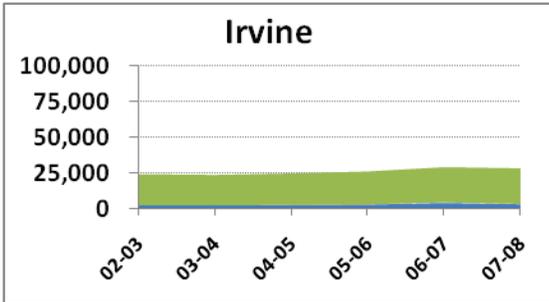
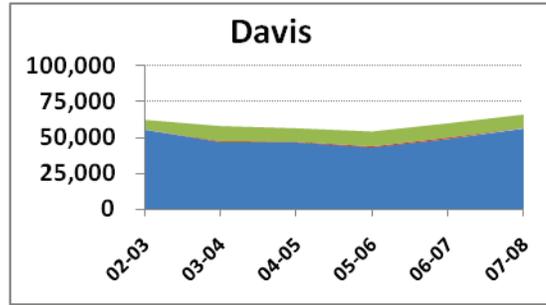
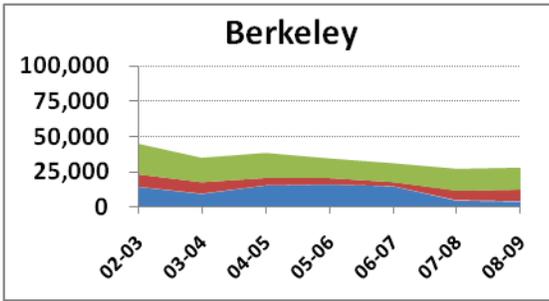
**Indicator 67**  
**Continuing Education Enrollments, 2002-03 to 2008-09**



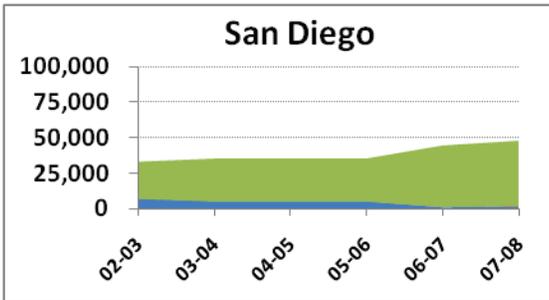
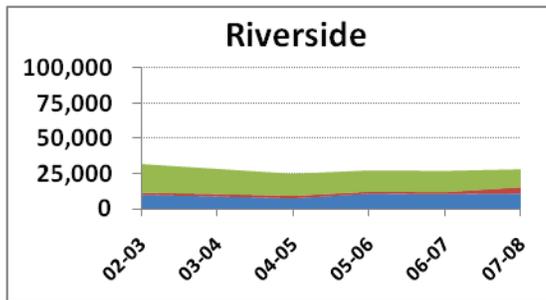
- UC Extension is completely self-supporting and its offerings are dependent upon user demand, which varies due to many factors, including the strength of the local economy.
- Each campus extension program addresses particular educational needs in its own geographic area.
- A substantial economic multiplier effect is associated with regional economic impacts from extension programs and activities at every campus. A recent study of UCLA’s extension programs, for example, estimated an annual contribution of \$250 million to the regional economy, 70 percent of which was attributable to students’ increased earning power after completing an extension program.
- Decline in UC’s extension enrollments since 2002-03 may be due to increasing competition from other university extension programs and the dramatic recent growth in student enrollments at for-profit universities.

Source: UC Extension Financial Statements

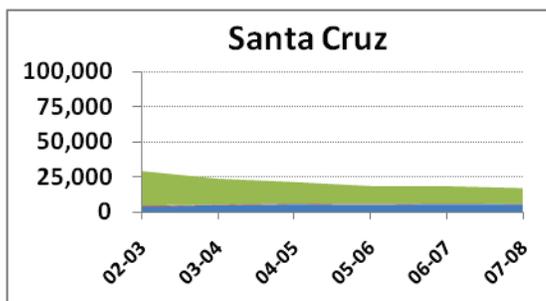
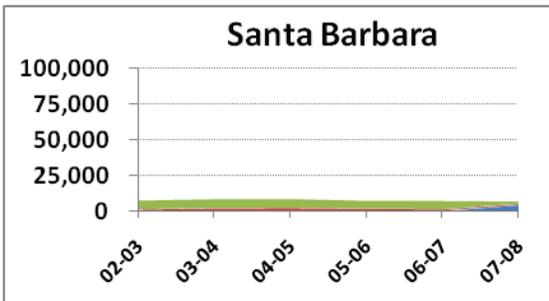
**Indicator 67 (continued) Continuing Education Enrollments, 2002-03 to 2008-09**



(Merced established Extension in 2009-10.)



(San Francisco does not operate general campus Extension activities.)



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