UNIVERSITY OF CALIFORNIA, RIVERSIDE

UCR
Graduation Rate Task Force Report

JANUARY 2014

UNIVERSITY OF CALIFORNIA
ucRIVERSIDE

EXECUTIVE SUMMARY

Graduation rates on college campuses have become an important national issue. In 2010 President Obama called for raising the college graduation rate among 25 to 34 year olds to 60% by 2020, a 20% increase in just ten years. California Governor Jerry Brown has set as a goal for each of the State's public universities a 10% increase in the proportion graduating in four years. UCR's graduation rates lag behind other UC campuses, and the average number of units taken by UCR students has also declined over time.

The factors that explain graduation rates can be divided into those rooted in student attributes and those rooted in institutional practices. The Task Force (TF) identified three major sources of low graduation rates related to student attributes: (1) the inadequate academic preparation of many incoming students; (2) the long hours some students spend in paid employment; and (3) a student culture that does not support course-taking patterns that lead to four-year graduation. The TF identified six major sources of low graduation rates related to institutional practices: (1) a deficit in the number of seats to accommodate student demand for 15 units per term; (2) an inadequate supply of some key courses to fully accommodate student demand for timely progress to degree; (3) gaps in programs that could better serve the needs of UCR students; (4) the failure of some colleges and departments to require course plans; (5) academic support services that vary in their level of effectiveness; and (6) financial aid policies that fail to provide incentives for timely graduation.

The academic preparation of incoming students is the most important predictor of graduation rates; in national studies using samples of hundreds of colleges and universities average SAT scores of incoming freshmen alone explain as much as two-thirds of the variance in six-year graduation rates. Quite a bit can be done on campus to improve graduation rates even if the academic profile of students remains constant, but we believe targeted recruiting to improve the academic profile of admitted students should also be part of the campus plan to increase graduation rates.

The report includes more than 30 recommendations. These include, among others, outreach to both very low and very high-performing feeder high schools; targeted recruitment of business students who are more likely to succeed at UCR; replacement of the current 16-unit first pass cap with a 17-unit cap; better planning in relation to the number and distribution of seats in CHASS and CNAS; allocation of high-quality teaching resources to introductory courses in fall quarter; the introduction of new health professions and science policy curricula that are more attuned to the limited math abilities of some UCR students; the development of mandatory four-year course plans in all of the colleges and departments; a redesign of CHASS learning communities; early identification of students requiring transition advising; and a study to determine whether revisions in financial aid policies can help to incentivize students' timely completion of degrees.

GRADUATION RATE TASK FORCE REPORT

I.   INTRODUCTION

Campus graduation rates have become an important national issue. In 2010 President Obama called for raising the college graduation rate among 25 to 34 year olds to 60% by 2020, a 20% increase in just ten years (de Nies, 2010).   This goal closely paralleled earlier calls by the Lumina and Gates Foundations for large increases in college graduation rates as a mechanism for economic opportunity, as a measure of educational productivity, and as a precondition to greater U.S. competitiveness (see, e.g., Merisotis 2009; Mangan 2013). California Governor Jerry Brown has embraced the goal of increasing college graduation rates.[1] He has set a 10% increase in the proportion graduating in four years between the entering class of 2012 and the entering class of 2017 (State of California Department of Finance 2013).

At the May 2013 Regents meeting, Governor Brown explicitly criticized UCR's graduation rates, using the Riverside campus to make his point that California public universities are not achieving performance outcomes that reflect the public interest (Gordon 2013). UCR's graduation rates lag behind those of the other UC campuses by 10% to 30% and have shown relatively little positive movement over the last two decades while other campuses have made progress in improving their graduation rates.

Executive Vice Chancellor and Provost (EVC/P) Dallas L. Rabenstein appointed a Graduation Rate Task Force in June 2013 to examine causes of UCR's comparatively low four- and six-year graduation rates and to recommend policies and practices that can lead to improvements in campus graduation rates.

The Task Force (TF) was composed of the following members:

Steven Brint, Vice Provost, Undergraduate Education (chair)
Ward Beyermann, Associate Professor, Department of Physics
Robert Daly, Assistant Vice Chancellor, Strategic Academic Research and Analysis
Peter Graham, Associate Dean, Student Academic Affairs, College of Humanities, Arts, and
    Social Sciences
William Kidder, Assistant Executive Vice Chancellor
LaRae Lundgren, Associate Vice Chancellor, Enrollment Management
Kazi Mamun, Assistant Dean, School of Business Administration
Mindy Marks, Associate Professor, Department of Economics
Michael A. McKibben, Divisional Dean, Student Academic Affairs, College of Natural and
    Agricultural Sciences
Chinya Ravishankar, Associate Dean, Student Academic Affairs, Bourns College of
    Engineering

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[1] Governor Brown has said he would like to see four-year graduation rates in California's public universities reach 80% (*Sacramento Bee* 2013).

A. Student Attributes and Institutional Practices

Graduation rates are a complex area of inquiry, because they have many distinct causes. However, the factors that explain graduation rates can be divided into those rooted in student attributes and those rooted in institutional practices.

The TF identified three major sources of low graduation rates related to student attributes:

- The inadequate academic preparation of many incoming students;
- The long hours some students spend in paid employment;
- A student culture of GPA protection that does not support course-taking patterns that lead to four-year graduation.

The TF identified six major sources of low graduation rates related to institutional practices:

- A deficit in the number of seats provided by the Colleges and departments to accommodate student demand for 15 units per term;
- Inadequate supply or timing of some key core courses to fully accommodate student interests in timely progress to degree;
- Gaps in program offerings that, if filled, would better serve the needs of UCR students;
- The failure of some colleges and departments to require course plans;
- Academic support services that vary in their level of effectiveness;
- Financial aid policies that fail to provide incentives for timely graduation.

B. The Centrality of Academic Preparation and Qualifications

The nine factors listed above do not have an equal influence on graduation rates. The most important predictor of graduation rates at UC -- and nationally -- is the academic preparation and qualifications of incoming students. One recent national study found that at the campus level, the simple correlation between average SAT scores and six-year graduation rates was .80 and that average SAT scores alone consequently explained 64% of the variance in inter-campus six-year graduation rates (Hosch 2008; see also Astin 2005). Another recent study found that a 100-point increase in average SAT/ACT score is associated with a six-year graduation rate that is 11 points higher and that "there is not a large amount of variation in graduation rates among institutions with similar SAT scores" (Chingos 2012). [2]

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[2] Two distinct schools of thought exist about whether reforms should take academic preparation into account. Some in the State believe that composition should be taken into account when assessing graduation rates. Thus far, Governor Brown has not adopted this approach. The Task Force and UCR more generally is mindful of the political context surrounding the question of graduation rates, but we are also committed to a culture of evidence when

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The TF has concluded that quite a bit can be done on campus to improve graduation rates even if the academic profile of students remains constant, provided that the necessary resources are allocated to this effort. At the same time, realistically, the amount of change the campus will need to make to achieve a graduation rate profile closer to that of other UC campuses cannot be achieved without recruiting better prepared classes.

Improvements in students' academic preparation and qualifications are already occurring in two of the colleges, the Bourns College of Engineering (BCoE) and the College of Natural and Agricultural Sciences (CNAS). Some faculty may fear that changes in the academic profile will jeopardize UCR's commitments to diversity and access. The evidence from BCoE and CNAS indicates that the recruitment of better prepared students can occur while maintaining the student body diversity for which the campus is justly celebrated. We caution that if the academic profile of the undergraduate student body changes greatly, robust and well-targeted recruiting may be necessary to maintain the current level of representation of some under-represented groups.

A realistic approach is to expect roughly half of any graduation rate goal to be met by campus efforts to help admitted students to graduation in a timely way and roughly half to be met by changes in the academic preparation and qualifications of admitted students, both through improved recruitment in areas identified in the report and through working with lower-performing feeder high schools.

C. Why Now?

At the end of the report, we make recommendations about the timing and organization of a campus campaign to improve UCR's graduation rates. We believe that such a campaign will be very important to the future of the campus. It will be important for the well-being of UCR students, too few of whom make timely progress to degrees – and too many of whom do not finish at all. It will also be important to the economic well-being of the campus which is negatively affected by every student who leaves and does not return. In 2102-13 budgeted revenue for the campus indicates that net tuition and fees constituted the single largest revenue sources (39%) followed by State support (23%) and research contracts and grants (23%) (UCR 2013a). Retention has a major impact on UCR's financial bottom line with respect to two of these main revenue sources. The campus experiences a significant drop-off in tuition dollars between the fall quarter and spring quarter every year. State support is keyed to year-round enrollment, thus indirectly reflecting the campus's success in retention. Because UCR is more reliant on tuition and State support than all other UC campuses except UC Merced, the fiscal pinch from retention issues exacerbates the already-tight budgets faced

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evaluating the array of choices and tradeoffs related to the question of improving graduation rates. We also feel that it is important to evaluate the risks and unintended consequences that can arise when any reform effort is contemplated, and we have attempted to do in this report.

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by the campus community. Increasing graduation rates will also be important to meet the challenges of a political environment in which graduation rates are playing an increasingly prominent role in higher education policy.

Our first two recommendations[3] follow from the premise that higher graduation rates are in the interest of the campus:

Recommendation #1: UCR should aim to exceed the Governor's performance target and raise four-, five-, and six-year graduation rates by 15% between now and the graduation dates of the 2017 entering cohort.

Recommendation #2: The Chancellor should announce an initiative to reach this goal. The implementation of the initiative should begin during summer 2014 based on an action plan, approved by the Deans, to reach the 15% goal.

<div align="center">II.   STATISTICAL OVERVIEW</div>

Comparison of UCR with other UC campuses provides important context to this report, as do statistics on the comparative academic qualifications of UCR students, and the average unit counts taken by UCR students in recent years.
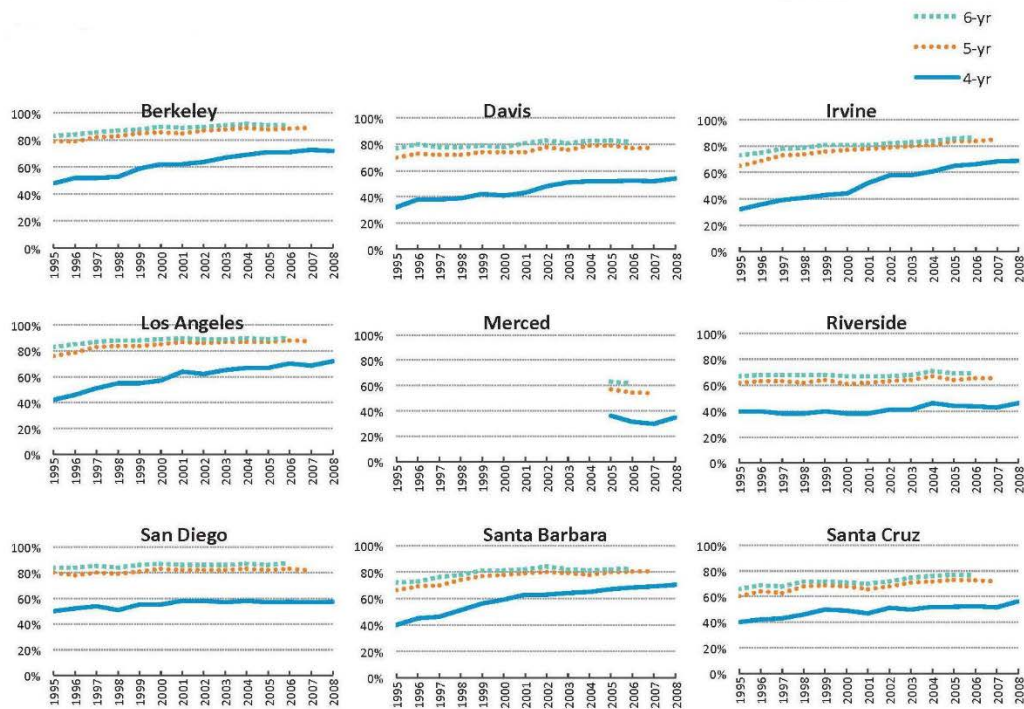
A. Graduation Rates at UC Campuses

Figure 1 compares UCR's freshman four-, five-, and six-year graduation rates for the eight large undergraduate campuses of the University of California from 1992 through 2007. The campus closest to Riverside is UC Santa Cruz whose graduation rates are approximately 10% higher and rose over the past decade by virtue of conscious campus-wide efforts (UCSC 2011). Throughout the period, these rates at UCR hovered at between 65% and 67% while the other campuses have reached or were moving toward 80%. Differences are still greater when we turn to four-year graduation rates. With the exception of Davis and Santa Cruz all campuses now have four-year graduation rates above 60% and some have reached 70%. Throughout most of the period, four-year graduation rates at UCR have, by contrast, hovered between 40% and 42%. Recent data indicate a significant improvement in the campus's four-year graduation rate. For the 2009 cohort, four-year graduation was 47% (UCR 2013b), a positive signal about the impact of changes that have already occurred in recruitment.

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[3] In Appendix A the Task Force's recommendations are regrouped by suggested implementation years and terms to provide the basis for discusssion about how a graduation rate initiative could unfold.

Figure 1: Four-, Five- and Six-Year Graduation Rates of Entering UC Freshmen by Campus, 1995-2008


Source: UCOP (2013a), p. 12.

B. Academic Qualifications as an Influence on Graduation Rates

Figure 2 provides evidence that the difference between UCR and other UC campuses have to do primarily with the academic qualifications of entering students. These graphs compare four-year graduation rates of the campuses from 1995 through 2004 divided into rates for the top, middle, and bottom third of students using the system-wide academic index.[4]

In the graph showing the top third of the index the campuses are tightly bunched with Riverside performing very well relative to most of the other campuses. In the graph showing the middle third of the index UC Santa Barbara stands out. The other campuses are tightly bunched, and Riverside looks very similar to the other campuses. Graduation rates for the bottom third are much more dispersed, ranging in 2004 from 50% to 35%. In this group Riverside is in the middle of the pack. These data suggest that, given students of similar academic quality, the campus performs as well or better than other UC campuses.

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[4] The system-wide academic index is computed from high school grade point average and combined SAT scores.

Figure 2: UC Campus Four-year Graduation Rates by Academic Index Thirds, 1995-2004
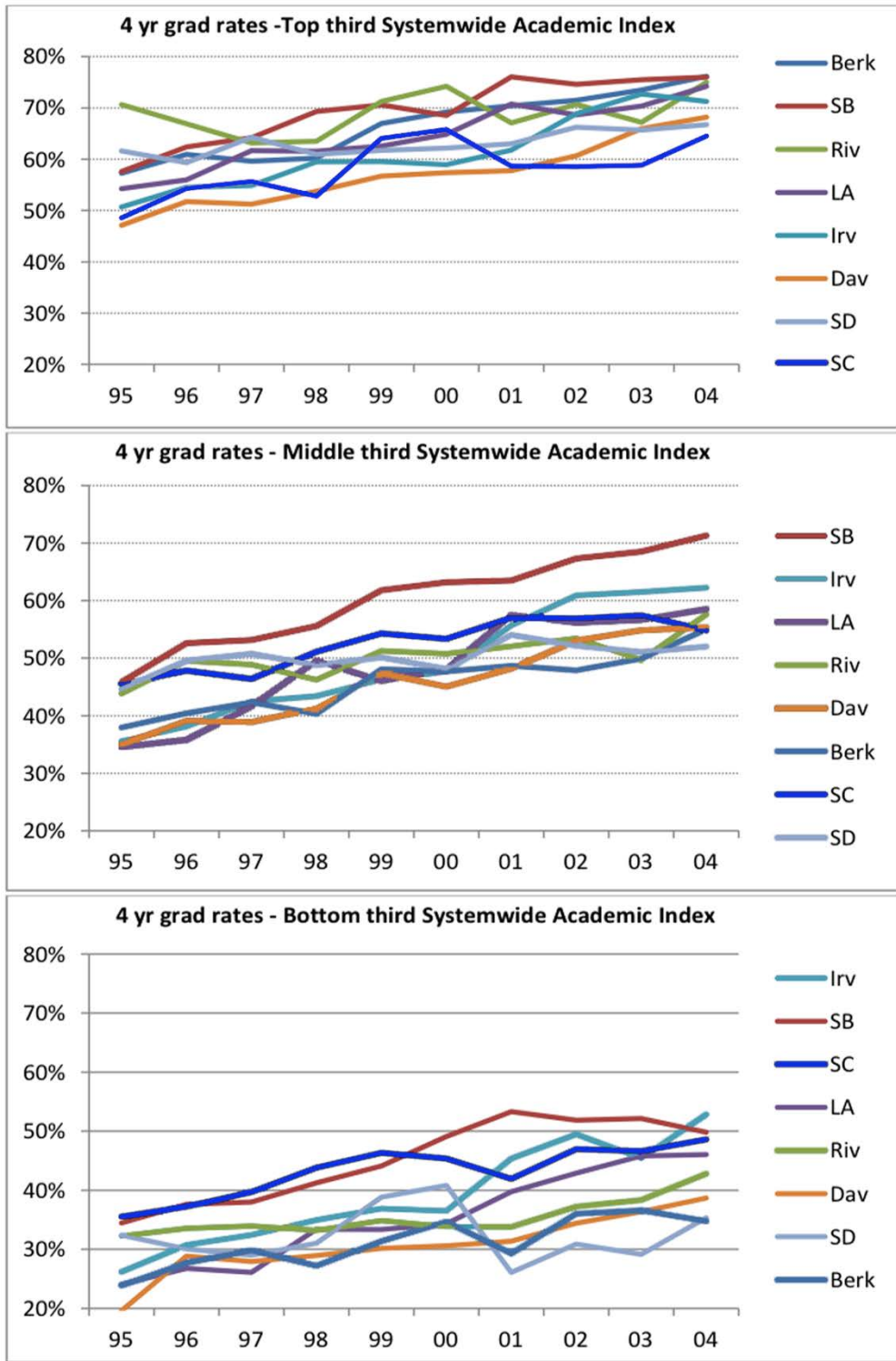
Source: UC Office of the President Institutional Research Office.

Table 1 confirms that the campuses are not equivalent with respect to the distribution of students on the system-wide academic index. In the later years of the time series, no other campus had as low a proportion of students in the top third of the system-wide index (3% in 2004) or as a high proportion in the bottom third (82% in 2004) as UCR. The campus closest to Riverside was UC Santa Cruz. In 2004 Santa Cruz had nearly three times as many students in the top third of the UC academic index as Riverside and about one-fifth fewer students in the bottom third.

Table 1: Proportion of Students in UC Academic Index Thirds, By Campus, 1995-2004

		1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Berkeley	Top	66%	65%	68%	74%	70%	72%	72%	75%	77%	78%
	Middle	22%	22%	20%	18%	20%	19%	19%	18%	16%	15%
	Bottom	13%	12%	12%	8%	10%	8%	10%	7%	7%	7%
Davis	Top	28%	24%	23%	20%	19%	19%	18%	20%	20%	20%
	Middle	42%	45%	45%	41%	42%	43%	44%	46%	46%	42%
	Bottom	30%	31%	31%	39%	39%	38%	38%	34%	34%	38%
Irvine	Top	13%	12%	12%	10%	11%	12%	13%	15%	17%	17%
	Middle	35%	38%	38%	41%	43%	46%	44%	47%	50%	49%
	Bottom	53%	51%	49%	49%	46%	42%	43%	38%	32%	34%
Los Angeles	Top	51%	57%	58%	64%	66%	64%	63%	63%	66%	66%
	Middle	31%	28%	31%	27%	24%	26%	26%	25%	24%	23%
	Bottom	18%	15%	10%	9%	10%	10%	11%	12%	10%	11%
Riverside	Top	16%	11%	10%	7%	7%	5%	5%	5%	3%	3%
	Middle	25%	23%	19%	19%	17%	16%	15%	16%	15%	15%
	Bottom	59%	66%	71%	74%	76%	79%	80%	79%	81%	82%
San Diego	Top	40%	44%	42%	39%	49%	52%	53%	51%	53%	49%
	Middle	51%	47%	48%	48%	45%	42%	44%	41%	39%	41%
	Bottom	10%	9%	9%	13%	6%	6%	4%	8%	8%	10%
Santa Barbara	Top	12%	11%	12%	14%	16%	20%	22%	21%	20%	21%
	Middle	28%	31%	33%	40%	43%	44%	43%	43%	47%	47%
	Bottom	60%	58%	55%	46%	41%	36%	35%	36%	33%	32%
Santa Cruz	Top	15%	14%	12%	9%	8%	9%	8%	7%	7%	8%
	Middle	31%	28%	27%	25%	28%	27%	26%	26%	25%	29%
	Bottom	54%	59%	61%	66%	64%	64%	65%	67%	68%	63%

Source: UC Office of the President Institutional Research Office.

These data make clear that if the academic index scores of UCR students were equivalent to the academic index scores of the median UC campus, its graduation rates would also be equivalent.

High school grades and test scores for UCR students have remained nearly flat at a time that grades and test scores in Association of American University (AAU) public member institutions have increased significantly. Since 1995, the mean SAT scores of AAU public institutions have increased from approximately 1100 to approximately 1250 (AAU 2013). During the same period UCR's SAT scores have climbed more slowly, starting at just over 1000 and climbing to just below 1100.

C. Causes of Four- vs. Six-Year Graduation Rates

The academic preparation and qualifications of students is a primary cause both for low four- and six-year graduation rates. At the same time, four-year graduation rates also have some distinctive causes. Unlike six-year graduation rates, four-year graduation rates are also influenced by the average unit counts that students take per term. As Figure 3 shows, UCR students do not average the 15 units per term necessary to graduate in four years. Instead, average unit counts are now in the range of 13.8 per term. Many students take only one or two quarters past four years to graduate, because their unit counts are too low to graduate in four years.

These unit counts have been falling steadily since 2007-08 and 2008-09 when average unit counts were 14.85 per term.

Figure 3: Average Unit Counts at UCR, 2005-2012
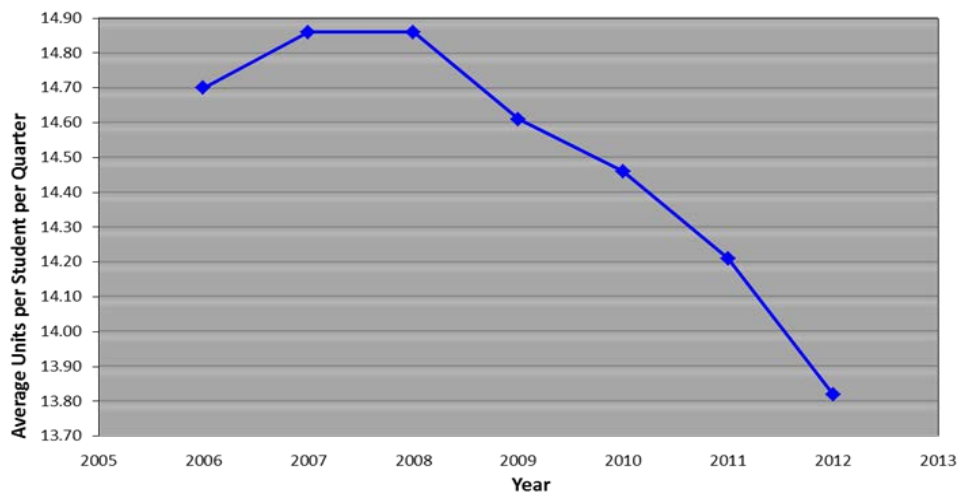
Source: UCR (2012).

This downward trend in average unit counts is particular concern given UCR's counts in relation to other UC campuses. As Figure 4 shows, UCR average unit counts are significantly below those of other UC campuses. These unit counts will need to increase if UCR wishes to increase its four-year graduation rates.[5] Thus, while efforts to improve academic preparation and retention of incoming students are necessary to improve both four- and six-year graduation rates, in addition, efforts to increase unit counts are necessary to improve four-year graduation rates.

Figure 4: Average Units Counts, UC Campuses, AY 2012
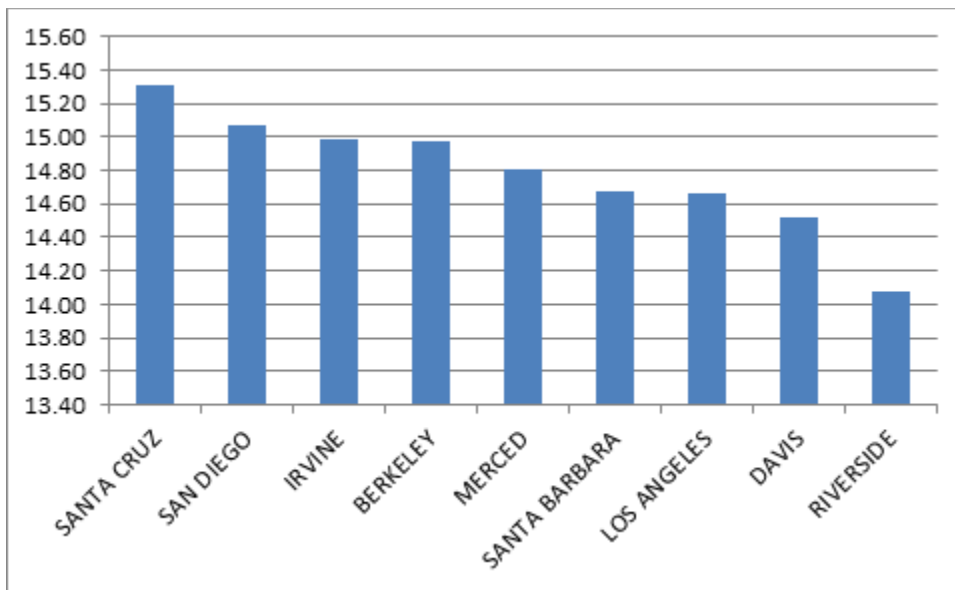
Source: UC Office of the President Institutional Research Office.

We find a bright lining around these statistics in the nearly equivalent graduation rates of students from the four largest racial-ethnic groups at UCR, as well as students from different socio-economic backgrounds. Unlike many of our sister UC campuses, UCR does not see large gaps in success between African American and Hispanic students and other students on campus (UCR 2010c).[6] It also does not see large gaps between Pell grant students and non-Pell grant students. The outstanding performance of the campus in equalizing graduation rates across racial-ethnic and socio-economic groups provides a jumping off point for future

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[5] We can see that unit counts themselves are not an important factor in six-year graduation rates simply by dividing 180 (the number of units required for graduation in most majors) by 13.8. With this unit count, and assuming that the student was continuously enrolled, the average student would take about 14 quarters to graduate and would therefore graduate in winter term of their 5th year. Even taking the bare minimum of 12 units per term would allow students who are continuously enrolled to graduate in 15 terms, or at the end of their 5th year.

[6] Indeed, in three of the last five years African American students had higher graduation rates than white students (UCR 2013c).

improvements aimed at raising while maintaining equality in graduation rates across all groups on campus.

III. RECRUITMENT AND OUTREACH

The evidence presented in Section II.B. above indicates that the lack of proper academic preparation of entering students is a very important cause of low graduation rates. Here we discuss recruitment and outreach opportunities that are in the spirit of UCR's values and aspirations (UCR 2010b)[7] and that can yield better prepared entering classes without adversely affecting the racial-ethnic and socio-economic diversity of the campus.

A. College-led Recruitment Efforts

Because both BCoE and CNAS have set the admissions bar higher in recent years, we can start to see the kinds of difference admissions decisions make. Since CNAS raised its Academic Index Score (AIS) cutoffs beginning in 2010, calculus-ready students in CNAS have increased from 40% to nearly 60%. At the same time, the proportion of undeclared students in academic difficulty dropped from nearly 11% to 5% in the most recent two years. In BCoE, the fraction of students who were calculus-ready (or had already completed calculus) increased from 50% in AY 2011 to 75% in 2013.

Academic preparation also has an impact in the College of Humanities, Arts, and Social Sciences, the college in which three-fifths of UCR students earn their bachelor's degrees. Here too higher AIS scores are associated with higher graduation rates. Although AIS scores in CHASS have increased a little in recent years, larger increases will not be possible without vigorous recruitment campaigns over many years, such as those that have already occurred in BCoE and CNAS.

One population in CHASS is a particular concern: pre-business students who do not achieve sufficiently high grades to transfer to the School of Business Administration (SoBA). These students are numerous, and their graduation rates are very low. Again we examined the 2006 cohort. Pre-business majors were 31% of all CHASS incoming students. Four-year graduation rates among pre-business students who achieved grades high enough to transfer to SoBA were 83%, and five- and six-year rates were over 95%, an outstanding performance. But among the half of pre-business students who failed to make the transition the four-year graduation rate was just 29%, and the five- and six-year rates were 43% and 47%, respectively – about 20% lower than the campus proportions. These students represented approximately 10% of all matriculating students in 2006.

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[7] *UCR 2020*, the campus strategic plan, states: "UC Riverside will begin more active efforts to recruit high-achieving students from diverse backgrounds…By attracting students with strong academic profiles, the campus will increase the value of a UCR degree, create more excitement and interest among current students, help to create future leaders for the state, and decrease the cost of support services" (UCR 2010b: 22).

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Thus, one part of the solution to low graduation rates will be to recruit pre-business students who are more likely to achieve grades acceptable for transfer to SoBA. For most of these students, the major problem has been math performance. This means that recruitment into pre-business must be attentive to students' high school preparation and qualifications in math. At the same time careful planning will be necessary to accommodate larger numbers of qualified students in the business program, which is currently restricted in size based, in part, on faculty numbers.

Many pre-business students are strongly committed to transfer to SoBA. For this reason better recruitment is likely to be a more effective tool than transition advising in promoting pre-business student success. Nevertheless, pre-business students who are not succeeding should be identified early. CHASS has recently begun a first-year review of pre-business students and is currently considering more intrusive advising. Transition advising should begin during the first year for students who are identified as very unlikely to transfer successfully to SoBA.

Recommendation #3: BCoE and CNAS should continue and accelerate, if possible, their efforts to recruit academically well-prepared students, while continuing to closely monitor the effects of these efforts on socio-economic and racial-ethnic diversity of the incoming student population. CHASS should begin vigorous efforts along these lines, paying special attention to recruiting pre-business students who have adequate math preparation.

Recommendation #4: CHASS should adopt early transition advising for students who are identified as very unlikely to transfer successfully to SoBA.

Recommendation #5: The Strategic Academic Research and Analysis unit should continue to monitor graduation rates closely by major. Programs with low graduation rates should be encouraged to tailor AIS scores and admissions criteria so that they accurately reflect the preparation and qualifications associated with success in the program.

B. Outreach to High Schools

Three of the undergraduate colleges are already engaged in outreach efforts to recruit top high school (and community college) students and to inform these students about what they will need to do to increase their likelihood of success at UCR. These college-level outreach efforts have helped the campus to attract better qualified students.[8] Outreach efforts targeted to the performance of matriculating students from UCR's main feeder higher schools can become a useful supplement to these efforts.

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[8] BCoE, for example, has improved its name recognition through its "Bourns Identity" marketing. In addition, to visiting local high schools, BCoE has very active outreach efforts aimed at community colleges, including cooperative engineering design projects.

The TF discovered that grades at or below 2.0 in the first quarter at UCR strongly predict graduation chances.[9] Fewer than 20% of the entering 2006 students who achieved a first-quarter GPA of 2.0 or below graduated in four years, and only 45% graduated in six years. These figures are about 20% below the campus averages. Nor is this "2.0 and below" group, which comprises fully one-quarter of the freshmen class, a small portion of the total. The campus could greatly improve its graduation rates by reducing the size of this "2.0 and below" group.[10]

We examined the composition of this group using data from the 2006 cohort. In the 2006 cohort, first-quarter grades below 2.0 were strongly correlated with high school grades and SAT scores. Students with high school grades below 3.25 and SAT-M and SAT-V scores below 500 were much more likely to fall in the "2.0 and below" group. By contrast, students' socio-economic and racial-ethnic backgrounds were weakly correlated with low grades in first quarter.

We also examined the performance of students by high school looking only at high schools that sent UCR 50 or more students between 2006 and 2012. We found that 14 of these feeder high schools sent students who tended to perform quite poorly at UCR. Students from these high schools achieved grades of 2.0 or below 30% of the time or more. By contrast, we found that 18 high schools that sent students who rarely performed poorly at UCR, using the same metric. Students from these high schools achieved grades of 2.0 or below in first quarter only 10% of the time or less.[11]

Recommendation#6: UCR admissions staff and any interested faculty members should work with principals and teachers at feeder high schools whose students perform poorly in the first quarter (30% or more of entering students achieving GPAs of 2.0 or below). The goal would be to help these high schools improve the preparation of applicants.

Recommendation #7: UCR admissions staff should work with principals and teachers at feeder high schools whose students tend to perform well in the first quarter (i.e. 10% or fewer achieving GPAs of 2.0 or below) to increase the number of UC-qualified applicants from these schools.

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[9] In this analysis we excluded the 83 students who achieved a GPA of 0.00, assuming that these students may never have enrolled.

[10] Because the academic profile of students has improved over the last two years, it will be important to update completion rates by high schools for more recent cohorts and to generate new lists annually based on the current performance of UCR's feeder high schools.

[11] The performance of high schools was not strongly correlated with the Academic Performance Index (API) scores, a measure of high school academic quality, although more high API schools were found in the latter group.

C. Will Changes in Recruitment Adversely Affect Diversity?

Some on campus worry that recruiting academically better prepared students will lead to erosion of UCR's identity as a campus that values and supports diversity.[12] Both BCoE and CNAS have been able to enroll better prepared students, thus far with very limited effects on their racial-ethnic diversity.[13] Smaller-scale recruitment campaigns in CHASS have similarly shown that students in the high school GPA band between 3.7 and 4.0 are highly representative of the racial-ethnic diversity of inland Southern California. These are students who tend to do well at UCR.[14]

Many highly-qualified minority students are simply choosing to go elsewhere (Kidder 2012). If the campus makes an effort, it has an excellent chance of competing successfully for highly-qualified minority and first-generation students, based on its distinctive reputation as a campus that values diversity and has notably harmonious relations across racial-ethnic and socio-economic groups, according to UCUES and other data (see, Brint et al. 2010; Kidder 2012; Study Group on University Diversity 2007: Appendix A).

IV. WORK HOURS

Both work hours and the location of work make a difference on students' prospects for timely graduation. Students who work long hours in paid employment are likely to take fewer units and to spend less time preparing for class than students who do not work long hours.

The University of California's and the State of California's relatively generous financial aid policies (see Section XI below) allow most UCR students to concentrate on being students rather than on working long hours in paid employment. The University of California Undergraduate Student Experiences Survey (UCUES) indicates that the modal UCR student works no hours per week and the average student works 10 or fewer hours per week (Brint et

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[12] The issue of racial-ethnic diversity is complicated by the fact that white students, who also contribute to diversity, represent a declining population at UCR, down from 25% of the student body in 2000 (UCOP 2000) to 15.5% in fall 2012 (UCOP 2012) and 12% of the entering 2013 class (UCR 2013d).

[13] Fall 2013 unofficial statistics indicate that freshmen CA-resident African American numbers declined by 30 from Fall 2012 (from 262 to 232). It is too early to tell whether this number may foreshadow a trend or represents a one-time statistical fluctuation. If the campus raised AIS dramatically, it would likely find a diminishing proportion of African American students on campus. With a more incremental change in AIS, however, targeted recruiting, with an emphasis on African American students' success at UCR, could continue to bring African American students to the campus at the same or higher proportions in the future.

[14] Students from the lower end of the campus AIS distribution are retained less frequently than students at the high end of the AIS distribution, both in the first and second years. For example, UCR lost 15% of top AIS quintile students in the entering 2009 and 2010 cohorts between matriculation and the end of second year, but nearly 30% of the bottom AIS quintile students.

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al. 2010). However, UCUES data are somewhat skewed in favor of higher GPA students, who are more likely to complete the survey, and therefore also in favor students who do not work long hours in paid employment.   Research indicates that students who work fewer than 15-20 hours per week tend to perform as well or better than otherwise similar students who do not work. However, students who work 20 hours or more per week do not perform as well as their peers, judging by their GPAs (Brint and Cantwell 2010). UCR students report higher numbers of hours worked per week, compared to students at other UC campuses, but the differences are modest.

The campus does not keep good data on the work hours of enrolled students. It does keep data on students who work on campus. We examined data from the 2006 entering cohort. About 35% of entering freshmen worked on campus during their years at UCR. These students graduated at significantly higher rates than other students. Their five- and six-year graduation rates look similar to those of students who are enrolled at the most selective UC campuses.   It seems likely that many of these students were also high achieving students since many jobs on campus, such as peer educators, require high grade point averages. The residual group of students who either did not work or worked off campus graduated at rates below the campus average. Students who work off campus are separated from the campus environment and may have many friends who are workers rather than students. Working long hours in paid employment off-campus will intensify these effects due to separation from campus culture and campus relationships.

Recommendation #8: In correspondence with students at the time of their acceptance and in orientation materials/presentations, students should be strongly advised that working more than 15 hours per week is detrimental to their chances of graduating, and the campus recommends that students seek employment on campus over jobs off-campus. This information should be part of every introductory advising session and should be repeated regularly by advisors.

Like low-income students at other institutions, low-income students at UCR tend to be debt averse. They fear that they will not be able to pay back loans or will not have enough money to live as they wish after they take out loan repayment amounts. Many have heard stories from relatives about the bad consequences of taking out loans. Risk aversion (including "sticker shock" and financial aid literacy) are well-documented challenges among low-income students, particularly among under-represented minority students in California (Study Group on University Diversity 2007). Campus data provided by the Office of Financial Aid suggest they are particularly averse to taking out unsubsidized loans. At the same time, the data suggest that students who take out loans are more likely to graduate than students who work off campus or do not work at all (see Section XI below). Students and their families should decide what is best for them, but these decisions should be based on accurate information about the relative disadvantages of working off-campus compared to assuming manageable levels of debt.

Recommendation #9: In correspondence with students at the time of their acceptance and in orientation materials/presentations, students should be informed through head-to-head comparisons of the effects of working more than 15 hours per week off-campus on graduation prospects as compared to taking on various levels of student loan debt.

V.   STUDENT CULTURE

Among the most surprising (and surprisingly common) comments we heard during the seven focus groups we conducted were from the many students who said that they wanted to take three classes per term and would not take four classes even if they could take any course on campus as a fourth course. Students' strong desires to protect their GPAs was the primary reason for these statements, but some students also said that they needed to take three courses per term to balance extra-curricular activities, internships, and/or paid employment. We heard repeatedly that students doubted their ability to obtain the grades they wanted if they took more than a "manageable" number of courses. Science lab courses were often cited as particularly time-consuming among the STEM students interviewed. Several contextual factors help to create a culture in which three courses a term is normative or at least completely acceptable. One is that many UCR students struggle to do well in their courses. A second is that the labor market is perceived as extremely challenging. Most students expressed deep concern about their marketability. Understandably, they felt that good grades and internships were an important part of marketability.

We are not yet certain how deeply held the norm of three courses a term is in the UCR study body. We believe that more information about how students are making sense of their college careers and the factors bearing on their progress to degree would be highly desirable. The only way to determine the subjective reasons for slow progress to degree would be to conduct a survey of the student body. Such a survey would also reveal important data about advising and courses that students feel are in too short supply. (Sample survey questions are included as Appendix B.)

Recommendation #10: The University should conduct a survey of the student body to determine the reasons why students take fewer than 15 units per term and the courses students feel are in too short supply.

We are skeptical that most UCR students cannot take four courses and succeed. According to self-reports in UCUES, the average University of California undergraduate student spends 26-27 hours in class and in out of class study and nearly 40 hours per week in social and entertainment activities (not including physical exercise) (Brint and Cantwell 2010). UCR statistics are similar to system-wide statistics (unreported data from Brint and Cantwell 2010). Adding a fourth class would certainly increase this workload for those students currently taking three courses per term, but a workload increase of 6-8 hours per week would not begin to reach the levels that the average college student of previous generations spent in class and on study (Babcock and Marks 2011).

At the same time, attempting to impose a four-course norm without raising the academic profile of the student body could back fire, reducing the graduation rate in an effort to increase it. Most students think rationally about how many courses they can take and do well. Students who are not academically well prepared may in fact not be able to do well if they take four courses, given contemporary expectations concerning how hard college students should work on their studies. Some who feel the stress of taking four courses will leave the campus.

Over time graduation in four years can be successfully linked to the culture of student success, but it may take a concerted messaging campaign over several years to forge the connection, as well as the admission of larger numbers of better prepared students.

The three-course norm is reinforced by the 16-unit cap.[15] Many CHASS classes, in particular, are five-unit classes. Students cannot take three four-unit classes and one five-unit class during the "first pass" enrollment period because if they do so they will exceed the 16-unit cap. The 16-unit cap was imposed during a time of extreme seat shortages. It is time to reconsider the 16-unit cap.

<u>**Recommendation #11**</u>: **The 16-unit cap for the first enrollment pass should be repealed and replaced with a 17-unit cap.**

The three-course norm is also reinforced by financial aid availability. Financial aid is available for students at 12 units per term, which is considered by some students a "full load." The idea that 12 units constitute a full load is also reinforced by some advisors who counsel first-quarter students to take three rather than four courses a term in their first fall term. We received mixed evidence about how common this counsel may be. Many students said advisors recommended three courses early during freshman year, but four courses thereafter. Others said that advisors often counseled taking fewer than four courses in order to protect their grade point averages. Because of these structural supports for the three-course norm, we anticipate that the norm will be difficult to change. But we think the university should make a strenuous effort to change it. One avenue for change can be through a "Finish in Four" campaign launched at the next Highlander Orientations. The "Expected Progress" rule can be another lever for change. This rule, which already exists as a campus regulation (see UCR 2007), states that students are expected to take at least 45 units each year and declares them ineligible for continued registration if they do not pass at least 37 units.

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[15] We note that other UC campuses have more stringent "first pass" unit caps but still have higher unit enrollment averages.

Recommendation #12: **The Colleges should begin a vigorous campaign to encourage students to "Finish in Four" during Highlander Orientation, including efforts to bond students with their graduation class year and a strong emphasis on the reasons to graduate in four years, including comparisons of the performance of students who graduate in four years and those who do not.**

Recommendation #13: **The Associate Deans and the Student Affairs Managers should work with the advisors to help students realize that taking just three courses in a term is a last resort, not an attractive option.**

Recommendation #14: **The Colleges should begin to enforce the "Expected Progress" regulation again.**

VI. SEAT AVAILABILITY

Sizable unplanned over-enrollments in 2008-09 and 2009-10 led to pressure on the campus for increasing the number of seats available to meet student demand. The colleges met these pressures, to a greater or lesser degree and in an *ad hoc* way, requesting new courses from departments willing to offer them. In 2011 EVC/P Rabenstein charged Vice Provost Steven Brint with developing an enrollment model that, if implemented, would assure UCR students the opportunity to enroll in 15 units of credit per term, thereby allowing for four-year graduation. The resulting enrollment model predicts seat demand in lower- and upper-division for each department based on historical trends in enrollments extrapolated to fit projected enrollments (Brint, Apkarian, and Yoshikawa 2012).[16]

When compared to actual seats offered in AY 2012-13 the enrollment model indicated that cumulatively through fall, winter, and spring terms, the University was more than 5,000 seats short in lower division to meet student demand at 14.85 units per term for every UCR student. It was also short, by approximately 775 seats in upper-division. Although several CHASS departments provided more than enough seats to meet demand in lower division, nearly two-thirds of the seat shortage in lower division nevertheless resulted from an undersupply of seats in CHASS, particularly in several large enrollment humanities and social science departments, notably, Anthropology, History, Political Science, Psychology, and Sociology.

If students do not wish to take more than three courses per term, offering enough seats for students to take 15 units per term will only result in many unused seats. This, in turn, puts unnecessary pressure on the campus space inventory, which is already under significant pressure. Culture change is a precondition for the full utilization of seat counts calculated to meet student demand at 15 units per term. Until this culture change occurs, a stepped approach may be

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[16] The model uses 14.85 units of credit per term as its target rather than 15 units, under the assumption that some students, such as graduating seniors and part-time students, do not need or want 15 units of credit to stay on track. The last time UCR was "fully meeting" student demand for units was 2007-08 at which time the average unit count was 14.85. Nor do any other UC campuses have average unit counts at exactly 15.

necessary, expanding seat counts gradually as student culture changes to more fully embrace a four-course norm.

While taking cultural norms into account, the campus nevertheless needs to plan aggressively for a return to the pattern of students taking more units per term, recognizing that in 2007-08 and 2008-09 students were taking an average of 14.85 units per term, currently one full unit higher than the current average unit count across campus. A structural precondition for improving four-year graduation rates is that the campus provides sufficient seats (as well as the right distribution of seats) for students to take 15 units per term. UCUES data suggest that, compared to students at other UC campuses, UCR students perceive that they encounter greater course availability constraints as a factor affecting on-time graduation.

The effectiveness of campus enrollment planning varies considerably by College. Both SoBA and BCoE use adequate methods to provide students with the courses they need to graduate on time. These Colleges face more limited planning tasks, because they need to plan only upper-division courses. Planning in CNAS is generally good and seat counts have been adequate or nearly adequate in recent years, though the distribution of seats is likely not yet optimal (see Section VII below). The largest planning issues remain in CHASS, UCR's largest college. This is a function of less structured CHASS curricula, as well as a historically *ad hoc* approach to enrollment planning in the College. Over the last year, CHASS has used targets generated by the enrollment model to provide planning guidance to departments. Nevertheless, the application of the model has not yet generated adequate seat counts, particularly in lower division courses.

Recommendation #15: **Using the enrollment model, the campus should increase seat counts in a stepped way to meet student demand for 15 units per term by AY 2016 – with an emphasis on prioritizing seat space in "high-demand" core courses.**

Recommendation #16: The campus should institutionalize enrollment modeling as a routine function of academic planning. Beginning in spring 2014 modeling should be located in the Strategic Academic Research and Analysis unit, with oversight by the Colleges.

Recommendation #17: CHASS should continue to improve its capacity to provide an adequate number of seats in lower division to meet student demand at 15 units per term. In the short term t**his will require close linking of temporary budget requests with predicted seat requirements based on the enrollment model.**

Adding seats will not be easy under current space utilization practices. Recent reports by the Office of Undergraduate Education and the Registrar's Office indicate that space utilization on campus is far from optimal (see Brint, Yoshikawa, and Curwin 2012; Dailey 2012). Many faculty members prefer to teach on Tuesdays and Thursdays only, and some departments and schools have allowed faculty members to teach very disproportionately on these preferred days. Because Tuesday-Thursday (TR) classes are 80 min. long, rather than 50 min., fewer time slots exist for TR scheduling than Monday-Wednesday-Friday (MWF) scheduling. In order to add

more classes to meet student demand, it will be important for Colleges and departments to return to the more equitable pattern of assigning an equal proportion of TR and MWF classes to faculty members. A few departments have even more restrictive scheduling focusing on seminar style classes on one day of the week, with Wednesdays being most popular.[17] In some cases, these seminar-style courses are appropriate to instructional aims; in other cases they may be used primarily because they limit the number of days faculty members are required to be on campus.

Increasing seats in upper-division lab courses is also made problematic by available physical space. For many large lab courses in the sciences, Saturday instruction is the only current option.

Recommendation #18: Deans and department chairs must work to reduce TR bunching in the undergraduate teaching week, as well as inappropriate 3-hour block scheduling on a single day of the week.

VII.   DISTRIBUTION OF SEATS

Supply of an adequate number of seats does not mean that seats are properly distributed. In general, we were impressed by the careful course planning currently found in BCoE and SoBA, aided by their capacity to focus on upper division courses exclusively. Students in these colleges appear to have the courses they need. Issues in the distribution of seats, however, exist in the two largest colleges on campus. Due to budget cutbacks, some CNAS chairs have complained that they do not have TA funds to provide both core courses for their majors and breadth courses for CHASS students. Nevertheless course planning is comparatively well developed in CNAS. Course planning is not yet well developed in CHASS.

In the past CNAS may not have offered a sufficient number of sections in some important gateway courses, such as BIO 5. Today, the problem appears to be limited to students who fail gateway courses. They may be prevented from moving forward for a year because sections in the course(s) they have failed are offered only once a year. The same is true of some CHASS courses with high failure rates. In addition, advisors and students cited a number of CHASS courses as not being offered frequently enough to meet student demand. These courses include, but are not limited to, ENG 1C, PSYCH 11, PSYCH 12, SOC 4, and SPN 4. Other 4th year language courses were also frequently cited as being offered too infrequently.

Conclusions about the distribution of seats must remain tentative for the time being. The TF was not able to conduct a thorough review of courses that are not offered as frequently as would be desirable or are not offered in rooms large enough to meet demand. The campus also does not

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[17] In addition, careful study will be required to maximize space utilization of classrooms in short supply, notably, the campus's limited supply of 100-seat classrooms. Faculty members often request preferred classrooms, but these classrooms are misallocated when capacity consistently exceeds enrollment.

currently maintain records related to students who are unable to enroll in courses they would like to take if seats were available.

Recommendation #19: **The Colleges should use the results of the graduation rate student survey (and other available sources of information) as evidence for courses that students would like to see offered more frequently. They should work with the departments to see that these courses are offered frequently enough to satisfy student demand.**

Recommendation #20: As technology becomes available, data should be collected on how quickly classes fill and the numbers of students who attempt unsuccessfully to enroll in courses. These data should be used in course planning and hiring.

Recommendation #21: The Colleges should offer sections of courses with high fail rates more than once a year so that students do not need to wait a year to retake key courses. Advisors should encourage students to take high failure rate courses early in their careers so that they will have time to retake these courses, should they fail them, before they fall too far behind their cohort.

Because performance during fall quarter of freshman year is a critical predictor of student success (see Section III.B above), teaching resources should be shifted to fall quarter. College deans should encourage department chairs to use their most effective instructors in fall quarter introductory courses. More course offerings and smaller classes would also help more first-year students successfully transition to college while maintaining grades above 2.0. CHASS is currently working on implementing this strategy, a development the TF supports and recommends that the other colleges also adopt. The addition of courses to fall term would have the additional benefit of allowing retake opportunities for students who fail on their first try.

Recommendation #22: In the planning process, the Colleges and the departments should shift as many outstanding instructors as possible to fall quarter introductory courses to improve the likelihood that first-quarter freshmen will make a successful transition to UCR.

The TF was not optimistic about the possibility of increasing enrollments in Summer Sessions to improve graduation rates, primarily because of the loss of summer Pell grants which have led some students to think that Summer Session courses are too expensive to take. However, the campus can do a better job of coordinating requirements for sections in classes with high student demand, including courses with high failure rates, and offerings in Summer Session. In focus group discussions, some students responded positively to the notion of incentives to enroll in summer session to enhance on-time graduation.[18]

Recommendation #23: Summer Sessions should work closely with the Associate Deans to ensure that classes required by students to make timely progress to degree are offered regularly in Summer Sessions.

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[18] Any experiments in cross-subsidizing summer courses would need to be analyzed carefully in terms of value to cost and piloted on a modest scale.

VIII.   CURRICULAR DESIGN

Students who are not able to succeed in business, engineering and science do not typically have interests that accord well with CHASS majors. Instead, they would benefit from majors in subjects like science and technology policy and health professions that more closely reflect their academic interests, but do not require as much math preparation or aptitude. The School of Public Policy will in time help to bridge student interests in science, technology, and health with curricula suited to these interests. Other curricular tracks could be developed in CNAS and CHASS. CNAS could, for example, develop programs in health professions. CHASS could develop a program in business, economy, and society.

Recommendation #24: The Colleges and College Executive Committees should consider new curricular tracks that are more tailored to the abilities of students who aspire to STEM and business major but whose prospects for success in these majors are limited by inadequate math preparation.

Several years ago, UCLA undertook "Challenge 45," an effort to streamline the undergraduate curriculum so as to allow for more senior capstone experiences. Challenge 45 referred to the goal of requiring 45 upper-division units in the major for the great majority of programs. Currently many UCR programs greatly exceed the UCLA 45-units in upper division norm.   In many cases current unit requirements are justifiable because of the complexity of the major and the amount of subject matter material a well-trained B.A. or B.S. level graduate is required to know. In other cases a large major unit count in upper division may be neither necessary nor desirable.

Streamlined requirements in upper division could help graduation rates in very popular majors by reducing the number of courses that must be provided every year or two. The potential advantages of streamlined majors, however, go beyond their contribution to students' timely graduation. Streamlined majors could also allow professors to teach more often in seminar and capstone courses, learning environments that can be productive of high levels of intellectual growth for many students.

Recommendation #25: **The Deans should encourage departments to analyze whether reductions in major unit requirements would be beneficial to students and faculty without sacrificing the quality of the UCR degree.**

IX.   COURSE PLANS

Course plans can help students keep on track for timely graduation by laying out the courses students need to take to complete their programs in four years (or slightly longer in the case of many BCoE majors). BCoE and SoBA currently provide course plans to their students. In BCoE and SoBA, students receive course plans that cover their entire career at UCR. In CNAS, most new majors are given provisional four-year course plans and advisors require a quarterly course plan before allowing majors to enroll in classes. In the other colleges, and in each

department, a four-year course plan can be devised for students in every major and discussed with students at the time of their matriculation. These course plans will specify the courses (or course options) that should be taken within a three-quarter academic year in order to graduate in four years. Academic advisors can then be deployed to see that each student's plan is followed. To be effective, course plans must be mandatory, rather than optional. A secondary benefit of course plans is that they allow colleges to do better curriculum planning. Based on course plans, the colleges should know how many students need to be accommodated in key courses during the year.

Because of the wide range of options in CHASS, and to a lesser extent CNAS, course planning will be more challenging for advisors in those Colleges. One barrier is the high workloads for advisors in the Colleges. Nevertheless, mandatory course plans remain a valuable tool even in a College offering relatively greater freedom of choice for students. An important reason for their value is that they can help to institutionalize the four-course norm that will be required to improve UCR's four-year graduation rates. The new Banner student information system may allow advisors to more closely monitor and flag students who diverge from their optimal course plans.

Recommendation #26: **Each of the Colleges, and the departments in each college, should implement a system of mandatory course planning to cover the entire four-year career for incoming freshmen and the two-year career for incoming transfer students. Every first-year student should have a course plan approved before they can register for winter quarter**. **These course plans should be the focus of discussions with advisors throughout a student's career.**

After course plans have been implemented in all of the Colleges, the campus will need to evaluate the extent to which course plans have been followed, why they have not been followed, whether they have helped students to achieve more timely graduation, and any unintended consequences they have created.

Recommendation #27: **Two years after full implementation mandatory course plans should be evaluated to determine their effectiveness and any unintended consequences they have created.**

X. ACADEMIC SUPPORT SERVICES

UCR loses about 15% of its incoming class in the first year (about double the UC average). It loses another 10% in the second year. These losses account for the majority of the gap between entering freshmen and six-year graduates, though obviously another 6-8% of entering students leave and do not return between their third and the end of their sixth years. Although first-quarter grades are a very important predictor of graduation, it is clear from these data that academic support services cannot focus solely on students in their first quarter.

A. Academic Support Programs

To the extent that UCR continues to enroll students who are in the bottom quintiles of UC system-wide academic indices, it will need to continue to make relatively heavy investments in academic support services. These investments should be made based on program effectiveness, rather than simply because the programs have existed for many years.

The strongest academic support programs on campus are Supplemental Instruction and the CNAS Learning Communities. The recent evaluation of Supplemental Instruction indicates that it is having a positive influence on student grades in most classes and that the more SI sessions students attend the stronger the impact. Further improvements are possible in SI with respect to quality control of peer educators, timing of SI sessions close to lecture, and, most important, in the level of support and publicity instructors give to SI (Coyne and Curran 2013). SI is also UCR's largest student academic support program, affecting more than 5,000 students per year. The CNAS Learning Communities (LCs) are another very well-evaluated academic support program. The most recent evaluation showed gains in GPA and persistence of LC students relative to a matched sample of non-participants (McKibben, Wallace, and Silverman 2013). CNAS LCs include not only block scheduling of introductory math and science classes, but mandatory SI, academic study skills workshops, and intensive advising.[19] Preliminary results for the redesigned Early Assist program are promising, but based on pilot data only for one quarter (Coyne 2013). The redesign focuses on an athletic advising model with an intake interview and regular check-ins of "at-risk" students with assigned peer educators and "extra credit" points assigned by instructors for students who attend all six check-ins during the term.

By contrast, the recent evaluation of drop-in tutoring showed no effect on students' grades when students who participated were compared to a matched sample of non-participants (Cantwell and Maldonaldo 2013). On the basis of this evaluation, the Office of Undergraduate Education (UE) has temporarily closed the tutoring program so that it can be redesigned to serve UCR students effectively. The recent evaluation of the CHASS Connect three-quarter sequences showed no effects on grades or retention over three separate cohorts when participants were compared to students who applied for the program but could not be accommodated (Aziz et al. 2012).[20]

Recommendation # 28: Academic support services that do not demonstrate value added should not be funded. Redesigns require piloting, evaluation of pilots, and, if evaluations are successful, building to scale.

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[19] BCoE provides another well-designed model. It requires learning communities of all incoming freshmen, including mandatory SI and registration via block scheduling, with an opt-out option only.

[20] As a result of this evaluation, UE withdrew funding from CHASS Connect. (CHASS Connect has continued with CHASS Dean's funding.) UE recommended redesigning CHASS Connect as a two-quarter sequence, with a strong emphasis on academic skills development.

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Recommendation # 29: **CHASS should consider whether its learning communities should be redesigned to follow the principles that have led to success in CNAS: mandatory SI for challenging classes, mandatory academic study skills workshops, and intensive advising.**

    B. Academic Advising

The research literature indicates that professional academic advising is one of the most important influences on students' graduation (Klepfer and Hull 2012). Academic advisors are particularly important resources for first-generation and low-income students as Figure 5 indicates.

The academic advisors at UCR are skilled professionals who make a positive impact on the academic lives of our students. However, academic advising at UCR has also been hampered by budget cuts and a failure to focus resources where they are most needed. In addition, some evidence exists that at least some advisors some of the time are not encouraging students to take four classes per term. Students in some of the focus groups expressed dissatisfaction with advising related to timely progress to degree. Many program reviews have also surfaced complaints about academic advising. The dissatisfaction that we have found appears to be due more often to overworked advisors than to poorly trained advisors.

Figure 5: Four-Year Student Persistence by Advising Session Frequency
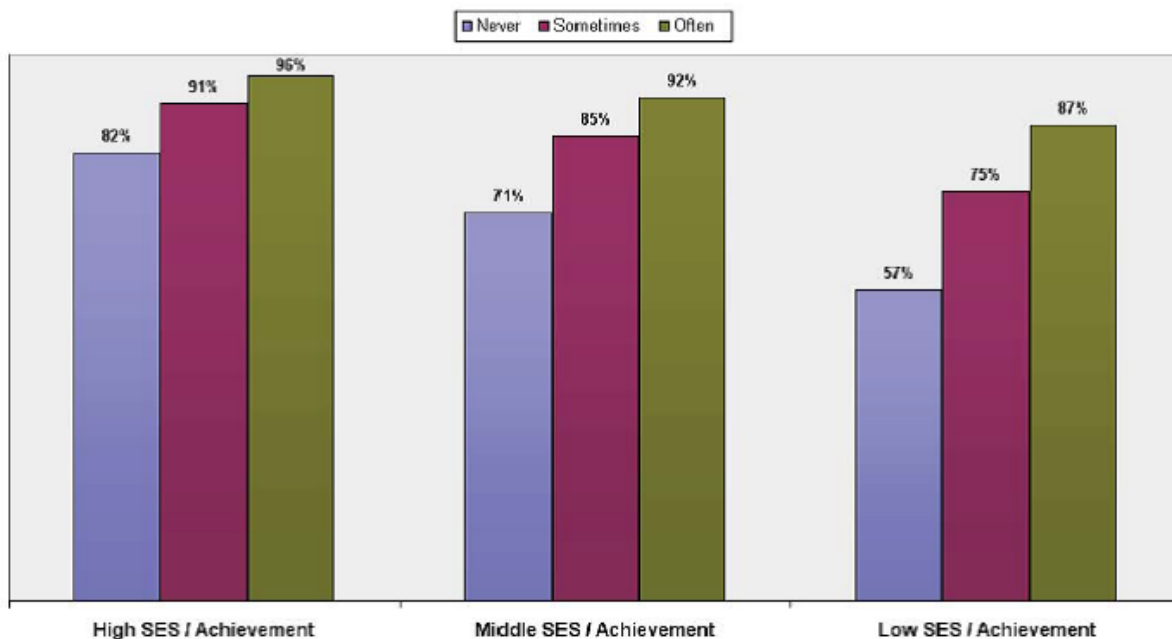
Source: Klepfer and Hull (2012), p. 6.

During the period of budget cuts, academic advising ratios increased dramatically. The Colleges were running student to advisor ratios twice the recommended level by the national college

advising association: 600:1 or more as compared to the recommended 300:1. Budget allocations have begun to reverse this deteriorating situation. The addition of new advisors will constitute the largest expense required to put the recommendations of this report into effect. The campus would need to add 18 advisors to meet the NACADA standard. A stepped approach would begin to move the campus in the right direction. This is an investment that would likely pay dividends in retention.

Recommendation # 30: The University should take steps during the budgeting process to return academic advising ratios much closer to the NACADA-recommended 300 students per advisor.

Recommendation #31: Academic advising should be organized so as to meet the greater academic and course planning needs of first-year students, particularly first-quarter freshmen and undeclared students. Colleges should consider intensive advising practices based on intercollegiate athletic models, with regular check-ins and standard questions, for "at-risk" freshmen.

Recommendation #32: Advisors should consistently advise all UCR students that they are expected to take 15 units (four courses) per term.

Undeclared students are another group whose graduation rates lag. Currently CHASS and CNAS students are allowed to remain undeclared for as many as six quarters.[21] The TF considers this policy counter-productive to the goal of increasing graduation rates.

Recommendation #33: The Colleges should adopt policies that allow students to remain undeclared for one academic year only. At that point, students should be required to declare a major.

XI.   FINANCIAL AID

UC campuses educate roughly eight times as many low-income students than all of the Ivy League universities combined (UCOP 2013b). The principal reason for this remarkable achievement is a needs-based financial aid system that is more generous than any other in the country. Between Pell grants, Cal grants, and institutional return to aid, students with family incomes under $80,000 per year can typically finance their entire educational costs without taking loans. Students who are on Pell grants graduate at approximately the same rate as students who are not on Pell grants.

This is an outstanding achievement. At the same time the generosity of the California system, if not managed astutely, may tend to encourage less timely progress to degree than systems in which a higher proportion of the educational cost is borne by students and their families. Because financial aid eligibility is defined as full-time student status at 12 units per term, the

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[21] BCoE and SoBA students are admitted to and are required to be in majors. The term "undeclared" is reserved in BCoE for students who are leaving the college for academic reasons.

effective goal for some students on financial aid may be to take at least 12 units of credit, not the 15 units needed to graduate in four years.

UCR's capacity to shift this incentive structure is limited for Pell grants and Cal grants. Federal Pell guidelines establish that students may receive Pell grants for up to 18 quarters, or six years.[22] Students are eligible for Cal Grants for four years, providing an incentive to the 44% of UCR students who receive Cal Grants to graduate in four years, if they can (and are aware of the eligibility period).

At the same time, UCR has flexibility to design its institutional aid to provide incentives for timely graduation, if it chooses to do so. Current UCR policy is to allow students to be eligible for institutional aid for 18 quarters. UCR policy changed to 18 quarters from 16 quarters in 2011-12, both to align with federal Pell policy and to simplify a complicated financial aid system. An unintended consequence of this change may have been to reinforce the tendency of UCR students to take fewer than the necessary four courses per term to graduate in four years.

If it wishes to do so, the university could shift the current incentive structure either by setting eligibility for institutional aid at a higher number of units or by allowing institutional aid only for a fewer number of quarters. We do not advocate making changes like these without careful study. Such changes could be experienced as drastic by many students and, if students find they cannot complete in fewer years, they might have the unintended consequence of depressing the four-year graduation rate rather than increasing it. For changes in the eligibility structure to have the desired effect, they will need to be carefully studied and they will likely need to be accompanied by recruitment efforts that yield better prepared students.

Recommendation #34: **The campus should conduct a study of the likely impact of several types of alterations in eligibility for UCR institutional aid on retention and graduation, including fewer quarters of eligibility and a higher number of units required for eligibility.**

Another important issue is the unwillingness of many UCR students to take out loans, particularly unsubsidized loans. We believe that many UCR students substitute hours of paid employment off campus for taking out loans to finance their college education. The evidence currently available suggests that this strategy is not advantageous to students. For example, students who took out unsubsidized Stafford loans in 2006 had four year graduation rates of nearly 50%, significantly higher than the 36% rate of students who worked off campus or did not work at all. Six-year graduation rates also differed appreciably between the two groups (UCR 2013e, 2013f).

Recommendation #35: **Students should receive information about the graduation prospects of otherwise equal students who take out loans as opposed to working long hours in paid employment. This information should be used to educate students about the relative costs**

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[22] Although some have argued that low-income students are harmed by this lengthy eligibility period, few if any legislators have proposed changing them (see Baum, Conklin and Johnson 2013).

and benefits of loans versus paid employment. Students and their parents or guardians should receive informational materials about loan repayment options and about how much of paychecks on average go to loan repayments at different loan levels.

Recommendation #36: Financial aid materials should be revised to emphasize that students must take 15 units per term to graduate in four years and that taking 15 units typically means four courses per term.

XII.   ORGANIZING A "FINISH IN FOUR" CAMPAIGN

Achievement of the goals laid out in this report will require a focused effort of senior leadership to shape the future of the campus in ways that produce higher graduation rates. The first step will be review of this report and its recommendations by the Dean's Council, the Enrollment Management Council, the Academic Senate (particularly where it relates to the Senate's responsibilities for admissions policy, curriculum, and degree requirements,) the EVC/P, the Chancellor. During this process, some recommendations will be accepted, others modified, and others rejected. Following agreement about the recommendations the campus will choose to adopt, an action plan should be developed, together with the individual(s) responsible for realizing elements of the plan and the dates by which these elements are expected to be realized. A campus committee should be appointed to monitor the progress of implementation. Any initiative will need to be accompanied by an effective messaging campaign. For this reason Strategic Communications should be brought into the discussion shortly after the recommendations have been reviewed and revised for implementation.

Recommendation #37: The Chancellor and EVC/P should convene the Dean's Council and Cabinet to discuss this report and its recommendations. Once recommendations have been revised and approved, an action plan should be developed to implement the approved recommendations. Strategic Communications should be an important partner in realizing approved recommendations.

XIII.   CONCLUSION

The campus fails to serve students who are admitted but do not graduate. The campus also has a financial stake in the success of its students. If student and institutional interests are not enough to focus attention on graduation rates, external pressures are likely to do so; graduation rates will remain on the national and state policy agendas for at least several years to come.

Although the primary drivers of UCR graduation rates can be readily identified, the systemic quality of their interaction should be fully appreciated by all who hope to raise UCR's graduation rates. For example, students who are not well prepared are more likely to want to take three rather than four courses per term. If they cannot find four courses they want to take, because seats in popular courses are in short supply or the 16-unit cap limits choices, these predispositions will be reinforced. If financial aid is available at 12 units per term rather than at a higher unit count, students' predispositions may be further reinforced. If advisors signal that

three courses a term is an acceptable load, students will feel confirmed in their decisions. If many students across campus adopt the three-course norm, students will feel further confirmed in their choices.

It follows that reconstructing a system of influences requires attention to each influence in the system. To change student behavior using the example above, recruitment, seat supply, unit caps, financial aid policies, and advising would all need to be reconfigured in a coordinated fashion to lead the current system to work in the direction of shifting from a three-course norm to a four-course norm. Treatment of only one or two of the elements in the system independent of the others would be unlikely to bring about the desired reorientation of the system as a whole.

We recognize that policy decisions are not based primarily on analyses, but on values, incentives, and relationships. Effective implementation, in turn, requires the additional drivers of motivation and accountability. UCR can change its graduation rates dramatically over the next five years, but to do so the campus will need to value higher graduation rates and be willing to take the steps necessary to achieve them. It will also need to find the resolve to put sound recommendations into practice and the accountability mechanisms to ensure that this resolve culminates in effective action.

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GRADUATION RATE TASK FORCE RECOMMENDATIONS GROUPED BY IMPLEMENTATION TIMELINE

Recommendations in the report are grouped by the nine factors the TF has identified as important to the improvement of UCR's graduation rates. Here we regroup the recommendations in relation to a timeline that will allow the campus to roll out the recommendations over a three-year period. Winter will be a time for further data gathering and planning. Spring term is a time when the campus reviews budget plans, colleges plan their curricula and the administration develops correspondence with admitted students and their parents. Summer is the time of orientation programs and preparation for fall term. Fall is the time for launching recruitment efforts. This grouping of the Task Force's recommendations reflects these rhythms of the academic calendar.

The first recommendation, however, is a premise for the others and therefore is not attached to a year or term.

Recommendation #1: UCR should aim to exceed the Governor's performance target and raise four-, five-, and six-year graduation rates by 15% between now and the graduation dates of the 2017 entering cohort.

YEAR 1: WINTER TERM

Recommendation #37: The Chancellor and EVC/P should convene the Dean's Council and Cabinet to discuss this report and its recommendations. Once recommendations have been revised and approved, an action plan should be developed to implement the approved recommendations. Strategic Communications should be an important partner in realizing approved recommendations.

Recommendation #2: The Chancellor should announce an initiative to reach graduation rate goals. The implementation of the initiative should begin during spring and summer 2014 based on an action plan, approved by the Deans.

Recommendation #10: The University should conduct a survey of the student body to determine the reasons why students take fewer than 15 units per term and the courses students feel are in too short supply.

YEAR 1: SPRING TERM

Recommendation #14: The Colleges should begin to enforce the "Expected Progress" regulation again.

Recommendation #19: The Colleges should use the results of the graduation rate student survey (and other available sources of information) as evidence for courses that students would like to see offered more frequently. They should work with the departments to see that these courses are offered frequently enough to satisfy student demand.

Recommendation #26: Each of the Colleges, and the departments in each college, should implement a system of mandatory course planning to cover the entire four-year career for

incoming freshmen and the two-year career for incoming transfer students. Every first-year student should have a course plan approved before they can register for fall quarter. These course plans should be the focus of discussions with advisors throughout a student's career.

Recommendation # 30: The University should take steps during the budget process to return academic advising ratios much closer to the NACADA-recommended 300 students per advisor.

Recommendation #13: The Associate Deans and the Student Affairs Managers should work with the advisors to help students realize so that taking just three courses in a term is a last resort, not an attractive option.

Recommendation #11: The 16-unit cap for the first enrollment pass should be repealed and replaced with a 17-unit cap.

Recommendation #36: Financial aid materials should be revised to emphasize that students must take 15 units per term to graduate in four years.

Recommendation #22: In the planning process additional and high-quality teaching resources should be shifted to fall quarter introductory courses to improve the likelihood that first-quarter freshmen will successfully transition to the more challenging expectations of college work.

Recommendation #4: CHASS should maintain its one-year review for pre-business students and include early transition advising for students who are identified as very unlikely to transfer successfully to SoBA.

Recommendation #16: The campus should institutionalize enrollment modeling as a routine function of academic planning. Beginning in Spring 2014 the development of campus-level enrollment models should be located in the Strategic Academic Research and Analysis (SARA) unit with oversight of the Colleges.

Recommendation # 29: CHASS should consider whether its learning communities should be redesigned to follow the principles that have led to success in CNAS: mandatory SI for challenging classes, mandatory academic study skills workshops, and intensive advising.

<u>YEAR 1: SUMMER TERM</u>

Recommendation #8: In correspondence with students at the time of their acceptance and in orientation materials/presentations, students should be strongly advised that working more than 15 hours per week is detrimental to their chances of graduating, and the campus recommends that students seek employment on campus over jobs off-campus. This information should be part of every introductory advising session and should be repeated regularly by advisors.

Recommendation #9: In correspondence with students at the time of their acceptance and in orientation materials/presentations, students should be informed through head-to-head comparisons of the effects of working more than 15 hours per week off-campus on graduation prospects as compared to taking on various levels of student loan debt.

Recommendation #12: The Colleges should begin a vigorous campaign to encourage students to "Finish in Four" during Highlander Orientation, including efforts to bond students with their graduation class year and a strong emphasis on the reasons to graduate in four years, including comparisons of the performance of students who graduate in four years and those who do not.

Recommendation #31: Academic advising should be organized so as to meet the greater academic and course planning needs of first-year students, particularly first-quarter freshmen and undeclared students. Colleges should consider intensive advising practices based on intercollegiate athletic models for "at-risk" freshmen, with regular check-ins and standard questions.

Recommendation #34: The campus should conduct a study of the likely impact of several types of alterations in eligibility for UCR institutional aid on retention and graduation, including fewer quarters of eligibility and a higher number of units required for eligibility.

Recommendation #35: Students should receive information about the graduation prospects of otherwise equal students who take out loans as opposed to working long hours in paid employment. This information should be used to educate students about the relative costs and benefits of loans versus paid employment. Students and their parents or guardians should receive informational materials about loan repayment options and about how much of paychecks on average go to loan repayments at different loan levels.

YEAR 1: FALL TERM

Recommendation #6: UCR admissions staff and any interested faculty members who are interested in working with principals and teachers at feeder high schools whose students perform poorly in the first quarter (30% or more of entering students achieving GPAs of 2.0 or below). The goal would be to help these high schools improve the preparation of applicants from these high schools.

Recommendation #7: UCR admissions staff should work with principals and teachers at feeder high schools whose students tend to perform well in the first quarter (i.e. 10% or fewer achieving GPAs of 2.0 or below) to increase the number of UC-qualified applicants from these schools.

Recommendation #3: BCoE and CNAS should continue and accelerate, if possible, their efforts to recruit academically well-prepared students, while continuing to closely monitor the effects of these efforts on socio-economic and racial-ethnic diversity of the incoming student population. CHASS should begin vigorous efforts along these lines, paying special attention to recruiting pre-business students who have adequate math preparation.

Recommendation #33: The Colleges should adopt policies that allow students to remain undeclared for one academic year only. At that point, students should be required to declare a major.

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<div align="center">YEAR 2: WINTER TERM</div>

Recommendation #23: Summer Sessions should work closely with the Associate Deans to ensure that classes required by students to make timely progress to degree are offered regularly in Summer Sessions.

<div align="center">YEAR 2: SPRING TERM</div>

Recommendation #21: The Colleges should offer sections of courses with high fail rates more than once a year so that students do not need to wait a year to retake key courses. Advisors should encourage students to take high failure rate courses early in their careers so that they will have time to retake these courses, should they fail them, before they fall too far behind their cohort.

<div align="center">YEAR 2: SUMMER TERM</div>

Recommendation #5: The Strategic Academic Research and Analysis unit should continue to monitor graduation rates closely by major. Programs with low graduation rates should be encouraged to tailor AIS scores and admissions criteria so that they accurately reflect the preparation and qualifications associated with success in the program.

<div align="center">YEAR 3</div>

Recommendation #27: Two years after full implementation mandatory course plans should be evaluated to determine their effectiveness and any unintended consequences they have created.

Recommendation #20: As technology becomes available, data should be collected on how quickly classes fill and the numbers of students who attempt unsuccessfully to enroll in courses. These data should be used in course planning and hiring.

<div align="center">ONGOING</div>

Recommendation #15: Using the enrollment model, the campus should increase seat counts in a stepped way to meet student demand for 15 units per term by AY 2016 – with an emphasis on prioritizing seat space in "high-demand" core courses.

Recommendation #17: CHASS should continue to improve its capacity to provide an adequate number of seats in lower division to meet student demand at 15 units per term. In the short term this will require close linking of temporary budget requests with predicted seat requirements based on the enrollment model.

Recommendation #18: Deans and department chairs should work to reduce TR bunching in the undergraduate teaching week, as well as inappropriate 3-hour block scheduling on a single day of the week.

Recommendation #24: The Colleges and College Executive Committees should consider new curricular tracks that are more tailored to the abilities of students who aspire to STEM and business majors, but whose prospects for success in these majors are limited by inadequate math preparation..

Recommendation #25: The Deans should encourage departments to analyze whether reductions in major unit requirements would be beneficial to students and faculty without sacrificing the quality of the UCR degree.

Recommendation # 28: Academic support services that do not demonstrate value added should not be funded. Redesigns require piloting, evaluation of pilots, and, if evaluations are successful, building to scale.

Recommendation #32: Advisors should consistently advise all UCR students that they are expected to take 15 units (four courses) per term.

APPENDIX B

DRAFT UCR UNDERGRADUATE SURVEY

The following questions are intended to help the university understand the obstacles that may prevent your and your fellow students from graduating in four years. They will also help the university understand the reasons that may lead some students to want to stay at UCR as long as possible.

These are important issues for the university, and we greatly appreciate your willingness to complete this survey. The survey should take no longer than 10 minutes to complete.

This survey is intended to be completely private.   No names of individuals can or will be identified in reports of the survey results.

The first questions ask about course-taking.

1) During the current term, winter 2014, how many classes are you taking?
   a) Less than three
   b) Three
   c) Four
   d) More than four

2) Which is more important to you: the number of classes you take or the number of units you take each term?
   a) Number of classes
   b) Number of units
   c) Don't know/No opinion

3) How many units do you consider to be a full course load?
   a) 12
   b) 13-14
   c) 15
   d) More than 15

4) Thinking about the last quarter in which you were enrolled in fewer than 4 courses, please indicate how important each of the following reasons was to you for taking fewer than 4 courses. (Scale: 1. Very important. 2. Somewhat important. 3. Not very important. 4. Not at all important.)
   a) I took 3 courses in order to protect my GPA.
   b) I considered 12 units a full load and that means I only need to take 3 courses per term.
   c) My advisor told me to take 3 courses if I feel that I cannot handle more.
   d) I could not find a fourth course I was interested in taking.

e) The 16-unit cap prevented me from enrolling in four courses most terms.
f) Many courses were closed by the time I could sign up for a fourth course.
g) I had to fit courses into my work schedule, and I could not find courses at the times I was free.
h) I had to fit courses into my extra-curricular activities schedule, and I could not find courses at times I was free.
i) I am a science student, and two lab courses are all that I can handle.
j) My financial aid will last for more than four years.
k) I wanted to leave time to enjoy the college experience.
l) I was worried I would not be able to find a job after I finished college.
m) I have failed some classes, and I have to be very careful not to fail any more classes, so I took fewer units.

The next questions ask about courses in which you have had trouble enrolling.

5) During your time at UCR, how many times have you tried to enroll in a course but found that no more places were available in the course?
   a) Never
   b) Once
   c) Two to three times
   d) Four to six times
   e) Seven to ten times
   f) More than ten times

6) Please list as many as five courses that you have found to be the most difficult in which to enroll.

   _____
   _____
   _____
   _____
   _____

The next questions ask about work and loans.

7) How many hours a week did you work for pay during fall term 2013?
   a) None
   b) Fewer than 10
   c) 10-15
   d) 16-19
   e) 20-25
   f) More than 25

8) Have you found that working for pay interferes with your ability to achieve good grades?
   a) Yes, a great deal
   b) Yes, somewhat
   c) No, not very much
   d) No, not at all

9) Do you or your parents take out loans to help finance your education?
   a) Yes
   b) No
   c) Don't know

10) If you saw information showing that taking out loans would greatly improve your chances of graduating with good grades when compared to not taking out loans and working long hours in paid employment, what would your reaction be?
   a) I still would not want to take out loans.
   b) I would be interested in meeting with a financial counselor.
   c) I would want to cut back my hours of paid work and take out loans.
   d) This is not an issue for me.
   e) Don't know/No opinion.

The final questions are about your demographic and academic background.

11) In which UCR College are you enrolled?
   a) Bourns College of Engineering
   b) College of Humanities, Arts, & Social Sciences (including pre-business)
   c) College of Natural & Agricultural Sciences
   d) School of Business Administration

12) What is your current UCR GPA?
   a) Under 2.0
   b) 2.0-2.5
   c) 2.5-2.75
   d) 2.75-3.0
   e) 3.0-3.25
   f) 3.25-3.5
   g) Over 3.5

13) What is your gender?
   a) Male
   b) Female

14) Which of the following best describes your racial-ethnic identity?
   a) African/African American
   b) Asian/Asian American/Pacific Islander
   c) Hispanic/Latino
   d) Native American
   e) White/European American/Caucasian
   f) Multi-racial

15) Are you a first-generation college student (i.e. neither of your parents attended college)?
   a) Yes
   b) No
   c) Don't know

16) Do you receive Pell Grants?
   a) Yes
   b) No
   c) Don't know

17) Did you start college at an institution other than UCR?
   a) Yes
   b) No

18) If you entered UCR as a freshman, regardless of your units, how many years have you been on campus?
   a) One
   b) Two
   c) Three
   d) Four
   e) Five
   f) Six or more
   g) Not applicable; I am a transfer student.

Thank you for completing the survey. Results of the survey will be available at the end of February at the following website: www.ue.ucr.edu.