Social Sciences (CHASS) and the College of Natural and Agricultural Sciences (CNAS). Learning outcomes and assessment measures were established in almost all undergraduate majors at this time and will assure and improve educational effectiveness for the undergraduate programs in the two colleges. Formal learning outcomes assessment is also required in the professional programs in the Bourns College of Engineering and the A. Gary Anderson Graduate School of Management. Learning outcomes assessment is explicitly required by the Academic Senate Committee on Educational Policy in its reviews of undergraduate programs.¹

In addition, the campus sometimes establishes special committees and work groups to address specific projects and opportunities regarding educational effectiveness. Examples include the Student Success Task Force, the Student Success Steering Committee, the Learning Outcomes Assessment Advisory Committee, the Academic Advising Task Force, and the Campus Vitality Committee. The activities of these committees and work groups were discussed in UCR’s Preparatory Review Report and/or are discussed in this Report. Special committees are sometimes transformed into standing committees to address ongoing issues or programs.

A wide variety of data are collected and analyzed regarding teaching and learning, including graduation and retention rates for groups of students, the effectiveness of curricular innovations, the learning gains of students, and similar information. Significant modifications are made in academic and co-curricular programs in response to these analyses.²

Through their collaborative efforts the Academic Senate and the administration regularly assess and attempt to improve educational effectiveness on the campus. Their quality assurance processes function at several levels and in a variety of ways to increase educational effectiveness at UCR.

Section 2. Significant Engagement and Analysis of Educational Effectiveness. As part of the Educational Effectiveness Review, each institution is expected to engage the issue of Educational Effectiveness in depth. The institution is expected to move well beyond description of activities to analysis of the evidence in its Data Portfolio, reflections on how well the institution’s quality assurance processes are working, and ways that those processes have led to further improvement. In addition, the Educational Effectiveness Review should provide an occasion for engagement of the institution’s constituencies, especially its faculty, to further its understanding of the results of its educational effectiveness and to lead to specific recommendations for improvement. The institution is expected to work with evidence of educational results and student learning as a major part of the Educational Effectiveness Report.

The concerns of this section are addressed in the three special themes studied by UCR as part of its Educational Effectiveness Review. The results of these studies are reported below.

¹ For further discussion of learning outcomes assessment, see Section 2, Undergraduate Theme (pp 4-6) and Appendix A, item (5) (pp A-5 to A-7), item (6) (pp A-7 to A-8), and item (13) (pp A-14 to A-17).
² Examples and specific details are presented in the discussion of the themes in Section 2, below; discussion of data analysis is found in Section 5, pp 36-41, and in the responses to the concerns of the last WASC Visiting Team, presented in Appendix A, Item (1) (p A-1), Item (4) (ppA-2 to A-5), Item (7) (pp A-8 to A-9), and Item (11) (pp A-11 to A-12).
Undergraduate Theme: Improving Undergraduate Student Engagement, Experience, and Learning Outcomes

The Undergraduate Theme is discussed in three sections below.

Faculty Aspirations for Students

The first focus in the Undergraduate Theme is on the faculty’s aspirations for students, especially undergraduates. Specifically, according to the Proposal for [Reaffirmation of] Accreditation, the research and focus was on: (a) defining the faculty’s aspirations for undergraduates at the level of individual programs as these relate to aspirations at the campus and general education levels; (b) developing means of measuring the degree to which undergraduates are meeting these aspirations; and (c) devising curricular and co-curricular means of improving the degree to which undergraduates are achieving these aspirations.

The objective of this section is to clearly define, measure and evaluate student learning outcomes at the level of the institution, general education requirements of undergraduates, and individual majors or programs, especially at the undergraduate level.

The goals of an undergraduate education, at the institutional level, are comprehensively defined in the UCR General Catalog. These institutional goals percolate to students through their general education courses and through their courses, research projects, and other training associated with their major. A new pilot program for breadth (general education) requirements is discussed below.

For each undergraduate student the focus of training is in the major. Continual improvement in the educational effectiveness of UCR’s undergraduate programs is being developed through program-level learning outcomes and assessment of the degree to which students are meeting these outcomes. Then, in a feedback mode, adjustments will be devised to improve learning when assessment indicates that the desired outcomes are not being met. Professional programs in the Bourns College of Engineering (BCOE), the A. Gary Anderson Graduate School of Management (AGSM) and the Graduate School of Education have cycles of learning outcomes-assessment-adjustment that have been well developed through practice and reviewed by professional program accrediting agencies. The remaining but largest colleges on campus, the College of Humanities, Arts and Social Sciences (CHASS) and the College of Natural and Agricultural Sciences (CNAS), are well on their way to developing similar cycles of learning outcomes-assessment-adjustment. The focus of this portion of the EER Report will be on these latter two colleges because that is where most of the recent effort and accomplishment is occurring.

At any institution of higher learning, but especially at the University of California with its strong tradition of shared governance, it is the faculty who bear the responsibility for educational programs. Thus, efforts to develop learning outcomes-assessment-adjustment cycles were

3 See Appendix B, pp B-1 to B-2.
4 See pp 13-14.
undertaken with the clear sense that, by necessity, these developments could come only from the faculty of the undergraduate programs, and that administration could best facilitate the process by providing opportunities for the faculty to attend forums and seminars on this process.

The process followed in developing learning outcomes and assessment measures at UCR was as follows: Attendance at two events away from Riverside provided experience and training for core groups of faculty who then facilitated progress in learning outcomes and assessment on campus. Ten UCR faculty attended the WASC Retreat on Student Learning and Assessment held September 25-27, 2008, in Emeryville, CA. An important outcome of the retreat for the UCR group was groundwork planning for a summit on learning outcomes and assessment to be held at UCR later that fall. Seven UCR faculty attended a Workshop on Learning Assessment in Biology, Chemistry, English, Psychology and Theatre held at the University of California, Irvine on November 7, 2008.

Following these preparatory activities, a Summit on Learning Outcomes and Assessment was the official “Call to Action” on learning outcomes and assessment for CHASS and CNAS. This half-day event was held on campus on November 19, 2008, and was attended by 82 individuals including 27 department and program chairs, 27 other faculty, 11 administrators, and 17 other staff. Attendees at the summit were provided examples of learning outcomes for their disciplines and an Assessment Guide developed by the University of Virginia. The group divided into five discipline-specific breakout sessions including biological and agricultural sciences, social sciences, humanities, arts, and physical sciences (including math and statistics). Each breakout session was led by a faculty member who attended the WASC retreat at Emeryville, or the workshop at UC Irvine, or both. The wrap-up session following the breakouts was moderated by CNAS Dean Thomas Baldwin, the calendar of due dates for developing learning outcomes and assessment mechanisms was presented by CHASS Dean Stephen Cullenberg, and the anticipated involvement of the Academic Senate in the overall process was outlined by Professor Anthony Norman, Chair of the Riverside Division of Academic Senate. The summit ended with the endorsement of Executive Vice Chancellor/Provost Ellen Wartella and her commitment to find finances as needed to support the effort.

Further endorsement and support for developing learning outcomes and assessment mechanisms came from the UCR Academy of Distinguished Teachers. Led by its Chair, Professor Perry Link, in meetings on November 13 and December 23, 2008, the Academy of Distinguished Teachers endorsed the development of learning outcomes and assessment mechanisms as tools for improving transparency of the goals for both instructors and students, thereby facilitating greater effectiveness in classroom instruction. The Academy of Distinguished Teachers coupled this endorsement with an offer, sent out to all departments, to help in the development process. Because the Academy felt that only faculty working in special fields are qualified to identify the learning objectives of the field, its offer of help was focused on ways in which to do assessment. When departments requested this assistance in developing assessment mechanisms, one or two Academy members met with the departments to assist as they could.

5 For a listing of the attendees of the Emeryville event, see Appendix B, p B-2.
An important component of developing learning outcomes and assessment mechanisms for the two colleges was the generation of an accessible database in which to compile the resulting information. The Online Assessment Tracking System (OATS) to record and organize learning outcomes and assessment methods was recommended by Christine Enyeart of The Advisory Board Company; it was developed at the Georgia Institute of Technology and has been adopted successfully by a number of other institutions. The UCR Computing and Communications Department set up a special task force to evaluate OATS and similar competing products. The task force concurred that OATS was the best system for UCR. After Executive Vice Chancellor/Provost Ellen Wartella provided funds to obtain the program, the task force implemented the software for use on the campus computer system.

As of April 16, 2009, 54 of 56 degree programs in CHASS have developed and loaded learning outcomes into the OATS database as have 12 of 14 degree programs in CNAS. [A new date and tally will be entered before the Report is finalized.] Almost all of the learning outcomes in both colleges also have associated assessment mechanisms. [Some departments still have to submit theirs, but most are expected to do so by the end of the quarter.] As these learning outcomes and assessment mechanisms were loaded into OATS, a team of learning outcomes assessment specialists on the campus reviewed the documents and provided feedback on the practical aspects of assessment.

A Learning Outcomes Assessment Advisory Committee (composed of a dean, an Academic Senate officer, three department chairs, and another faculty member) also reviewed the documents and generally recommended that each program add a curriculum map (curriculum alignment matrix) or other course listing to indicate in which courses each learning outcome is addressed. Each program was also asked to submit a multi-year assessment plan that schedules which learning outcome(s) is(are) to be accessed each year. In most degree programs, the first assessments are scheduled to take place in 2009-10. However, the Art Department assessed its learning outcomes last year and modified its capstone experience accordingly for 2008-09. Hopefully, other departments will advance to the third phase, adjustment of curriculum and/or teaching practices, by fall 2009. The multi-year assessment plans assure that assessment will be an ongoing and productive process throughout the colleges. On-line access to the full contents of the OATS database will be made available to the WASC review team.

At the start of the learning outcome and OATS process at UCR, the focus was on undergraduate majors in the CHASS and CNAS. Graduate programs are expected to adopt formal learning outcomes and assessment measures in the coming year or two. Many graduate programs possess implicit if not explicit learning outcome goals for graduate student training, and all have a capstone experience that assesses the crucial learning outcomes of an original scholarly contribution to the field, or, in the case some Masters programs, a comprehensive examination.

Improving the First Year Experience of Undergraduates
The second focus of the Undergraduate Theme is on **improving the first year experience of the heterogeneous group of undergraduate students at UCR, with a particular focus on the difficult transition from high school to college.** This focus includes, as set forth in the original Proposal for (Reaffirmation of) Accreditation, the following overall strategies: (a) assessing and refining the summer bridge programs and other approaches to addressing deficiencies in student preparation for college-level work, especially basic writing and mathematics skills areas; (b) improving the performance of students in entry-level courses in majors, especially majors in science and technical fields; (c) assessing integrative approaches to breadth requirements and expanding the successful aspects of them; (d) developing ways of engaging students more completely in curricular and extra-curricular activities; and (e) assessing and improving academic advising for freshmen.

Researchable questions include identifying the activities and programs in which successful freshmen at UCR are engaged; identifying the impediments to freshmen success at UCR; and discovering and developing strategies to overcome these impediments.

**Introduction**

UCR understands an effective transition from high school to college is crucial to the success and persistence of first year students; moreover, the campus realizes it is especially pertinent for a research-intensive university with a large underrepresented student population. The first year of college is challenging for all students (Isher & Upcraft, 2005), but may be especially difficult for underrepresented minority, low income, and/or first generation students. These students may lack the academic preparation and readiness to compete in college level coursework and may have weak study habits. They may not have a reference point to – or a support system of mentors who – understand the research university experience, and thus, are at a disadvantage in comprehending the vast and interconnected opportunities of a university education.

To place the above in the context of UCR, the campus ranks fifth nationwide for enrolling the most diverse undergraduate student body at a research university (*US News and World Report*, 2009), and is the most ethnically diverse of the UC campuses (UC Accountability Report, Draft 2008, UCOP, Table 5.3).\(^6\) Across all ethnicities, UCR undergraduates are challenged with affordability issues. For example, the campus awards the highest number of Pell Grants of any other UC campus or comparable national research university – 43% of the undergraduates, 11 percentage points higher than UC system average of 32% (UC Accountability Report, Draft 2008, UCOP, Indicator 8.7). Data for the 2008 entering first year students show 71% receiving some sort of financial aid from the university (UCR College Portrait 2008). For almost 52% of the 2008 entering freshmen, neither of their parents has graduated from high school (Institutional Research in Undergraduate Education [IRUE], 2008). In addition, over three quarters of the students come from four surrounding counties – Los Angeles, Riverside, San Bernardino, and Orange – which have some of the lowest college-

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\(^6\) See Appendix B, pp B-3 to B-9 for the ethnic and gender breakdown of UCR students, including graduate, undergraduate, and total; also including new students only.
going rates in the State, as well as some of the lowest performing high schools (CA Department of Finance, Demographic Research Unit, 2007; CPEC, Student Data, 2007). Copies of references for this section and other sections of this Report will be available in the WASC Team Room.

With these circumstances and challenges clearly in mind, UCR has focused on developing, implementing, assessing, refining, and institutionalizing practices that foster student success, that are measured by persistence from first to second year, expected academic progress, and an affinity for the campus; which in turn bring timely graduation and attainment of learning outcomes which lead to employment and/or graduate school, and lifelong learning (Kuh, et. al., 2007).

Before discussing strategies and practices, though, it is important to note a few important shifts in campus culture that were germinating when the Proposal for [Reaffirmation of)] Accreditation was developed more than four years ago. Members of critical Academic Senate committees, the Executive Vice Chancellor/Provost, and other senior administrators had placed among their seven key priorities the fostering of both undergraduate student success and campus vitality. From their commitment grew two major campus-wide workgroups: the Student Success Task Force (SSTF) and the Campus Vitality Committee (CVC), each of which produced a thorough report of existing programs and practices, as well as recommendations that guided discussions, decisions, and funding priority; copies of the reports will be available in the WASC Team Room. In addition, a Vice Provost for Undergraduate Education (VPUE) was hired in 2004 and an organization consisting of new and existing units created a central point on campus for the development, enhancement, and evaluation of undergraduate student success practices. Moreover, the Institutional Research Coordinating Group (IRCG) was formed, which brought together staff and faculty from all corners of the campus to better coordinate research efforts for the WASC self-study and to disseminate results to effectively inform decisions and practices.

**Strategies for First Year Student Success**

UCR understands the factors that contribute to student persistence or departure, and initiated or revised policies and practices to enhance student success. The five strategies presented in the Undergraduate Theme address the problems that impede first year (including transfer) student success. Under each strategy the corresponding practices and the process by which they were developed, implemented, assessed, evaluated, refined for improvement, and institutionalized are listed. A more detailed essay and the supporting documentation of each practice and process discussed below are found at [www.eesuccess.ucr.edu](http://www.eesuccess.ucr.edu).

(a) Assessing and refining summer bridge programs and other approaches to addressing deficiencies in student preparation for college-level work, especially basic writing and mathematics skills areas

Although UC eligibility requires students to be in the top 12.5% of the California graduating class or the top 4% of their particular high school class, the 2008 incoming cohort had an average SAT score of 1036 and high school GPA of 3.42, which are both lower than the UC
system-wide averages (IRUE, 2008). Over half of the entering first year students do not test into university-level writing or calculus courses and are required to take preparatory work to bring themselves to the level of performance necessary to succeed at UC (IRUE, Fall 2008). Consequently, the time devoted to preparatory courses lengthens the time to degree and/or their low academic performance attributes to lower retention whether they leave voluntarily or are academically dismissed.

**Summer Bridge:** The UCR Summer Bridge program provides entering first year students with intensive entry level writing or precalculus mathematics coursework, academic assistance, and support for transition to college life. Program enrollment started at 20 students and grew to 400 students in 2007; but, following further evaluation, was reduced in 2008 to 250 students. Undergraduate Education (UE) and the Learning Center analyzed the impact on subsequent course success, beginning with mathematics. Preliminary analysis for Math 5 (Precalculus) suggests that its students perform well in subsequent calculus courses. However, problems were found with student performance in Math 8A (Introduction to College Mathematics for the Sciences). The pass rates for the bridge students were comparable to those of their academic year cohorts taking Math 8A in fall 2007, but the summer bridge cohort performance in Math 8B, the next course in the sequence, was far behind that of their academic year cohorts. Thus, the program did not offer Math 8A in summer 2008, but will in summer 2009, after increasing the length of the program to seven weeks and using a higher qualifying score on the mathematics placement test.

The impact of Summer Bridge activities on first-year retention and on subsequent performance in the English Composition series is currently underway; results will be available during the WASC team visit in October.

**UC Entry Level Writing Requirement:** Students must pass the University of California system’s Entry-Level Writing Requirement (ELWR) before the end of their first year of study and before enrolling in English Composition. Students preparing to come to UCR either take a placement examination – the UC Analytical Writing Placement Exam (AWPE), administered state-wide by the UC Office of the President – or submit acceptable scores from the Advanced Placement (AP) English or Scholastic Aptitude Test (SAT) examinations. If they do not fulfill the requirement by these means, they can take a transferable composition course at another institution, or a summer course at UCR; otherwise they must enroll in an entry-level writing course in the fall. Approximately half of UCR’s entering first-year students do not fulfilled the ELWR and were strongly encouraged to do so before fall matriculation. The Writing Program developed a website detailing information on all the alternatives, especially community college and UCR Summer Sessions and Bridge courses that could fulfill the ELWR. The Writing Program reminds students of this through their MyUCR accounts, and also administers and scores the AWPE for late testers the day before each of the new student orientation sessions so that all students can be advised of the summer opportunities and/or the appropriate placement for fall enrollment. By the beginning of fall 2008, 108 new students had passed by means of a course at another institution and 192 had passed by means of a course taken in UCR’s summer school; thus were ready to enroll in English Composition and be on track to graduate in four years.
Mathematics Advisory Examination: The Mathematics Advisory Examination (MAE) indicates the readiness of incoming freshmen for pre-calculus and calculus coursework at UCR. The results of various intensive analyses of student pass rates in pre-calculus, calculus, and subsequent coursework indicated that students scoring just above the cutoff scores on the MAE were performing poorly. In response, a collaborative effort amongst the Mathematics Department, UE and the Learning Center, in conjunction with the Academic Senate Committee on Preparatory Education, raised the qualifying placement scores for entry into pre-calculus and calculus courses in 2007, and again, after careful analysis, in 2008. Also, in order to ensure that students were directed by academic advisors to enroll in the appropriate mathematics course during summer orientation registration, the Learning Center shifted primary administration of the MAE to the May-June period, well ahead of Bear Facts Highlander Orientation. The Learning Center also offers MAE administration at various off-campus locations throughout the state to encourage students to take the MAE before orientation.

Intermediate Algebra Requirement: In response to low pass rates in the entry level pre-calculus courses, the undergraduate colleges, UE, and the Mathematics Department determined that some students entering UCR were not ready for university level precalculus work. Consequently in 2007, students in STEM majors who received a particularly low score on the MAE were required to earn a C grade in an Intermediate Algebra course at a community college before being allowed to enroll in a pre-calculus course at UCR. In 2008, CNAS and BCOE created regulations that students must fulfill this requirement by the end of their first enrolled quarter, or they are unable to continue in the College and must switch to a major in CHASS. UE and the Learning Center partnered with Riverside Community College to offer an intermediate algebra course taught at UCR in late summer and again in fall quarter. [Need to insert statistics in final draft:] Of the ## fall 2008 new students testing into Intermediate Algebra, ## took and passed the course, ## changed majors before matriculating, and ## were discontinued in their college and moved to CHASS during winter quarter. Realizing the benefit of the qualifying score, CHASS is contemplating requiring a specified placement score for entrance into their Math 4 pre-calculus course, beginning fall 2009.

New Student Orientation: Historically Bear Facts Highlander Orientation has served as an effective vehicle for facilitating advisement and registration for first quarter courses, and attendance has proven to be a key correlate with first year student success and retention (Institutional Research, Student Affairs [IRSA], 2007, 2008). During spring 2005, the Division of Student Affairs engaged an external consultant to review the Bear Facts Highlander Orientation program. While the feedback was very positive overall, the consultant strongly recommended the University move to a program that comprehensively provides freshmen with purposeful introduction and transition to the university and its academic and non-academic attributes, demands, and resources, utilizing diversified modes of information delivery to actively engage students across a diverse spectrum of learning and processing styles. The summer 2006 program was reshaped in response to these recommendations and included a pre-orientation online module introducing campus services and a basic overview of course registration, personalized communication through a robust web portal “MyUCR”, and new programmatic elements to instill and cultivate institutional pride. Advance administration and grading of
placement examinations was incorporated to ensure that academic advisors would have accurate mathematics and writing placement information before registration. Participation was also made mandatory. These changes have yielded continued positive feedback from students and campus colleagues, increases in enrollment of students who have not yet formally accepted their offer of admission to UCR, and improved student success and retention after one or two quarters of enrollment.

**STEM Transfer Student Pre-Matriculation Programs:** Several initiatives are currently funded by a large CCRAA-HSI [College Cost Reduction and Access Act-Hispanic Serving Institution] grant awarded in 2008 to help prepare community college students for success in STEM majors at UCR. **Major Preparation and Pre-Matriculation Advising:** UCR has partnered with six local community college campuses and regularly sends staff and students to the community colleges to help prepare STEM majors for transfer. **Faculty and Counselor Connections:** By engaging community college counselors and faculty, the campus creates greater collaborations to facilitate the transfer of well-prepared students to UCR and other four-year universities. **Summer Bridge Faculty Mentored Research Program:** Incoming transfer students participate in a ten-week summer program and work on a faculty-mentored research project for a stipend. Evaluation of these initiatives will determine funding priorities when the grant funding ends.

(b) **Improving the performance of students in entry-level courses in majors, especially majors in science and technical fields**

**Supplemental Instruction:** As is discussed in UCR’s Preparatory Review Report, UE created a pilot program (fall 2005) in which student peer leaders facilitated Supplemental Instruction (SI) sessions in courses with historically high rates of D and F grades. There are two SI delivery models consisting of first, an open door model, in which students can attend any of the SI sessions, and second, a learning community model. The latter is used in the CNAS Scholars Learning Community Program, in which the SI sessions are part of the student academic schedule that serves about 650 first-year CNAS students. After the pilot year in UE, the Learning Center took over the administration of the program. Academic performance of student participants is regularly and rigorously compared with student non-participants using a quasi-experimental empirical design. Participation in SI is found to increase the overall course grade of participating students by one-third of a grade point. The Learning Center and UE consistently monitor examination results and revise the courses that are supported by SI course offerings to ensure that funding is spent to provide support to the courses where SI is making the largest difference. For example, early in the program no statistically significant results were found for SI in Humanities and Social Science courses, resulting in a decision to offer SI for only Mathematics, Science, and Engineering courses until a solution could be found.

**Early Identification:** In response to low student performance in rigorous gateway courses, and first year student difficulty in transitioning to the quicker pace of quarter system coursework, UE, Computing and Communication, the Learning Center, and selected academic departments created a pilot early warning program (2008-2009) to quickly identify struggling students, and to deliver academic support services to those students, including peer mentoring,
workshops, and skills assessment, in order to increase students’ chances of passing the course. Five faculty identified assessments prior to week 5 that would be assigned minimum “passing” scores, below which, with the aid of Computing and Communications, the course’s iLearn grading software was programmed to flag the students as struggling, and automatically deliver a list of names to Learning Center staff for contact and services. UE is evaluating the impact of the pilot courses for effects on student academic performance and recommendations are expected the end of spring 2009. The Learning Center is researching sources of funding to institutionalize the program if it proves successful.

**Mathematics Second Assessment Examination:** A UE study tracking the grades of approximately 2,500 students/year enrolled in pre-calculus courses from fall 2003 through spring 2006 indicated almost one-third were not earning grades of C- or above, and therefore could not enroll in the calculus sequence required for all STEM, business, and psychology majors. One primary reason -- identified in lecturer, TA, and student interviews -- was a lack of feedback on course performance during the first three or four weeks of the quarter. In fall 2007, the Mathematics Department administered, during the first week of classes, a Second Assessment Examination that covered foundational knowledge necessary to pass the course. Scoring-range information (developed collaboratively by UE, College’s Academic Advisors, and Mathematics) provided students with an indication of where they stood in relation to the performance of other precalculus students. Lecturers and TAs played a key role in emphasizing the necessity of doing homework, attending class, asking questions, using faculty and TA office hours, and participating in SI. UE evaluations showed that the Second Assessment score served as an extraordinarily important indicator of student success in the precalculus course, and so the Mathematics Department not only continues the practice in precalculus, but is administering a similar exam for the calculus course in fall 2009.

**Mathematics Task Force:** During the academic year 2008-09, a cross-campus Precalculus Mathematics Task Force, chaired by the CHASS Associate Dean of Student Affairs, investigated the causes of high failure rates in precalculus courses at UCR. The Task Force carefully examined a variety of causes of these failure rates, including student preparation and motivation, the accuracy of placement tests, curriculum and pedagogy, and academic support services. The Task Force conducted a number of analytical studies, including evaluating the effectiveness of models of student success in precalculus courses, possible differences in grading between instructors, and the effectiveness of different precalculus course tracks in preparing students for calculus courses. The Task Force surveyed students and met with faculty, lecturers, and teaching assistants in Mathematics, as well as the Learning Center Director and academic advisors from the majors that require calculus. The Task Force will submit a report, including recommendations, by the beginning of fall 2009, and the WASC Visiting Team will be provided a copy.

**Transfer Programs through CCRAA-HSI:** Transfer students experience acclimation issues similar to freshmen, but they need immediately to perform academically at a junior-status level to compete with continuing students. UCR initiated several programs directed at supporting transfer students in entry gateway courses to the major, funded by the CCRAA-HSI grant. The Transfer Resource Center opened in winter 2009 in the Student Academic Services
Building and provides a crucial physical space for transfer students to congregate and network, while its staff, peer mentors, website and newsletter provide pertinent information about resources at UCR to help make for a smooth transition to campus. Starting in winter 2009, Research Internships match a total of 46 upper division and transfer students with faculty for mentored research projects in STEM fields. Also with grant funding, Supplemental Instruction expanded to serve select upper division gateway courses into STEM majors, providing support for both transfer and upper division continuing students.

(c) Assessing integrative approaches to breadth requirements and expanding the successful aspects of them

To date, UCR has provided general education through a traditional set of breadth requirements including courses in English composition, humanities, social sciences, ethnicity, foreign language, and natural sciences and mathematics. Recently, however, the Academic Senate, in response to general faculty and student concerns and the recommendations of the SSTF, formed a committee to consider mechanisms that might be more effective in delivering general education. This effort came to fruition at the February 17, 2009, meeting of the Academic Senate where the Ad hoc Committee on General Education Reform proposed a program of thematic Concentrations as an alternative to the traditional system of breadth requirement courses. The Academic Senate approved the pilot program to begin fall 2009. The committee reported that:

The concentrations were conceived as coherent units in which courses from different fields were included because they enriched the concentration. The rationale is that students will learn more from classes that they need because of the concentration they choose to explore than they will from courses they take solely because they are required on the basis of breadth. Students will also learn from each other in these classes, which is why it is crucial to keep all concentrations open to students from all colleges.7

Approval was given to open the program on a trial basis in fall 2009 with concentrations in “California Studies”, “Climate Change/Sustainability”, and “Global and Ethical Dimensions of Technological Innovation”. The trial is anticipated to involve up to 225 students (75 in each of the three concentrations). Each concentration includes a capstone course that will be used to evaluate the success of the program. Learning communities may be created for the cohort of students enrolled in a given concentration. The campus eagerly awaits the outcome of this new approach to general education.

(d) Developing ways of engaging students more completely in curricular and extra-curricular activities

7 See http://senate.ucr.edu/agenda/090217/Pilot%20Program%20for%20General%20Education%20Reform.pdf
As stated before in UCR’s WASC Preparatory Review Report and this EER Report, the SSTF comprehensively studied the student support programs existing at UCR, researched best practices, and developed a thorough report and set of recommendations (copy available in WASC Team Room). This work became the blueprint for campus efforts and stimulated extensive evaluation of practices and refinement of efforts to ensure quality, focus, and productivity in individual programs. Currently, the Student Success Steering Committee, chaired by the Vice Provost for Undergraduate Education, maintains the efforts and practices. Recent progress is described below.

**First Year Learning Communities:** Learning communities offer an innovative approach for engaging undergraduate students in the classroom, by purposefully designing a cluster of courses which fosters small group peer learning and faculty connections. Groups of students take the same courses together, form relationships with each other and create a small community within a large university setting. UCR offers various learning community models to fit the needs of each of its three colleges, and participation has grown significantly, from serving 192 students in 2002 to serving over 2,100 students in 2008. (When students participating in the Honors Program and the residence halls’ Living Learning Communities are included, the count approximated three-quarters of the first year population.) An Undergraduate Education quasi-experimental evaluation of the impact of the 2006 learning communities on retention showed a three percentage point difference in retention for students participating in Learning Communities as compared to those who did not (IRUE, 2007). Given that roughly half of all freshmen participate, this translates into an improvement in campus-wide retention of 1.5 percentage points. Due to the sophisticated and careful evaluation work on a specific learning community in CHASS, UCR competed for and was awarded a Fund for the Improvement of Post-secondary Education (FIPSE) grant in 2008 to double the number of students (225 to 450) in the CHASS Connect program and to implement, in fall 2009, a rigorous experimental evaluation (based on random assignment into the program) of the impact of this program on retention and student success.

**First Year Workgroup:** The First Year Workgroup is a campus-wide collaborative with representation from the university’s three colleges, UE, University Honors Program, Student Life, the Learning Center, Undergraduate Recruitment, Office of the Registrar, and Housing. The mission of the workgroup is “to provide an opportunity for workgroup participants to discuss critical issues, identify best practices and research, develop partnerships, and provide recommendations in support of undergraduate students through their first year at UCR.” The workgroup was a SSTF recommendation and was established in 2006 to coordinate university-wide initiatives in support of student success. Recent accomplishments include development of website and printed materials, enhancement of the registration system in 2007 to allow students to register in clustered learning communities, subsequent enhancements in 2009 to support the growth and complexity of learning communities, and the establishment of a council of student advisors.

**Learning Center Reorganization:** Upon the strong recommendation of the SSTF, the Learning Center was moved from Student Affairs into the UE organizational unit in winter 2007. In that summer UE and the Learning Center convened a Reenvisioning Retreat, inviting student,
administration, staff, and faculty stakeholders. Based on the retreat outcomes, and the goal of aligning practices with students’ academic needs, the Learning Center and UE reengineered the department mission statement, organizational structure, and all 20 staff job descriptions. The department also began intensive assessment of its programs, commencing with SI. Evaluation of Early Warning, Summer Bridge, and Academic Intervention are all in progress. The Center implemented a new student participation tracking system in 2007 to generate program data to assist staff in quarterly program assessment and refinement.

**First Year Success Series:** FYSS, coordinated by Student Life, is modeled after a program at Bowling Green State University and aims to proactively assist new students in their transition to University life with a focus on out-of-class challenges that have the potential to derail academic success. The FYSS engages professionals and paraprofessionals from Student Affairs units to University Libraries and Computing and Communications as facilitators of workshops. Almost one-quarter of the entering 2007 class attended one or more sessions, and participant feedback suggests program success in both providing helpful information to students in navigating the first year and in highlighting the support resources available on campus. Participant and partner feedback has informed program refinement to include formalizing active linkages to First Year Learning Communities, publicizing programs to new transfer students, providing information to students who were unable to attend the summer Bear Facts Highlander Orientation; and bolstering participation incentives. The FYSS was recognized with a 2007-08 National Association of Student Affairs Administrators First Year Excellence Award.

**Living Learning Communities:** Residential Life collaborated with the academic colleges to provide LLCs in the residence halls. In these special housing options, residents share the same interests and in many cases class schedules. Currently there are more than 700 first year students housed in five academic-based living learning communities, which include CHASS, CNAS Scholars, Enginuity (BCOE), Honors Hall, and Pre-Business.

**Academic Intervention Programs:** In response to the large numbers of students in academic difficulty [Need academic difficulty data here], two existing peer counseling programs in the Learning Center were enhanced to engage a larger number of at-risk students more effectively in the academic life of UCR – one for at-risk students who are referred by academic advisors, financial aid counselors, and/or student affairs officers, and another program for students who self-identify as struggling academically. Currently, UE and the Learning Center are evaluating the impact of the program on retention and student success. In addition, CHASS, the Dean of Students, Student Life, and the Learning Center collaborated to create a for-credit course on student transition and meeting faculty expectations for CHASS majors who are on academic probation in their first year. BCOE created several programs to provide early identification of academic difficulty and deliver services to at-risk students in the college.

**Technology and Pedagogy:** Recognizing the academic challenges faced by many underprepared undergraduates, including poor study skills, faculty are proactive in implementing a variety of mechanisms to enhance the student learning experience. Most notable is the move from the traditional lecture style teaching to implementation of active learning teaching strategies that encourage student interaction. These new pedagogies are supported by new flexible
classroom settings that allow for easy mobility of furniture to create team teaching environments, wrap-around white boards that promote student collaboration in problem solving, and instructional technologies such as clickers and iLEARN software for virtual student interaction though the use of discussion boards, blogs, and wikis. Faculty innovators of active learning strategies are supported by Instructional Innovation & Excellence Grants and recognized through the Scholarship of Teaching Series, Innovative Teaching Award, and Plato’s Round Table.

**Campus Vitality Movement:** Motivated in part by student feedback solicited through the 2004 University of California Undergraduate Experiences Survey (UCUES) which revealed that a significant percentage (24%) of UCR students were dissatisfied with social life at the campus and that there was a strong correlation between satisfaction with social life and students’ overall satisfaction with the University, the Division of Student Affairs developed a campus-wide initiative to address student satisfaction and campus vitality. Focus groups conducted by the Division of Student Affairs with engaged students revealed that students had low to no expectations of UCR’s campus social environment prior to enrollment; once enrolled at UCR, students’ experiences matched their low expectations; students generally did not find the greater Riverside area to be student friendly; institutions that were identified by UCR students as universities with an ideal campus climate included institutions located in a city and with an active athletic program and with an annual high profile, large scale social event. Focus groups further revealed that promotion of campus-wide events had been marginally effective, students’ awareness of campus history and traditions was very limited, and students often felt stifled and burdened by the university bureaucracy. Efforts to increase campus vitality included reviving and institutionalizing spirit and traditions, as well as expanding, enhancing and envisioning large scale campus-wide events; renovating and adding new facilities to support campus vitality (most notably through the Highlander Union Building project); minimizing obstacles to campus vitality and student initiated programming, and enhancing promotion and marketing efforts. Assessments comparing student responses to the 2006 and 2008 UCUES surveys show significant improvement in student satisfaction with their overall social experience at UC Riverside. [More specifics will be provided in the final version of the Report]

(e) Assessing and improving academic advising for freshmen

**Professional Academic Advising Job Series:** Another strong recommendation of the SSTF was to create a system of academic advising to enhance the undergraduate student experience by raising the performance and professional stature of academic advisors. Changes brought a new job classification series, the first of its kind in the UC system, that requires academic advisors meet the minimum educational threshold of a bachelor’s degree; that the duties of the academic advisors be restricted to academic advising only; that advisors each have an optimal caseload of no more than 300 students and be accountable to the Student Academic Affairs offices of the undergraduate colleges (not department Management Services Officers, who may know little about state of the art delivery of academic advising); and that advisors embrace a high degree of competency and professionalism in their interactions with students, staff, and faculty. The colleges’ undergraduate Student Academic Affairs offices worked closely with Human Resources to develop the job duties of the series, with the first reclassifications
becoming effective in spring 2007. Subsequently, the undergraduate colleges have embarked on varying initiatives regarding professional development, assessment, and training.

**Academic Advising Task Force:** To complete the academic advising items recommended by the SSTF and respond to the staffing concerns that surfaced in the beginning stages of the Professional Academic Advisor series implementation, the Vice Provost for UE appointed an Academic Advising Task Force with representation from the colleges’ associate deans, academic advisors, and the student affairs managers. The Task Force spent 2007-08 developing an academic advising mission statement and corresponding goals, organizational structures that fit each of the colleges, and recommendations for professional development and training opportunities at UCR. An external consultant was hired to review the campus system for academic advising. With the recommendation of this report, combined with resources from the National Academic Advising Association, the Task Force helped with the transition. The full Task Force document, including the consultant’s report, will be in the WASC Team room.

**Professional Advising Course, Student Advising Information System, Timely Placement Results for Entering Students:** The professional development of Academic Advisors is aided by a course taught on campus by one of the advising supervisors. In addition, the Department of Computing and Communications, in close consultation with a panel of outstanding academic advisors, has piloted a revised Student Advising Information System (SAIS). The SAIS provides faculty advisors and professional academic advisors with a comprehensive report on the progress students are making toward their degree and what they still need to accomplish. It is available to the advisors after proof of completing a training program on its use. Both the training program syllabus and access to SAIS will be available in the document room during the WASC Team visit. In addition, early administration and scoring of both the writing and mathematics placement examinations for entering first year students made it possible for academic advisors to ensure accurate enrollment into English and mathematics courses (or Learning Communities) during freshman orientation, as well as disseminate information about summer opportunities so students could matriculate in the fall on schedule to graduate in four years.

**Summary**

Scholars, administrators, and practitioners agree that to increase retention and student success, the focus must be on the first year of college; the largest proportion of student attrition occurs in the first year and prior to the second year. Importantly, UCR approaches first year student success by understanding the factors that contribute to student success and persistence and prioritizing the development and refinement of policies and practices that are proven to foster first year success, especially for its large underrepresented student population. Intensive assessment and evaluation that can inform decisions is of utmost importance in the current budget crisis.

**Refining Campus Review Criteria for Freshman Admission**
A third focus of the Undergraduate Theme is **refining the campus’ comprehensive review criteria for admission of freshmen to improve the success rate of those admitted**. This focus includes *(a) defining the characteristics of the students who are a good fit with UCR and *(b) establishing ways to contact and attract such students as applicants.* Researchable questions included discovering patterns of student success at UCR that can be used by the Undergraduate Council to refine the criteria used in the comprehensive review of applicants for freshmen admission, and defining the characteristics of those students most likely to succeed at UCR and for whom UCR would be the best UC campus for them to attend.

**Introduction**

Comprehensive Review is the title for UC’s selective admissions process by which students applying to UC are evaluated for admission using multiple measures of academic achievement and promise, viewed in the context of the opportunities and challenges that the applicant has faced. Throughout the UC system undergraduate admissions policy falls under the purview of the Academic Senate. The UCR Undergraduate Council is the committee that is responsible for review of existing admission policy and any development of new policy.

UCR’s current Comprehensive Review model, developed in 2003, was instituted in the 2005-06 admissions cycle. The four academic criteria used include high school GPA, scores of all SAT and ACT required exams, number of “a-g” courses taken beyond the minimum, and elements of the Eligibility in the Local Context. In addition to these, low family income and first-generation university attendance are used in UCR’s Comprehensive Review considerations. The only change to the academic criteria of UCR’s Comprehensive Review model was the system-wide revision of the examination requirements and associated weights, which became effective fall 2006.

UCR’s Academic Senate delayed revising the comprehensive review model because a new UC freshman admissions eligibility construct was being developed. The new construct, written by the Academic Senate Board of Admissions and Relations with Schools (BOARS) and recently approved by the UC Academic Council and the Board of Regents becomes effective for fall 2012 admissions.\(^8\) The Undergraduate Council is scheduled to review the Comprehensive Review Model in 2010 and may revise the academic criteria by which admissions decisions are made, in light of the new admissions eligibility construct.

**Defining the characteristics of the students most likely to succeed at UCR**

In anticipation of the new admissions requirements and the greater freedom given to each campus to establish its own particular comprehensive review criteria, Student Affairs and Undergraduate Education conducted a number of empirical studies of the determinants of success at UCR to determine the profile of successful students. The results suggest that retention and academic performance are highly linked to academic performance in high school, and the high school GPA in particular. This measure is far more important than scores on standardized

\(^8\) For details, see Appendix B, p B-10.
tests; in fact, SAT scores, for example, provide little help in predicting retention. Other important determinants of success include participation in co-curricular activities in high school and planning not to work full-time while in college. As the campus moves to update criteria for use in the comprehensive review of admissions files, this information will be utilized to inform admissions decisions and aggressively target students for recruitment.

Establishing ways to contact and attract such students as applicants.

UCR seeks to develop productive relationships with prospective students who are good fits to the campus. The recruitment campaigns consist of eye-catching brochures, individualized MyUCR messages, personalized faculty outreach to applicants, faculty participation in recruitment events, intensive campus tours, and, for transfer students, One-Stop Admissions Days in the newly opened Transfer Resource Center.

The colleges are using the characteristics of successful UCR students to target applicants for personal recruitment efforts. In spring 2009 CHASS, for example, selected a group of 300 applicants to their college with unweighted high school GPAs of 3.5 to 3.7 for targeted telephone contact by faculty, an invitation to a luncheon on campus with faculty, and follow-up contact by honors students to answer any additional questions. For evaluation purposes, there is a control group of 300 such students, with whom no special recruitment efforts were made. Results of the effort, by component, will be analyzed after the deadline for students to respond to the offer of admission, and will be available for the WASC site team visit.

CNAS, on the other hand, had its department chairs contact applicants with high school GPA at or above 3.4 and SAT I (Verbal and Math) scores at or above 1100. Applicants who were awarded Regents or UCR scholarships were contacted by phone or e-mail by faculty who congratulate them and invited them to a Scholarship Celebration event on February 28th. Fifty faculty were joined by 120 scholarship awardees for lively and informative conversations at the celebration. Scholarship awardees were also invited to a special reception on April 18th, just prior to the College’s Discover Day event; 14 attended and were joined by 12 faculty.

Graduate Theme: Growing and Improving Graduate and Professional Programs

In its Proposal for [Reaffirmation of] Accreditation the goal, for the Graduate Theme, is to identify and promote best practices in graduate and professional program development and graduate and professional student success. Activities would include identifying the parameters and processes of successful graduate and professional programs and generalizing these to other programs, with special attention to interdepartmental graduate programs; identifying successful graduate and professional students and determining the reasons they are successful; and improving the recruiting of graduate and professional students and determining the reasons they are successful; and improving the recruiting of graduate and professional students.

Researchable questions include (1) identifying and promoting best practices in graduate and professional program development and graduate and professional student success, (2)