UC Santa Cruz achieves its institutional purposes and attains its educational objectives through the core functions of teaching and learning, scholarship and creative activity, and support for student learning. It demonstrates that these core functions are performed effectively and that they support one another in the institution’s efforts to attain educational effectiveness.

Research and scholarship are at the heart of the institutional purposes and educational mission of UCSC. Our origin contributed significantly to the current culture that makes research and scholarship integral to graduate as well as undergraduate education. These goals are reflected in a recent description of UCSC distilled from the goals and mission of our campus:

“UC Santa Cruz has created a unique environment of intensity and innovations where synergy between research and teaching provides unparalleled opportunities for people who drive intellectual, social, cultural and economic progress.”

Lipman Hearne Report, 2003

In its relatively short 38 year history, UC Santa Cruz has become known as one of the most “innovative” and highly respected campuses in the nation with respect to its many contributions to promoting quality undergraduate education and for many of its interdisciplinary programs and pedagogical approaches to teaching and learning, many of which have become exemplars for other research and liberal arts universities. (Kliwier, 1999; Boyer Report, 1998; UC Santa Cruz WASC proposal, 2002).

The success of UC Santa Cruz in undergraduate education is directly reflected in the nearly 60,000 alumni who have made and are making tremendous contributions to the state, nation and world. As an institution, we continue to evolve to meet the educational needs of today’s students – be they undergraduates or graduates – and to prepare them for tomorrow.

Like other major research universities in and outside the U.S., UC Santa Cruz has devoted a considerable proportion of its human, capital, and fiscal resources to the encouragement, facilitation and rewarding of world-class research. Resources have been employed strategically and systematically to support and expand the campus’s scholarly mission, and particular attention has been paid to the fostering of interdisciplinary research, research that takes advantage of and contributes to new technologies, research integrated with public service, and research that takes a global view.

Our tremendous success in attracting some of the best new faculty in the nation and world (see Essay 3) and thereby increasing our research contributions and reputation is attributed to the campus’s collaborative ethos, its excellent research facilities, strong research institutes, excellent graduate students, the intellectual energy and abilities of our undergraduates, and to the campus’s commitment to helping researchers gain external funding. A telling measure of UC Santa Cruz’s scholarly achievement and reputation is its recent ranking as fifteenth among U.S. research universities in terms of citations per faculty in scholarly journals.

In the first part of this essay, we will recapitulate some of our achievements in undergraduate education, how we have emphasized research and scholarship at all levels of education, and how we encourage and reward excellent teaching. We then discuss ways by which we plan to increase graduate enrollments and both the size and number of our graduate programs and to become recognized as a leader in developing graduate programs that fit the needs of both students and society for the 21st century.

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UNDERGRADUATE EDUCATION IN PUBLIC RESEARCH UNIVERSITIES - DEVELOPMENT OF THE “WHOLE STUDENT”

The distinctive genius of the American college is that it is “a place which is neither a house of learning nor a house of play, but a little of both; and withal a microcosm of the world in which we live.”

Lawrence Summer, President of Harvard University,
quoting Samuel Eliot Morison in Summer’s 2003 Harvard Commencement Address

The responsibilities and expectations that society has placed on American higher education are enormous and require the expertise of a broad spectrum of professionals. These expectations include providing students with:

- a comprehensive and in-depth education in a specific discipline
- a breadth of knowledge and understanding of a broad spectrum of disciplines outside a student’s expertise
- an appreciation and knowledge of other cultures, values and contributions
- skills required to become a productive, engaged, and socially responsible citizen
- leadership skills; our students are not only expected to become contributors to society, they are expected to assume leadership roles in state, nation and world. As such they need to learn to work together in teams, to motivate and organize others to work effectively together to accomplish goals.
- an appreciation of learning and a desire to be life-long learners.

The development of the “whole student” with the attributes described above is dependent on optimal learning which is dependent on outstanding teaching both inside and outside the classroom. It requires a partnership between faculty who are dedicated to providing outstanding curriculum, courses and teaching inside the classroom and student affairs professionals whose expertise in student development ensures optimal learning and personal development outside the classroom. The success of the partnership also depends upon the synergistic interactions of programs that are presented by the 10 UC Santa Cruz residential colleges and its 33 academic departments.

It is the role and responsibility of the 33 academic departments, which are organized into 5 academic divisions to provide the academic disciplinary programs, curricular and courses as well as provide classes that contribute to the campus general education program.

It is the role of the colleges and their student affairs professionals, working with faculty that are housed within departments (many of which are located within residential colleges) to provide:

- programs such as freshman core courses that help students transition from high school to university
- courses outside departments that enrich the curriculum of students
- academic counseling, advising and mentoring of students and tracking the academic progress of each student.
- learning support services
- service-learning programs that encourage volunteerism among students
- structured experiences outside of the classroom that promote the development of socially responsible citizens and leaders.

Departments also provide specific academic advising to their majors and in some cases, learning support and service learning programs.

The model that has evolved at UCSC – which synergistically deploys the resources of both our residential colleges and our departments – has been so successful in promoting student development that other campuses throughout the country are now planning or are launching residential college programs to provide services best administered by the cooperative efforts of student affairs professionals and faculty in the residence of the students (e.g.,
Princeton’s new Whitman College, Rutgers, Vanderbilt, and UC Merced).

In the remainder of this reflective essay we examine more closely how the partnerships of residential colleges and academic departments and of academic faculty and student affairs professionals contribute to student learning and student engagement, the role that scholarship and creative activities play in teaching and learning, how the institution encourages and rewards quality teaching and what the campus has done and is doing to improve graduate education.

**TEACHING AND LEARNING: “UC SANTA CRUZ – A RESEARCH UNIVERSITY WITH AN UNCOMMON COMMITMENT TO UNDERGRADUATE EDUCATION”**

**Partnerships in academic advising:** At UC Santa Cruz, as well as other universities, academic advising has come a long way from the time when a faculty member, often not well-versed in the nuances of curricular and course requirements sat in their office, ‘advising’ students on what courses they might need to graduate. During the last 20 years, such prescriptive advising has become the responsibility of professional advisors and is now moving (at UCSC and elsewhere) to academic information systems which do on-line degree audit determinations for students and determine what courses and requirements must be taken and when.

In addition to such prescriptive advising, faculty and student affairs professionals engage in what is now termed “developmental advising” which is “teaching in out-of-class settings to promote student learning and personal development” to help students form and implement educational and life plans (Creamer 2000). In his recent book *Making the Most of College*, Richard Light (2001) concludes that “good advising may be the single most underestimated characteristic of a successful college experience.”

To improve our advising structure and promote better coordination and division of labor between all campus advisors, we have engaged in a process over the last four years to evaluate our advising practices and their effectiveness and to improve all academic advising across the campus.

A workforce of nearly 70 staff advisors in departments and in colleges (academic preceptors), and specialized advisors in both student and academic affairs (e.g., EOP, EAP, financial aid), are engaged in academic advising. But the currently highly decentralized and “silhoed” system that has evolved has many inherent problems. Much of the effort is duplicative, not differentiated and synergistic and the role of faculty in the advising process is not clear.

The large increase in number of undeclared majors over the last several years (in 2002 nearly 47% of our incoming freshman provided no information of their major interest) also has caused stress on our existing system. Since students are not referred to their departmental staff (or faculty) advisors until they declare their majors, and since most students do not declare their majors until the end of their second year, a great deal of academic advising falls upon staff advisors who, though good generalists, often are not proficient in providing specific recommendations of courses within majors, or in providing information to students that help them select their major and formulate their educational and career goals.

In response to this situation, the campus has several new programs to help provide better advising across the campus. We have:

1. Reduced the number of ‘undeclared majors’ by initiating a new advising cluster program.
2. Increased the role of faculty by involving them in campus advising events structured around advising clusters – not just departments.
3. Increased the role and impact of faculty by initiation of freshman discovery seminars – many faculty participating in teaching these courses

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4 All students must now select one of 10 broad interest areas (e.g., Life Sciences, Arts, Physical Sciences, Engineering, etc) when they accept admission to UC. These are not majors, rather areas that represent clusters of majors. Appropriate departments are forwarded their names and departments are expected to contact these new students and begin both the prescriptive and developmental advising process.
reported a significant amount of advising and career mentoring of students.

4. Created CAPs (Coordinating Academic Preceptors) who coordinate all advising between both departments and colleges. These senior staff members also provide professional development opportunities for other staff advisors, they organize and present workshops, and participate in national meetings (NACADA and others) in which they learn of best practices in advising at other universities.

5. Launched our new academic information system that will meet the prescriptive advising needs of our students, thereby providing more time for developmental advising by faculty and staff.

We continue to work to improve all advising at UC Santa Cruz and are encouraged by recent data from the UCUES survey (UC Undergraduate Engagement Survey) that has shown that relative to other UC campuses, our students have a much higher level of satisfaction of academic and non-academic advising from faculty (17% higher than other UC campuses) and staff (18%).

**UC Santa Cruz’s dual system of colleges and academic departments work synergistically to help transition students to university, engage students and provide learning support.** Nationally, there has been a resurgence of interest in and discussion of the educational needs of first year and lower division students as they transition from high schools to universities (Light, 2001, Boyer Reports 1998, 2002; Academic Literacy, 2002, AAC&U report - Greater Expectations 2002, AAU report – Understanding University Success 2003). The elements that most experts in student educational development agree must be part of a transitional ‘freshman experience’ include (1) development of writing and other communication skills (oral and technological), (2) critical thinking skills, (3) the development of intellectual self-confidence, (4) an understanding of inquiry and research as part of the process of learning, and (5) collaborative learning skills and the ability to work with others. These studies stress the importance of connecting faculty with students as freshman to help them develop these skills and to provide early avenues that will link faculty and students as successful partners.

During the past several years, UCSC has begun to examine its freshman and lower-division experience to determine if we are doing the very best job that we can for our students. We have examined the college core courses⁵ and are attempting to assess if these courses are the best that we can offer. We have begun to examine our writing programs at the lower division and upper division levels to determine if they are meeting the needs of our students and we will continue to build on existing strengths.

We have recently begun our freshman discovery seminar program to provide more ways to connect our freshman students with our faculty and to introduce students to the faculty’s excitement as a researcher/scholar and thereby help students understand the role of research and scholarship in education. This last year over 30 of these seminars were offered, and they received rave reviews from both students and faculty. Students commented that they learned more about what faculty “do” as scholars and began to think of themselves doing research and other creative activities as part of their education. They also commented that the seminar helped them connect to faculty, and that they were able to seek advice and mentoring through discussions of possible career goals. The faculty also commented favorably on the program and nearly all will teach in it again next year. Because of the success of this year’s program, we will expand the program significantly over the next few years with the goal of providing at least one freshman discovery seminar to every interested student. More detailed discussions and evaluation of these and other academic programs, including those that help to ensure the successful transition of students from community college to university, will be the subject of the educational effectiveness review that will comprise the second part of the WASC evaluation process.

In addition to the in-class programs that help students transition to the university, student affairs professionals often working in partnership with faculty, play a critical role through the colleges, departments and campus-wide in providing a wide

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⁵ Each student is required to take a college “core course” during his or her first quarter. This course reflects the intellectual theme of the college, and is designed to foster critical thinking, discussion, reading of texts and writing.
range of (1) programs that support student learning, (2) leadership and service learning programs that help develop socially responsible citizens and (3) student organized programs and organizations that are designed to provide structured social engagement of students and thereby contribute positively to student retention (Hurtado and Carter 1997). Below, we provide some details relating to both learning support services and leadership and service learning programs.

**Learning Support Services:** During the last 4 years, the campus has developed and launched several new learning support programs and a new central Academic Resources Center (ARC). The new center occupies a new building and provides one-on-one tutoring, skill development workshops and has just installed a wireless system of laptop computers that are used on-site for group tutoring and workshops. The coordination of all learning support programs and the establishment of policies that govern each program is the charge of an Academic Resources Advisory Committee that includes faculty members, students and student affairs professionals.

Among the programs available to students is the modified supplemental instruction program (MSI). This program is designed to increase students’ academic success by attaching learning support to gateway and transition courses that have proven to be historically difficult based on student performance data (pass rates). MSI uses student learning assistants who are hired from the ranks of the top previous students in the specific courses to guide peer learning groups of up to ten students meeting once per week. Data gathered from fall quarter 2001 clearly shows the effectiveness of this program. In courses in biology, physics, precalculus, economics, computer engineering and computer sciences, a significant increase in passing courses was seen in students who participated in the MSI program.

Two other major academic support service programs include STARS, that provides services for transfer and re-entry students and the ACE program that provides course tutoring for students in sciences, math and engineering. At a 1999 ceremony at the White House, President Clinton conferred upon the UC Santa Cruz ACE program an Excellence in Education Award – recognizing its outstanding contribution in helping underrepresented minority students succeed academically in sciences and engineering. Since its beginning (1986) this program has served the needs of nearly 3000 students.

**Service Learning and Leadership Programs:** UC Santa Cruz attracts students who are highly motivated to help others and in many respects, this is one of the defining features of the UCSC student character. Nearly all our students participate in some volunteer activity and collectively students/faculty and staff contribute more than one million hours in volunteer service to community annually. The many volunteer/service learning and leadership programs on campus are collaboratively provided by both faculty and student affairs professionals and are offered in academic departments, colleges and through many of the more than 150 student organizations. A few examples of these programs include college programs such as Oakes Service Learning, Merrill Honors Program, and Colleges Nine and Ten. These programs place students in schools and in non-profit organizations and combine an in-class experience with an off-campus volunteer experience. In several of our departments (e.g. Community Studies), service learning is required as part of the major experience. Lastly the Campus’ Student Leadership Certification Program and the Chancellor’s Undergraduate Internship programs provide opportunities for more than 100 students annually to gain classroom knowledge of and real life experience in leadership.

The importance that our students place in providing service to others is likely related to the fact that UCSC ranked eighth nationwide in the number of students (not percentage) who have served in the U.S. Peace Corp. We have just been honored for our 500th volunteer.

**Research, scholarship and other creative activities are integral to UCSC teaching and learning:** Research and scholarship are at the heart of the educational mission of UCSC – for undergraduate students, graduate students and faculty.

Our historical beginnings as primarily an undergraduate institution contributed significantly to the culture that now exists that makes research and

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scholarship integral to undergraduate as well as graduate education. From the beginning, faculty worked with undergraduates as research colleagues, sometimes because the faculty did not have graduate students with whom they might work as research colleagues. In addition, the requirement established at the founding of UC Santa Cruz – that every student had to complete a senior ‘capstone’ experience – meant that most undergraduates undertook a research project and wrote a thesis, many of which were of the quality of graduate theses and were published. Thus from the beginning, we have had a history of incorporating undergraduates in the research enterprise. Even with the growth of graduate programs, this remains the case and nearly 50% of our graduating undergraduates have completed significant independent research and writing.

The new freshman discovery seminars are designed to introduce freshman to the excitement of research and to encourage them to think of research as being integral to their educational experience from the very start of their university career.

For the last five years, research achievements of our undergraduates have been the focus of a week-long ‘Student Achievement Week’ in which undergraduates describe their research in poster sessions, platform presentations, public readings, art events (student opera, ‘Open Studios’, etc.). The week is culminated by a well-attended campus event that is hosted by the Chancellor to recognize the contributions of both the students and their faculty mentors. The ten most outstanding senior theses from each academic division are awarded the dean’s prize, the top three from each division are awarded the Chancellor’s prize and the most outstanding senior thesis from the campus is awarded the alumni prize (a substantial cash award from the Steck family).

The importance and success of our history of incorporating research into undergraduate education is reflected in statistics that show that in comparison to all public AAU and UC campuses, we rank second with respect to the number of our undergraduate students who go on and complete their doctorate degree.

UC SANTA CRUZ ENCOURAGES AND REWARDS EXCELLENT TEACHING.

During the last decade, characterized by unprecedented growth of both our student body and faculty, we have continued to attract some of the best scholars and teachers in all disciplines. Recruitments generally net our first or second choices among our candidates who choose UCSC over a prestigious institution such as Harvard, Yale, other UC campuses, the University of Michigan, and others. Many of the faculty who choose to come to Santa Cruz do so because of their commitment not only as scholars, but also as educators.

Most departments actively select faculty members who they expect will be both outstanding scholars as well as educators. Departments frequently request candidates for faculty positions to present two seminars – one a research seminar and the other a seminar to demonstrate their teaching abilities.

Upon being hired, faculty members are provided with two years (or more) of monthly brown-bag seminars focused on developing their abilities as educators and scholars and on understanding the culture and operations of the campus. These seminars which are sponsored by the Office of the Campus Provost and Executive Vice Chancellor, also provide social opportunities for faculty from different disciplines to meet each other.

Like all faculty and graduate students, they are encouraged to use the services of our acclaimed Center for Teaching Excellence. This center organizes workshops and provides publications (including the quarterly Focus, with articles on teaching and learning practices), provides in-class evaluation of teaching techniques, helps instructors design useful course evaluation surveys, works with departments to design and deliver student evaluations of specific instructors and works with the campus’ Faculty Instructional Technology Center to provide training and support to encourage faculty to utilize technology (e.g. WebCT, on-line placement and student assessment software) to improve teaching and learning.

Quality teaching is expected of all UC Santa Cruz faculty and is examined critically during the personnel review of each faculty member (this occurs every two
years for assistant and associate professors and every three years for full professors). Departments, division deans, the Academic Senate’s Committee on Academic Personnel, Ad Hoc Committees, and occasionally the campus Provost and Chancellor, read student evaluations of faculty teaching and letters from colleagues with expertise about the quality of the faculty member’s teaching.

Quality teaching is not only rewarded during the promotion process but it is also recognized in two campus-wide teaching awards ceremonies. Annually, the Alumni Foundation recognizes the most outstanding teacher from the faculty in a large event attended by faculty, students, alumni, and community members. A substantial cash award is given as a prize. In addition, the Academic Senate’s Committee on Teaching (COT) annually recognizes the most outstanding teachers and graduate student teaching assistants in a campus-wide event. The recipients of these awards also receive a significant financial award and campus and community recognition.

**UCSC IS INCREASING ITS GRADUATE STUDENTS AND PROGRAMS, AND IS SEEKING WAYS TO IMPROVE THE QUALITY OF GRADUATE EDUCATION.**

A significant increase in the number and academic range of the campus's graduate and professional programs over the past two decades, along with increasing size and diversity of our graduate student population, has added welcome energy and intellectual resources to campus life. These changes offer a firm foundation for the campus's plans to more than double the number of graduate and professional students over the next decade and to increase the proportion of such students from ten to fifteen percent of the campus's total student population. The campus administration and faculty are committed to ensuring that such growth results in a further enhancement of academic quality, fueled by the continuing appointment of first-rate faculty, provision of first-rate research facilities, supplementing state graduate-support funds by increasing federal and foundation grants, internships, endowments, and other private gifts.

The campus will also institute other strategies for enhancing its competitiveness in attracting first-rate graduate students and ensuring their preparation for professional success, strategies that respond to needs articulated in 2001 by a special University-wide Commission on the Growth and Support of Graduate Education. In its report to the UC Regents, the Commission stressed the importance of graduate students overall quality of life and professional growth opportunities as key to recruiting and student success. A variety of national studies have demonstrated persuasively that graduate students can benefit from professional development opportunities offered outside, as well as within, their departments. They can benefit from a range of cultural and social opportunities that continue to expand their horizons beyond their specialized academic fields and that enable them to interact productively with faculty and graduate students outside their own fields. It was in response to such desiderata that graduate students, faculty, and administrators collaborated to build, in 2001-02, a Graduate Student Center that has enhanced graduate student interaction across disciplinary lines. A similar collaborative effort is leading to the establishment of a pilot institute administered through University Extension, which will sharpen graduate students’ skills in the use of web-aided pedagogy.

Major efforts to improve the quality of life and professional development of graduate students are reflected in the planning now underway, with the strong endorsement of the Academic Senate’s Graduate Council and the Graduate Student Association, to establish a Graduate College at UC Santa Cruz. This concept also has the support of the campus administration but much more discussion must occur among all constituents including appropriate academic senate committees before this idea becomes a reality.

The Graduate College, if established, could respond directly and creatively to recommendations made by the Commission on the Growth and Support of Graduate Education in its September 2001 report to the UC Board of Regents. The Commission recommended "that the University re-examine a number of internal practices to improve support for and foster the progress of our graduate students." Among their conclusions were that every UC campus should make graduate housing, especially for first-year students, a priority and that UC’s campuses should be made “the ten best campus environments in
the nation for graduate students”. This challenge will be met in part by improving mentoring, consciously designing new opportunities for graduate students’ professional practice, creating community spaces where graduate students can meet and study, and expanding career planning and placement and other services and by elevating the visibility of graduate students and graduate education.

The campus also recognizes that adequate and affordable on- and off-campus housing in this high-rent state will be critical to attracting and retaining excellent graduate students. Thus, part of the revision of its Long Range Development Plan will be to ensure that additional graduate student housing is included.

The Graduate College at UCSC will build on several features of the campus’ long-standing and very successful undergraduate residential college system, while adapting those features specifically to the needs and interests of graduate students. It will complement rather than duplicate the curricular programs, research opportunities, co-curricular activities, and other services provided by the campus's degree-granting graduate programs and by the academic divisions.

Research is integral to all education – both at the graduate as well as the undergraduate level. Over 50% of our undergraduates participate in research and other creative activities. We are increasing our number of graduate students and programs not only because our knowledge-based economy relies on new ideas that emerge from the studies of these students and their faculty, but also because a mature graduate program is essential to the quality of undergraduate education, which is enhanced by the work of inspiring young scholars in the undergraduate classrooms, studios and laboratories.

The UCSC Colleges provide relatively small communities where students engage both inside of and outside the classroom. In both national (NSSE) and state (UC) surveys, our students report that they are more intellectually engaged, more often discuss ideas outside of class with faculty and others and have had serious conversations with students different from themselves in terms of ethnicity, religion and values. They also report reading more, writing more papers and report that their coursework emphasizes higher-level thinking than students at comparable universities.