



OFFICE OF THE VICE PROVOST AND
DEAN OF UNDERGRADUATE EDUCATION

291 McHenry Library, Santa Cruz, CA 95064
Phone (831) 459-4419 • FAX (831) 459-4573

December 20, 2000

Sandra Smith
Assistant Vice President
for Planning and Analysis
Office of the President
1111 Franklin Street, 11th Floor
Oakland, CA 94607-5200

Dear Vice President Smith:

RE: Annual Report to the Legislature on Undergraduate Instruction and Faculty Teaching Activities

This is in response to Part I of your October 11, 2000 request to Executive Vice Chancellor John Simpson for information for the *Annual Report to the Legislature on Undergraduate Instruction and Faculty Teaching Activities*.

During the 1999-2000 academic year, UC Santa Cruz continued its rapid growth with an additional enrollment of 310 students. In anticipation of "Tidal Wave Two," (which began fall 2000 with an additional 845 new students) the campus took important steps to accommodate the larger number of students, to improve the quality of undergraduate education, to ensure the availability of classes for these students, and to improve retention. The following is a summary of some of these steps (see attachment for details):

- Over the last year, the Academic Senate, working with the administration, revised our student assessment policy and voted to implement mandatory grades in three-quarters of courses taken by undergraduate students. Students will also continue to receive narrative evaluations in all classes taken at UCSC. Accordingly, as noted in *The Chronicle of Higher Education*, UCSC now has the most thorough and stringent student assessment policy of any major UC research university.
- UC Santa Cruz strengthened its campuswide advising efforts during 1999-00 by establishing a new position of Coordinator of Academic Advising (CAA). The CAA provides strategic direction and integrates academic advising functions delivered by colleges, departments, and the Division of Student Affairs.
- In 1999-00, UCSC continued to offer a majority of its courses in small class size format. Two-thirds of all courses (excluding independent studies and physical education) had enrollments of thirty or fewer students. This is an improvement over preceding years.

- UC Santa Cruz continued to emphasize the role of undergraduate research and scholarship during 1999-00. A majority of our graduating seniors satisfied their senior capstone experience by engaging in some significant research/scholarly activity; many of these students published their work. This year, we began the planning process for our new centralized Undergraduate Research Office which will soon be going online.
- UCSC's second annual, campuswide, Student Achievement Week took place in June, and showcased the research contributions of our undergraduates. Our students also participated in the first UC Day in Sacramento, which focused the attention of the Legislature on the research efforts of UC's undergraduate students.
- The new Learning Center was planned and implemented during 1999-2000. The Learning Center is committed to assisting UCSC's students to achieve their highest potential during their academic careers. Students can access the Learning Center at two locations on campus — at Oakes College and at Crown College. In the near future, the Learning Center will move to a centralized facility. The Learning Center offers tutoring and services in a variety of disciplines, and there are over seventy-five highly qualified tutors working for the Center this year. In addition to tutorial services, the Learning Center also offers an assortment of workshops and informational meetings for students, with a variety of instructors and speakers who expose students to a diversity of opportunities to learn in an intimate atmosphere with students who have similar interests and academic needs.
- In 1999-00, UCSC adopted a campuswide learning management system, WebCT. UCSC faculty use WebCT to deliver web-based course materials to supplement their classroom instruction.
- A new initiative, "Writing Across the Curriculum," was approved in 1999-2000, to strengthen the quality of undergraduate education. This program will provide more opportunities for students to take a writing course in their disciplines, especially in Biology, Psychology, and the Arts Division. In addition, it will increase the support for the teaching of writing available to faculty and teaching assistants, especially in the Arts, Natural Sciences, and Social Sciences divisions.
- The Humanities Division's "Scholars' Week" launched its pilot program this fall. "Scholars' Week" was designed as a tool to recruit and retain high-achieving students, and included involvement by faculty from each division. Thirty-five of the forty-four incoming freshperson Regents' Scholars participated in "Scholars Week," which was held September 10-15, 2000.
- The Humanities Division's Faculty Multimedia Development Lab, planned by the division's computing staff over the last year, was designed to assist faculty in the design of web sites and CD ROM materials. Training and installation of the Lab took place during the summer and early fall.
- The reassessment and reorganization of the Office of International Education's (formerly International Programs) took place during 1999-00: Under the guidance of a new faculty director, Professor Margo Hendricks, the Office of International Education is making internal changes designed to increase student participation in the systemwide Education Abroad Program, as well as to provide better advising services for international students attending UCSC.
- Two new B.A. programs were initiated during 1999-00, Classical Studies and Italian Studies.

Attached is our detailed report. Since I will be out of the country from December 22 until approximately January 23, 2001, please call my assistant, Susan Jessen, if you have any questions about this report. Susan's telephone number is (831) 459-4908 (email address: susan.jessen@adm.ucsc.edu).

Sincerely,

Lynda J. Goff
Vice Provost and Dean
of Undergraduate Education

Attachment

cc: Vice Provost Brown
Chancellor Greenwood
Vice Chancellor Hernandez
Associate Vice Chancellor Irwin
Dean Designate Kang
Academic Advising Coordinator Koreck
Associate Vice Chancellor Michaels
CATS Director Riddle
Campus Provost and EVC Simpson
Vice Chancellor Suduiko
Graduate Dean Talamantes
CTE Director Tanner
Associate Vice Chancellor Thompson
Assistant Campus Provost Willis
Academic Deans
College Provosts
Department Chairs

**March 2001 Annual Report to the Legislature
On Undergraduate Instruction and Faculty Teaching Activities**

**Report from the University of California, Santa Cruz
Part I**

*Prepared by Lynda J. Goff, Vice Provost and Dean, Undergraduate Education
December 19, 2000*

A. INNOVATIVE PROGRAMS IN UNDERGRADUATE EDUCATION, 1999-00

1. Providing Undergraduate Research Opportunities:

UC Santa Cruz has always had an exceptionally strong undergraduate program, which brings students into the research enterprise. Students progress through both their general education and their majors and, throughout both, research and the creative enterprise is a unifying theme that exposes them to cumulative learning. The undergraduate experience is culminated by a senior capstone activity that may include a research thesis, a capstone seminar, a service-learning experience, a research-centered academic internship or, in some cases, it is met by an examination in a major field. Last year, all of our graduating seniors participated in senior capstone experiences and over 50% of these students were engaged in some formal research endeavor. UC recently compared all its institutions with all other AAU institutions with respect to the number of undergraduate students who went on to graduate school and completed their doctorates. Of all public institutions compared¹, UC Berkeley and UC Santa Cruz had the most undergraduate students (8.5% and 8.3% respectively) completing their doctorate degrees. We think that this reflects the emphasis that has always been placed by our faculty and our students on the role of research and the creation of knowledge in the educational process.

UC Santa Cruz will soon be launching its Undergraduate Research Office. Funding for this is being made available by the UCOP FY2001 funds to “strengthen the quality of undergraduate education.” Initially, this office will provide a resource base to direct students into undergraduate research opportunities. It will also work to expand the number of undergraduate scholarships (through UCSC development efforts) and will coordinate all student applications and track their applications for awards such as the Strauss, Rhodes, Truman, Phi Beta Kappa and others. This office will be opening “virtually” on the web during this current academic year.

During AY1999-2000, the campus held its second annual “Student Achievement Week” in the last week of the spring quarter. This week focused the attention of the campus and surrounding community, and partnering community colleges and secondary schools, on the achievements of our undergraduate students in research. Throughout the campus, students presented their scientific work, their literary work, their theatrical or musical productions, and their art to large and enthusiastic audiences. The week culminated in a “Student Achievement Awards” event to which students, their parents, the UCSC Foundation, the alumni and prominent community members and community area teachers were invited. Students were honored by the Chancellor and received awards for their senior theses and other research contributions. More than fifty students, their faculty mentors, and families were honored at this ceremony.

¹ The average in this comparison was that 4.1% of the undergraduate students of the 62 universities compared went on to obtain their doctorate degrees.

Some specific examples serve to demonstrate the scope of activities of UC Santa Cruz students in research and other scholarly activities:

In the Division of the Arts, the past year saw full occupancy of all the new facilities in Baskin Arts, the Music Center and the Theater Arts Center projects. These new facilities provide unique venues for expansion of creativity and pedagogy. Faculty are committed to mentoring and encouraging students' unique interests and talents through numerous independent studies and tutorials.

- In the Art Department, faculty collaboration and mentoring has enabled students to successfully compete for public art commissions. Art History students were awarded internships in both local and national galleries and museums. Their senior theses, representing significant research efforts, have won prizes from the departments, and both inside and outside the division.
- Theater Arts' student production program allows student directors, designers, dramaturgs, and dancers outstanding opportunities to do productions -- either under faculty guidance or in conjunction with faculty directors or choreographers. An annual festival of new plays allows student directors and filmmakers opportunities to develop their own pieces and present them to enthusiastic audiences. A showcase of student dance is part of the department's regular theater season. It is rare in the UC system that undergraduates are supported in fully mounted productions, but this is a normal part of the UCSC theater arts experience.
- Multimedia authoring classes allow students to create professional level CD presentations of music, dance and theater material, which include substantive student research. The Chancellor's Undergraduate Internship Program (CUIP) has provided opportunities for students to become integral contributors to departmental outreach, production coordination, and web design.
- Film and Digital Media students may film, edit, and produce their own works. A significant number of students obtain summer internships in the industry with small independent companies, as well as with giants such as Pixar and Industrial Light and Magic. Students are also supported in internships in film and television in New York and Los Angeles. After graduation, many have gone on to employment with these firms, and others in the entertainment industry.
- Students are provided the opportunity to interact with professional actors, directors, and designers in the context of Shakespeare Santa Cruz's professional theater productions. The Theater Arts Department's "Shakespeare-To-Go" program took approximately fifteen student performers to fifty schools with a production of a Shakespeare script.

The Division of Humanities and its departments undertook numerous initiatives and efforts focused on the enhancement of undergraduate education. Two of these were Scholars' Week and the Faculty Multimedia Lab.

Scholars' Week was developed during the 1999-2000 academic year to serve as a tool for recruiting and retaining high-achieving applicants. The pilot program for Scholars' Week was held in early September of this year, with thirty-five of the forty-four incoming freshperson Regents' Scholars participating in the activities. While this program was developed and implemented by the Division of Humanities,

ladder-rank faculty from each academic division offered one and a half-hour “mini-courses” during Scholars’ Week; each “mini-course” was held four times during the five days of Scholars Week. Subsequent evaluation of *Scholars’ Week* has shown that it was enormously successful. The student participants in this program strongly bonded as a cohort and they continue to interact and stay connected through seminar type programs that they are organizing.

The Division of Humanities’ computing staff developed the Faculty Multimedia Development Lab to assist faculty in the design of web sites and CD ROM materials for their courses. The use of this Lab has resulted in increased knowledge of technology by both faculty and students, as well as a greater student interest in these courses.

The Linguistics Department sponsored an undergraduate research conference in June for Linguistics and Language Studies students. The Literature Department annually sponsors student Creative Writing magazines, *The Red Wheelbarrow* and *La Revista*. Literature also sponsors the “Living Writers” series, which brings in guest writers for Creative Writing courses. The Women’s Studies Department has provided funding for journals produced by Women’s Studies students who publish their research papers.

Approximately fifteen faculty members have hired up to twenty-five students for research-related work. Some examples of these projects are: library research (bibliographies, books, periodicals, letters) sometimes in languages other than English (i.e., Spanish, Italian, Turkish); development of course web pages (i.e., French, Spanish, Portuguese, Chinese, Hebrew, Italian); identify, read, and summarize articles and primary documents for faculty project; assist with word processing, proofing, editing text intended for scholarly publications; assist in preparing collections of slides for classroom presentations

The Division of Natural Sciences is extremely proud of the success of its efforts to provide undergraduates with access to research opportunities. There are numerous programs within the division that provide research experiences:

- *MARC/MBRS/MIRT*: Jointly, the Minority Biomedical Research Support (MBRS), the Minority Access to Research Careers (MARC), and the Minority International Research Training (MIRT) programs are designed to give targeted minority students an opportunity to gain experience in laboratory research and to gain first-hand knowledge of the academic research environment. Students are provided the opportunity to design and carry out their own research projects, present their research at professional conferences, and publish their results in scientific journals. The combined programs provide research internships to approximately thirty undergraduate students per year.
- *CAMP*: The California Alliance for Minority Participation in Science, Math and Engineering provides funding for approximately twenty undergraduate research internships each summer. The Santa Cruz program, now in its tenth year, is one of the most successful programs in the UC system. Our program has been designed to integrate the research experience with undergraduate education to create a cohesive program that fully prepares student participants for graduate education and successful careers.
- *Natural Sciences Undergraduate Research Symposium*: Each spring, the Division of Natural Sciences sponsors an Undergraduate Research Symposium. This event provides an opportunity for all undergraduates who have been involved in supervised research to prepare posters and present their work to their peers and mentors in a professional setting. During 1999-2000, forty-four science undergraduates participated in the symposium.

- *Biology 162 – Field Quarter in Marine Ecology*: This new course, offered by the department of Ecology and Evolutionary Biology, provides students the opportunity to undertake independent research projects in the field. This year's class is spending six weeks in Tahiti, studying various aspects of marine ecology on site.
- *Independent Study Enrollment in the Natural Sciences*: In 1999-00, independent study enrollments per permanent payroll faculty FTE in the Natural Sciences was 10.9 (graduate and undergraduate students combined). This number reflects 337 undergraduate students who enrolled in independent study or independent research projects under the direction of science faculty.

In the Division of Social Sciences, Anthropology undergraduates have the opportunity to do independent studies for credit towards the anthropology major. These opportunities may be field studies (in the U.S. or abroad), faculty supervised research tutorials, or independent lab studies.

Community Studies students are required to work on a six-month field study in an organization pursuing a specific social change issue. Students may be placed anywhere in the world. Approximately thirty-three percent of Community Studies students are placed internationally.

UCSC students enrolled in the UCDC program spend one quarter at UC's site in Washington, DC. They serve as interns at government and private agencies and attend seminars and classes related to the program content. Students earn credit for independent studies via internships (usually unpaid) with various local agencies and elected officials.

In addition, the Division of Social Sciences has programs to fund undergraduates to do their research under faculty supervision, such as Anthropology's Undergraduate Travel Awards, which consists of moderately sized sums of money to fund undergraduate research and attendance at professional meetings.

Anthropology Department faculty also may apply for funds to hire undergraduate research assistants. Faculty-sponsored undergraduates can also petition to receive credit for research and management of the Anthropology Archives, for lab work, or for being course assistants.

2. Increasing the Number of Lower-Division Seminars:

UC Santa Cruz continues to strive to provide courses with smaller enrollments to both its lower-division and upper-division students. Last year, over 66% of our courses had enrollment of fewer than thirty students. And even our larger introductory courses in such popular majors as biology and psychology remain much smaller than those of other UC campuses.

The hallmark of our lower-division seminar program is the college core course – the freshman seminar experience. Last year over 150 sections enrolled over 3000 entering students. These core courses are designed around the topic and intellectual theme of the individual sponsoring college. Most of these are one-quarter courses offered during the fall quarter; Stevenson College offers a yearlong core course that satisfies several general education requirements for its students. Since every incoming freshman within any specific college is required to take the same core course during the same quarter, all students living in a college have a common shared educational experience. They read the same books, hear the same lectures, and they challenge, and are challenged by, the same ideas. They meet weekly in a meeting of the entire class and in small individual seminars (22-23 students). In these freshman seminar sections,

students receive extensive training and practice in writing, in critical thinking, research skills and speaking skills.

Like most courses at UC Santa Cruz, the core course is a five-unit course. This is usually about one-third of the total course load taken by a student during the academic quarter and the amount of material covered is similar to that presented in most semester length courses. Since students generally are only taking two other courses, each student is expected to dedicate one-third of his or her time to each course. By taking only three courses each academic quarter, students have the time in each course for special "out-of-the classroom" academic projects that stress research and creative learning. This approach has become a hallmark of teaching and learning at UC Santa Cruz.

Not only do college core courses provide for intensive undergraduate seminar experiences, but many other small seminar courses have been developed that provide these experiences to both lower and upper-division students.

In the Division of Natural Sciences, the *Academic Excellence Honors Program (ACE)* continues to provide students in the sciences with high-quality, small seminar experiences. A challenging and supportive setting, combined with collaborative learning techniques in small groups (sixteen is the maximum section enrollment), effectively increases the success rates of undergraduate students in selected gateway courses. This program is funded by the division and serves approximately 250 students per year.

The *Undergraduate Mathematics Colloquium* was funded by an Instructional Improvement Mini-Grant and was coordinated by Visiting Assistant Professor Rosanna Pearlstein. The colloquium consists of a series of bimonthly presentations given for mathematics undergraduates, with the goal of increasing undergraduate participation in the mathematics community and to broaden students' knowledge of interesting mathematical problems and fields of study.

The Division of Natural Sciences added a new, one-unit course, Earth Sciences Mentorship (EART 190). Faculty research activity, analytic facilities, and career counseling in three separate earth sciences laboratories are offered through this course. Satisfactory completion of this course is required of all Earth Sciences majors. The course format varies and includes field trips, discussions and equipment demonstrations. Each fall and winter quarter, three different faculty members participate in each course offering. There was a total enrollment of thirty-six students in this course in 1999-00.

Associate Professor Rebecca Braslau taught a new, very successful two-unit seminar course during the spring quarter of 2000. The course addressed topics in bioengineering, including genetic manipulation of crops (trans-genic organisms), cloning, and medical aspects such as gene therapy. This course was intended to encourage students to think critically about the various ways science and politics intersect, to avoid "knee-jerk" reactions to emotional subjects, and to read and assess scientific works written for a lay audience in fields outside of the reader's expertise.

In the Division of Social Sciences, Politics 100 is a core seminar required of all politics majors, emphasizing discussion, writing and analytical thinking. Approximately twenty students were enrolled in nine seminars during 1999-00.

Porter College uses a significant amount of its college endowment fund to provide many small seminar courses. In 1999-00 Porter offered a small seminar, *Ways of Knowing*, for beginning students, and fourteen two-unit seminars. A total of 700 Porter College students were engaged in these small seminars, almost one half of its enrollment. The vast number who benefited by these offerings were lower-division students.

One of the most innovative and successful new seminar courses taught in 1999-2000 was developed and taught by Chancellor M.R.C. Greenwood. This course, "Leadership and Institution Building" is required of all interns in the Chancellor's Undergraduate Intern Program (CUIP). It is a two-unit seminar course that provides students with: (1) the leadership and communication skills they will require as interns ("leadership assessment" by a psychological testing service, grant writing, use of PowerPoint and web pages in presenting ideas and proposals); and, (2) the opportunity to learn how leaders work with constituent groups to reach consensus and solutions and how they develop implementation plans. Through a series of lectures, readings and student-directed discussions, students learn from campus senior administrators (vice chancellors, deans, vice provosts, etc.), about the University of California and UC Santa Cruz, and it introduces students to the problems faced in building these institutions. Students work in teams to obtain information on specific problems and guide discussion of the class to reach consensus and provide recommendations that will be forwarded to the central administration.

3. Ensuring the Quality of Undergraduate Teaching:

During AY1999-2000, the campus continued its efforts to ensure that the quality of undergraduate teaching and learning is optimal. A few campuswide efforts are discussed below, followed by specific examples from some of the academic divisions.

Probably the most important discussion that our faculty held about undergraduate teaching and learning centered on how we assess the performance of our students. Through the joint efforts of the UC Santa Cruz administration and its Academic Senate, the faculty reviewed its student assessment policy and concluded that we could improve the quality of the learning experience for our students, and assure their future prospects, by changing our evaluation policy. Accordingly, beginning next academic year, our campus will have the most rigorous and thorough student evaluation program of any major research campus in the country. All students will receive a letter grade in at least three-fourths of their course work and they will also receive a written performance evaluation in every course. The faculty concluded that not only would our students be best served by having a traditional grading system that is the acceptable "coinage" of the rest of academia, but also that students need to continue to receive detailed feedback via narrative performance evaluations. The rapid development of web-based technology that supports multidimensional assessment of students will assist our faculty in the delivery of this assessment.

During AY 1900/2000, several of our teaching/learning support structures expanded their services. Our Center for Teaching Excellence (CTE) began to serve graduate student teaching assistants as well as our faculty. CTE provided mid-quarter assessment of teaching effectiveness and has helped to develop new and better means by which students provide assessment of courses and instructors. CTE's faculty clientele expanded by nearly 100% during this past academic year. In addition, CTE expanded its services to increase the focus of the faculty and graduate teaching assistants on teaching in their respective fall orientations.

Developed by CTE during the course of 1999-2000, the UCSC Teaching Portal brings into one easily accessible online location all the critical resources related to instruction at UCSC. Information is organized via six different pathways: teaching, student learning, technology, instructional development, support and recognition, and division-specific resources. Taking advantage of the kind of flexibility the Internet offers, the Teaching Portal will continue to develop and grow as more instructional resources acquire an online presence.

A great number of our faculty and teaching assistants have begun to seriously incorporate technology into their teaching, which has dramatically improved the teaching/learning experience. In response to the need of our instructors to utilize these technologies, the campus markedly expanded its instructional technology faculty resource center staff. Each faculty member may now obtain the services of an instructional technology staff member to develop course web pages, learn WebCT, digitize course material, etc. The UC Santa Cruz Academic Senate Committee on Teaching played an instrumental role this past year in articulating the needs for improving technology assisted learning and they worked closely with the administration to obtain the funds to provide these services and support.

Working in partnership, academic affairs and student affairs successfully completed their plans and obtained funding to develop our new centralized campus learning center. This new center will function as a hub and coordinate with the decentralized campus learning satellite centers that exist in many of the colleges. The new center has begun to offer vastly expanded tutoring services and are promoting cohort-learning programs and many other programs that will ensure the academic success of all our students. Funds from the new UCOP initiative to improve the quality of undergraduate education will support this center.

AY1999-2000 also saw changes in our campuswide writing program that will improve the quality of writing of our undergraduate students. The campus decided to expand its successful "Writing Across the Curriculum" program and funded additional writing coordinators and tutors to enable departments and academic divisions to offer writing intensive courses in their specific disciplines.

Lastly, our campus honored the exceptional contributions to undergraduate teaching of several of our faculty. Professor Barry Bowman (Biology) received the 1999-2000 Alumni Award for Outstanding Teaching and, at a campuswide ceremony during spring quarter, the campus honored sixteen faculty members who received the 1999-2000 Excellence in Teaching Awards. The faculty were: Professor John Borrego, Community Studies; Lecturer Geoffrey Dunn, Community Studies; Professor Diane Gifford-Gonzalez, Anthropology; Professor Stephen Gliessman, Environmental Studies; Professor Craig Haney, Psychology; Professor Barbara Rogoff, Psychology; Associate Professor Daniel Wirls, Politics; Frank Bauerle, Mathematics; Murray Baumgarten, Literature; Linda Burman-Hall, Music; Robert Kuhn, Biology; Justin Revenaugh, Earth Sciences; and David Sweet, History. The Division of Social Sciences presented "Golden Apple" awards to Professor Isebill Gruhn (Politics) and Professor Dane Archer (Sociology) for excellence in undergraduate teaching.

In addition to campuswide efforts to ensure quality teaching and learning for our undergraduates, several department/division programs were initiated during AY1999-2000. A few examples follow:

- In the Division of the Arts, the Film and Digital Media Department redesigned its medium-to-large courses to include sections, enhancing the educational dynamics. Some departments have supplemented their regular curriculum budgets with extramural funds, such as endowed chair funds, to offer more undergraduate courses. The Division of the Arts continues to explore all avenues for inviting distinguished artists and scholars to complement the expertise of their regular faculty. The ratio of students to faculty in these programs remains excellent, ranging from one-to-one for applied music instruction, to an average twenty-to-one for studio classes.
- In the Division of Humanities, the Literature Department's endowment/development efforts resulted in the establishment of Literature's Annual Undergraduate Lecture in Literary Studies. The goals are to bring distinguished visitors to UCSC to speak publicly and visit classrooms, to present our undergraduate majors with the best the literature discipline has to offer, and address undergraduate audiences to promote and foster their interest in the discipline.
- Also in Humanities, the Women's Studies Department's faculty members work extensively with graduate student TAs to insure quality in the discussion sections and in the evaluative process. The faculty members meet at least once a week with each TA. In addition, a special upper-division seminar on Feminist Methods of teaching is required for the undergraduate assistants who lead discussion sections for "Introduction to Feminisms," WMST 1-A. This intensive supervision provides undergraduates with a unique teaching experience, which also enhances their own understanding of the teaching process.
- The Community Studies Department keeps its core courses (for majors) at a maximum of twenty-five students per class; therefore, the department offers more than one section of the same class.
- At Oakes College, the Guzmán Mentor Program received support in the form of a generous allocation from the Associate Vice Chancellor for Student Affairs, enabling it to take on a carefully selected group of at-risk students for its third year. This year the Guzmán Mentor Program served twenty-nine students, using seven mentors, marking an increase of two mentors from the previous year. Firmly established within UCSC, the Guzmán Mentor Program is now a campus model. A Crown College mentor program has emerged as an offshoot of the Guzmán program. Within the next two years, each UCSC college shall adopt programs similar to these mentor programs.
- Stevenson College continued to put more effort into its Mentor Program, which promotes student interaction with faculty college Fellows, and helps to put the students at ease when visiting and talking to professors. Mentors are continuing students who are assigned to frosh as a way of familiarizing the latter with life at Stevenson College and UCSC. The college also ran a Fellow-in-Residence program, inviting a distinguished visitor to live at Stevenson for a few days and conduct a series of meetings and lectures with Stevenson students, staff, and faculty. Last year, our Fellow-in-Residence was Paula Gunn Allen, Emerita Professor of English, American Indian Studies and Creative Writing at UCLA.
- In the Jack Baskin School of Engineering, the Computer Engineering Department chair initiated a more quantitative approach with teaching evaluations to provide comparisons and better feedback to instructors. Another step was the appointment of F. Joel Ferguson, Professor of Computer Engineering, as Associate Dean of Undergraduate Affairs for the School of Engineering.

- Crown College received funding from the Instructional Improvement Grant program (through the Committee on Teaching) to help revise the Freshman Core Course. This funding was used to develop an interactive course web page, through which students submitted assignments, engaged in discussions, and had their writing published on-line. In the fall, the college held a daylong instructor workshop for core course seminar instructors. This workshop included sessions on accessing library research materials on the web and on pedagogical uses of the course web site.

4. Providing Experiential Learning Opportunities:

Through both their general educational experiences and their disciplinary majors, our students gain a keen understanding of the relevancy of their education in the contemporary world. Core courses introduce them to issues of diversity, which is reinforced throughout many other courses, including their general education requirement in comparative ethnic studies. The culture of the colleges instills in our students a deep appreciation and respect for community. Through several college programs, a very large number of our students enter into service learning experiences. Last year, our Budget and Planning Office completed a study on community service, volunteerism and service learning at UC Santa Cruz. This study revealed that our students, staff, and faculty contributed in excess of 895,000 hours of volunteer service to our surrounding communities. To put this figure in some context, a recent television commercial for General Electric proudly advertises that its employees nationwide contribute about one million hours of volunteer time to their communities each year.

The ethos of altruism that characterizes UC Santa Cruz students and the personal satisfaction that our students realize from their volunteerism bring many of them to careers in education and in public service. Many of our students become interested in education by interning or working for the Educational Partnership Center, a UCSC program that coordinates the myriad of programs that help to interface our university with K-12 educational institutions. The UC Santa Cruz culture of volunteerism may help to explain why UC Santa Cruz consistently ranks as one of the top ten universities from which Peace Corps volunteers are recruited.

Last year, several additional campuswide programs were launched to provide additional opportunities to our students in service learning and community volunteerism. A few are cited as examples:

- The Division of the Arts, utilizing Porter College facilities and resources, initiated a new service-learning program, *ArtsBridge*. During the 1999-2000 academic year, seventy students from Theater Arts, Music, Art, and Film and Digital Media were placed in K-12 classrooms to teach for eight weeks. UCSC faculty mentors provided coaching and feedback on the students' work, gave orientations for the students (which were facilitated by UCSC faculty and professional artists), and visited the students in their classrooms. The *ArtsBridge* program has been met with enormous enthusiasm by the school sites. *ArtsBridge* has been successful in recruiting students into a career in teaching; a number who participated are currently working on their teaching credentials or beginning their teaching careers.
- At Oakes College, the *Oakes Serves* Community Service Program operates both in the city of Santa Cruz and in the city of Seaside. In Santa Cruz, student volunteers serve a variety of local agencies, and meet in a weekly seminar. In Seaside, specially selected students are trained and employed as

tutors in middle and secondary schools. Also, Oakes College Provost David H. Anthony and *Oakes Serves* Director R. Stanley Oden worked with community-based educators and the UCSC Educational Partnership Center (EPC), which resulted in EPC funding to support the Learning Enhancement Program based in Martin Luther King Middle School, Los Arboles Middle School, and Seaside High School. *Oakes Serves*-trained Community Resource Assistants (CRAs) help teachers in their classrooms at these schools. *Oakes Serves* is an outgrowth of Oakes Colleges' *Urban Collaborative*, a Community Assessment and Mentoring Program developed with an action research grant from the UC Office of the President.

- Porter College offered sixteen sections of the Porter Core Course where 400 freshmen participated in small seminars, in close contact with a faculty member. Each section had an undergraduate instructional assistant, who helped the new students in negotiating writing skills. These sixteen upper-division students participated in a seminar on teaching writing, which was taught by a lecturer. This is a strong service learning experience for our upper division students and many who participate go on to teach at a high school or college level.
- In the Division of Humanities, the Language Program organized two ongoing “spring quarter abroad” programs for its students, that are taught by its own faculty — one in Nimes, France, and one in Moralia, Mexico. A new faculty-led quarter abroad is being planned that would combine time in Mexico and Cuba. In the Women’s Studies Department, service-learning programs are extensive. Students do internships at Women’s Crisis Support, The Walnut Avenue Women’s Center, Defense de Mujeres, the Santa Cruz Survivors Healing Center, Rape Prevention Education Peer Advising Program, and others.
- In the Division of Natural Sciences, the *Earth Sciences Senior Field Internship* provides seven weeks of summer field study of the geologically complex areas in the eastern Sierra Nevada and Mono Basin. Activities include geologic field mapping, sample collection, library research, and preparation of a formal written report for each class. The *Community Teaching Fellowship Program in Mathematics and Science* selects participants to work in a K-12 classroom for a total of eight hours per week for two quarters. Fellows observe lessons, help and support the classroom teacher, tutor students, and sometimes teach several lessons. This program is designed to encourage undergraduates to consider a career in K-12 education.
- At Crown College, in the course *Crown 30: Delta Learning Connection*, about a dozen Crown College students engaged in supervised tutoring of “at risk” high school students at the Delta Charter High School, which was located on the Crown College campus in 1999-00.
- In the Division of Social Sciences, the Anthropology Department encourages its undergraduates to participate in programs and studies outside UCSC. These programs include EAP, archaeological field schools, and field studies in which students perform field research in conjunction with local, national, and international programs. In Community Studies, students are required to work on a six-month field study in an organization working on a specific social change issue.
- One example of effective service learning is the *Step-to-College* program, which is housed at Merrill College. The *Step-to-College* program provides university mentors for migrant high school students in the small, rural, farming community of Pescadero, California -- particularly at Pescadero High

School -- to help those students prepare for college. One of these Step-to-College mentors, Naomi Campos, won the prestigious Donald A. Strauss \$10,000 Scholarship last spring for her outstanding work in this program. Naomi's winning submission proposed expanding the *Step-to-College* program, which -- since Naomi's involvement -- has grown from five college mentors going to Pescadero one day a week, to sixteen mentors going to Pescadero three days a week.

- The Social Sciences Media Lab has continued its community service by offering photography courses to Delta High School students. Five social sciences students received the Social Sciences Media Recognition Awards.

5. Ensuring a Smooth Transition for Community College Students:

UC Santa Cruz has begun a highly innovative community college outreach program called its "dual admissions" program. Students who apply to UC Santa Cruz, and are denied admission because of academic deficiencies, are given dual admission to both a partnering (one of thirteen) community college and to UC Santa Cruz. If they satisfy the intersegmental transfer requirements, and any deficiencies, they will automatically be admitted to UC Santa Cruz after two years of community college work. To assure the academic success of these students, the UC Santa Cruz Admissions Office and academic advisors work with these students in their community colleges. This program is proving so successful that the entire UC system is considering implementing a systemwide dual admissions program.

In addition, the UC Santa Cruz's Pister Leadership Opportunity Awards program provides a selected student from each of our regional partnering thirteen community colleges with a \$20,000 scholarship to attend UC Santa Cruz for his/her junior and senior year. These funds are provided from an endowment raised by the UCSC Foundation for this program. Not only are the selected students outstanding scholars, but they must also have exhibited exceptional leadership skills and the spirit of helping others.

In addition to campuswide programs such as our reentry student center and our transfer student center, several programs have been initiated in the academic divisions/departments that are designed to ensure a smooth transition of transfer students. A few of these are discussed as examples:

In the Division of the Arts, more careful study of how its programs interface with community college programs is contributing to the smoother transition of community college students. Art History now regularly offers a writing-intensive junior seminar course specifically designed for transfer students to help bridge the challenges of transfer students.

The Division of Natural Sciences initiated the *ACCESS* Program, which is a partnership between UC Santa Cruz and four area community colleges. The program is designed to increase transfer rates of underrepresented students and offers services to all community college students. Program activities are focused on students who are interested in pursuing a bachelor's degree and are interested in biomedical research careers. *ACCESS* offers study sessions for science courses, seminars and workshops, lab tours at UCSC, and a summer internship at UCSC.

CAMP/MESA is another ongoing program in the Division of Natural Sciences. The goal of the program is to assist community college students to successfully transfer to four-year institutions. This program is a collaborative effort between the UCSC *CAMP* Program, the Cabrillo College *MESA* program, and

various other community colleges throughout the state. This year the program accepted students from Sacramento City Community College, American River Community College, College of the Sequoias, East Los Angeles Community College, Cosumnes Community College and Solano Community College. The *CAMP/MESA* program brings students to the UCSC campus for two weeks in the summer and emphasizes writing and research skills, study skills, and computer skills as they relate to majors in science, engineering, and mathematics. An emphasis is placed on research. The students are trained in research techniques and complete a focused research project under the direction of graduate student mentors. Lastly, in Natural Sciences, the *ACE Program* serves as a divisional unit that provides course support, tutoring service, and informal advising to assist transfer students in their transition to UCSC.

The Stevenson College core course offers an optional section for transfer students one quarter every year. Transfer students are not required to take Stevenson Core but, if they do, they will have the opportunity to take part in a fundamental aspect of the life of the college. Stevenson has also continued to offer an off-time section, one that takes place outside prime teaching time (10:00 a.m. to 4:00 p.m.) every quarter. The college staff and administration hopes that these two initiatives will make its core course more accessible to working and non-traditional students.

6. Using Instructional Technology:

In 1999-00, UCSC adopted a learning management system, WebCT. Robust learning management system software products are based on the emerging Instructional Management System (IMS) standard that includes specifications for how metadata is stored and exchanged. WebCT is an IMS-compliant product. UCSC faculty use WebCT to deliver web-based course materials to supplement their classroom instruction. Several other UC campuses, including Berkeley and UCLA, use WebCT. According to the vendor, WebCT has the potential for integrating with student information systems in 2001-02.

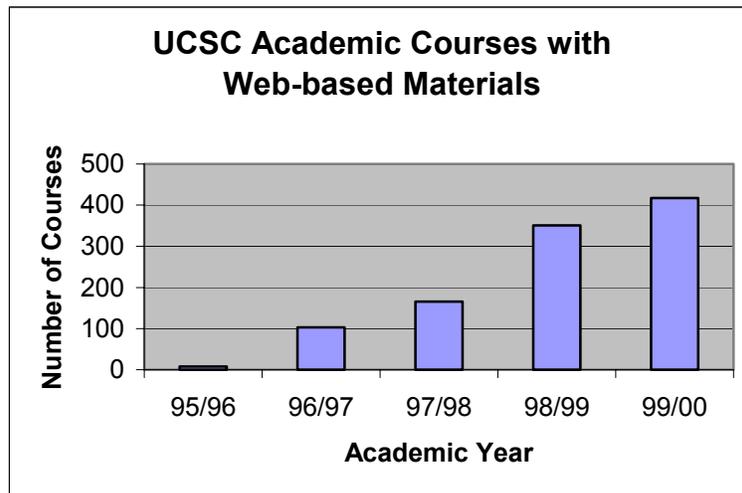
Student web developers assist faculty in developing course materials on the web. WebCT is a tool that facilitates the creation of sophisticated web-based courses by non-technical users. It can be used to create entire online courses, or to simply publish materials that supplement existing courses. Undergraduate student web developers are hired by the central computing Faculty Instructional Technology Center, and are available to provide four hours of free technical assistance to each faculty each quarter. If faculty have projects requiring more than four hours per quarter, they can apply for grants to pay for the additional assistance. Faculty and undergraduates work closely together; faculty are the content experts, and students provide the technical skills to develop the course materials on the web.

WebCT courses are password protected so that copyrighted material can be presented legally under the "fair use" restrictions. Faculty using WebCT can incorporate a wide variety of tools in their course site such as a course calendar, conferencing system, electronic mail, group projects with student-created web pages, auto-marked quizzes, and grade maintenance and distribution.

Course web sites supplement class instruction. Here at UCSC, we focus on web-based course materials to *supplement* classroom instruction, not to replace it. Outside of class time, students can use WebCT to view course materials, participate in web-based class discussions, collaborate on student group projects, and take quizzes. Faculty can use WebCT to see what materials students have viewed before they arrive

in class. If faculty administer pre-class quizzes on WebCT, they can see what concepts students understand before class, and tailor their lectures accordingly.

Since 1995, UCSC faculty have posted course sites on the web. There are “home-grown course” sites (some with simple syllabi only), electronic reserves (“E-Res”) for posting reading materials, and course sites developed in the framework of a standardized instructional management system like WebCT. In 99-00, there were 417 academic courses with web sites at UCSC (see chart below).



By encouraging faculty to use an IMS-standard product like WebCT, UCSC can be flexible and focus limited resources on creatively supporting faculty within this standardized environment.

In the Division of the Arts, all departments continue to expand their use of instructional technology, both through design and as participants in the interdisciplinary Digital Arts/New Media proposal. Photography, electronic art, intermedia, film and video, electronic composition and music, sound, drafting, multimedia authoring, and classes that look at the interface of media and theater, to name a few; all rely on current IT facilities for successful instruction. Students regularly create web pages or CDs as class projects, allowing them to understand the new media and its applications. Art History provides multi-dimensional, interactive web sites for all of its large and medium sized courses.

In the Division of Humanities, the computing staff developed and installed the Faculty Multimedia Development Lab to assist faculty in the design of web sites and CD ROM materials. The lab includes: G4 tower with digital video capability for video development; G4 tower with digital audio capability for language instruction; G4 tower for use on the development of web materials; associated peripherals include printer, mini DV video deck, mixer, mics, etc. A few examples of the web sites that have been created:

- Patrick McKercher's “Virtual College Eight,” which began as an outgrowth of Virtual UCSC. It was designed primarily as an outreach effort to the public schools; for example, in mentoring high school students and tutoring those taking online AP courses. It is also being used to support the College

Eight core course, and could easily be expanded to support the “Writing Across the Curriculum” efforts.

- Spanish Lecturer Maria Morris has four courses on the web now.
- Spanish Lecturer Paco Ramírez has created a web page for his Spanish 156a course: *Hispanic Culture through Film*. Besides links to several sources of Hispanic film titles and descriptions of the films, he has questionnaires, critical commentary, and partial scripts for students to study. Most interesting are film clips with accompanying questions, so that students can learn about film theory and language. He has the same clips on a CD for use in class, as well.

In the Language Program, *Beyond the Classroom Walls: Individualized Second Language Learning*, is a current project lead by SOE Lecturer M. Victoria Gonzalez-Pagani. It is an advanced topic-oriented, computer-assisted program in Spanish-language grammar and syntax instruction. During 1999-00, Lecturer Pagani gave demonstrations of this program to Cabrillo College, Merced High School, and UC Merced.

1999-00 also marked the start of a divisionally supported training seminar involving most of the Language lecturers. The seminar was designed to give faculty a broad knowledge of the application of instructional technology to language course materials. It will prepare them to produce their own software material for classroom application, and will enable them to then mentor other language faculty members in these tasks. Also for the first time, in 1999-00, language placement exams in Spanish were offered on-line so that they could be taken at the students’ convenience. This year, the Language Program acquired its own computer server to support these and other computer enhancements to instruction.

In the Division of Social Sciences, the Anthropology Department has a multimedia lab in which faculty produce videos and tapes. Anthropology courses regularly incorporate film, video, music, and slides as instructional materials. In Community Studies, the department provides computing space and a database for students to research their six-month field placements. Politics offered a new course, “Politics of the Internet,” using the technology to teach the course.

The Social Sciences Media Lab undergraduate course support increased from 267 in 1998–99 to 297 in 1999–2000. Students from all departments in Social Sciences use the Media Lab in one form or another (audio, video, editing, darkroom work, course support, etc.). Thirty-two students utilized the Media Lab for student projects (class projects, thesis projects, and independent studies).

Crown College received an Instructional Improvement Grant from the Committee on Teaching to develop an interactive instructional web site for the Crown Core Course. (<http://crown-server.ucsc.edu/>) This site uses a software interface that allows each seminar instructor to design his/her own section pages, post assignments, create on-line discussions, and electronically “publish” student writing, among other features. This web site has allowed the core instructional staff to substantially increase their contact with students outside the classroom, and to keep students engaged in the course material between and beyond class meetings. It has also augmented the “community” orientation of the course.

B. Efforts to Facilitate four-year degree completion, 1999-2000

1. Advising Efforts:

UC Santa Cruz strengthened its campuswide advising efforts during 1999-00 by establishing a new position of Coordinator of Academic Advising (CAA). Under the direction of the Vice Provost/Dean of Undergraduate Education, the CAA provides strategic direction and integrates academic advising functions delivered by colleges, departments and Student Affairs units. In January 2001, a preliminary review of all units engaged in delivering academic advising at UCSC will initiate a campuswide effort to integrate and enhance these services. The CAA will identify and plan professional development opportunities for our advising staff and will work with our faculty to engage them more explicitly in academic advising.

UC Santa Cruz implemented its first annual "Advising Day" on February 24, 2000. This daylong program involved academic advising activities in colleges, academic divisions and major departments, as well as other campus units devoted to providing academic support services. The day's program was designed to assist students in the process of gathering information relevant and pertinent to their specific course of studies and academic development. No formal classes or lectures were held on Advising Day, in order to enable more students to participate.

UC Santa Cruz organized and hosted the UC systemwide Advising Conference -- *Riding the Wave into the 21st Century* -- held in Monterey, California, on May 18-19, 2000. Faculty, professional advising staff, and others representing a cross-section of the UC system attended this event. Among the topics addressed at the event were presentations devoted to "Tidal Wave II" and the demographic composition and characteristics of incoming UC students, statistical studies on freshman attrition rates, and informal opportunities to develop ties and networks among advising professionals across the UC system.

UCSC also holds regular summer and winter orientations, two campuswide events held in July and December, respectively, to provide frosh and transfer students with an opportunity to become acquainted with the university and campus resources and services. Colleges and academic departments schedule special advising sessions, workshops and presentations that precede enrollment, to inform and assist students with academic requirements and choices.

In the Division of the Arts, departments regularly review, and tighten if necessary, their curriculum to insure the smooth movement of students through the majors. Considerable progress is evident in the increased number of students who finish their programs in four years. Additionally, departments provide extensive information, advising, and handouts for transfer students to aid them in their progress toward degree completion.

Porter College consistently does outreach to its students and is highly successful in getting them to visit advisors early and often. Orientations are run at the beginning of each quarter. Advisors held hours outside the college dining hall during prime advising periods, such as prior to enrollment. Special training for transfer students as well as freshmen was provided.

In the Division of Humanities, the Linguistics staff is proactive in identifying and reaching out to at-risk students. In the Literature Department, faculty advising is available daily to students. In addition, a

weekly electronic bulletin is sent to all majors with pertinent programmatic, departmental, and campus information and events relevant to the literature undergraduate program. In Women's Studies, a significant number of students are double majors, who often need between one and three additional quarters. The department manager, who was a Women's Studies major, does initial advising. She has extensive knowledge not only of the field, but also of the specific research interests of the faculty, and is able to direct students to appropriate faculty advisors.

The Jack Baskin School of Engineering did a complete review of the student advising office services and procedures were changed to improve both service and efficiency.

At Crown College, special efforts to advise and assist at-risk students included the course, *Crown 10: How to be a Successful Student*, a two-unit Academic Success course taught by an instructor with advanced degree in counseling psychology. This class was designed to help students in academic difficulty by providing them with skills and strategies that foster responsibility, as well as empowering them as students.

In addition, the *Crown-Merrill Science Learning Community* is a joint project between the colleges and the Division of Natural Sciences to target first-year students with a designated interest in the sciences, but with poor high school preparation in math and science. Students in this program live together in the residence halls and attend a special tutoring session with an *ACE* tutor in Chem 1A. They are also given priority for individual tutoring in math. The academic preceptor tracks students' progress.

Stevenson College has actively engaged in outreach efforts, especially those for underrepresented populations; these outreach efforts have been organized by the Office of Admissions. Stevenson hosted several "Over-Night" events, in which high school students were matched with Stevenson students and resident assistants in a sleepover at the college. In addition, the college has made a special effort to encourage Stevenson students to participate in the "Taking UCSC Home" program. The "Taking UCSC Home" program is run by the UCSC Admissions Office, which trains current students to talk about UCSC when they go back to their home high school, to encourage those students to go on to college. The rationale behind this is that high school students are more likely to listen to a peer, someone they know, more than to a counselor.

2. Administrative Efforts:

The UCSC Academic Senate Committee on Educational Policy has examined issues of general education and majors' course loads and has made specific recommendations to departments, which will ensure that our students are able to meet their specific graduation requirements within four years. More specific departmental program review procedures were established by the Office of the Campus Provost and Executive Vice Chancellor to provide for more regular and thorough curricular reviews by departments and divisions. Several efforts at the divisional level have been implemented as well. A few of these are presented below as examples:

In the Division of Humanities, generally, the Scholar's Week pilot program, held this fall, was designed to be a tool for recruiting and retaining high-achieving applicants. Thirty-five of the forty-four incoming freshman Regents Scholars participated, and faculty members from each division offered "mini-courses" during the week.

Linguistics' staff makes extraordinary efforts to communicate with students by developing databases and maintaining email lists. In Literature, Summer Session offerings have been added, which have increased Literature's course enrollments.

In the Jack Baskin School of Engineering, the Computer Engineering department offered for the first time a required class over the summer, *CMPE 12C/12L, Computer Organization*, an important class required for graduation of all School of Engineering students and often needed by transfer students.

In response to student requests and to maintain appropriate class sizes, the School of Engineering also added more offerings of certain courses:

- (a) Another offering of *CMPS 12B, Data Structures*, was added for spring quarter in order to accommodate all of the students who wanted to enroll, and also to keep the class size reasonably small (under 120).
- (b) Four Computer Science upper-division courses usually taught once a year were offered twice to help with students' scheduling and to keep the class size lower (*CMPS 102, Analysis of Algorithms; CMPS 130, Computational Models; and CMPS 180, Database Systems*). Course *CMPS 115, Software Methodology*, is being offered three times.
- (c) Computer Engineering added another offering of *CMPE 123, Advanced Microprocessor System Design*, in fall in response to student requests.

The Coordinator of Academic Advising is currently developing a web portal that will serve as a clearinghouse for the coordination of advising by delivering consistent information to campus constituencies (students, faculty, professional staff) in a timely and updated fashion. This use of technology will result in better and clearly designated entry points for students. Another enhancement that will indirectly impact time-to-degree will be the use of software that facilitates career exploration, thus encouraging students to commit to earlier declarations of majors across our campus.

In addition, UCSC will be deploying a new Academic Information System (AIS) that incorporates automated degree checks or degree audit modules. AIS will come up incrementally and will eventually provide students and advisors with a web-based, on-demand, real-time analysis of students' progress toward satisfying degree requirements.

C. MEETING CALIFORNIA'S WORKFORCE NEEDS

1. Undergraduate enrollments in Engineering and Computer Sciences:

During the 1999-2000 academic year, the Baskin School of Engineering admitted its first cadre of undergraduate students² to its new Information Systems Management (ISM) program, a joint major with Computer Science and Business Management Economics. The response to this program has been excellent and the program now has nearly 200 majors. These students will meet a very critical need in

² This major was approved during the fall of 1998 and in 1998-1999 it admitted one major. The program was not advertised and included in the undergraduate admissions application until the 1999-2000 admissions cycle.

the employment market since they have both a background in IT as well as in business management economics.

With the hiring of several new faculty, the relatively new undergraduate major in electrical engineering now has a complete curriculum and the program will graduate its first class in June. One interesting project within this program combines the efforts of UCSC undergraduate students and faculty with students of the University of Michigan to develop satellite instrumentation. The project is being funded by NASA.

The School of Engineering established the Huffman Prize to recognize outstanding SOE graduating seniors. This prize is awarded annually to a student whose academic career exhibits extraordinary creativity, depth of inquiry, and overall excellence.

The Baskin School of Engineering also was very active in developing outreach programs to attract community college students to its programs. They have proposed a program to use distance education to reach community colleges to encourage students to enter engineering and computer sciences and to be better prepared for transfer to UC or CSU. The program is seeking funding for implementation of a pilot and they have participation commitment from DeAnza and Foothill community colleges and San Jose State University. This program would enable community college students to take courses that would be assured of equivalence to UC/CSU requirements and courses that many community colleges are unable to offer. This program will also offer an introduction to high-tech engineering to inspire community college students to be engineers, as well as an introductory computer architecture course and laboratory (via a "kit" and web tools) that is equivalent to UCSC's CE 12C course.

Lastly, the Baskin School of Engineering has been highly successful at partnering with companies in the Silicon Valley area to provide summer and academic internships (paid). This provides students with real work experience before they graduate and often results in their placement in the same company in which they interned.

2. The Teaching Profession:

UC Santa Cruz initiated a number of new programs during 1999-2000 designed to encourage undergraduate students to enter the field of education. A minor in education was expanded to include students majoring in areas of natural sciences and mathematics and there was a synergistic reorganization of programs in these majors to complement the education minor and to ensure subject matter preparation for participating students. After only three years, more than 200 students are now minoring in education and most of these are planning to enter our masters of education program³ or those of other universities, particularly Cal State. In addition to this highly successful minor program, the Education Department initiated its multiple subject waiver program for undergraduate students interested in entering K-6 education.

³ In AY1999/2000, the Education Department launched its highly successful 15-month Master of Arts in Teaching/credential program that begins in the summer session, extends through the following year (which students are also teaching) and concludes the following summer. This program proved to be highly attractive to our own graduates and nearly three-fourths of the nearly 100 students in this program were UCSC graduates.

The UCSC Education Department is home to one of the systemwide UC Links programs, devoted to supporting education in the schools by providing computer based after-school activities on campus for underprivileged children from the local "Barrios Unidos" program. Undergraduates, under the leadership and instruction of Professor Cindy Pease-Alvarez, provide tutorship to these elementary school-aged children in the areas of math and literacy.

UC Links benefits the surrounding community because parents have the security of knowing that their children are learning and playing in a safe environment during the hours between school and home. It benefits UCSC students by offering them field training that integrates theory and practice in the areas of cognitive development, language, culture, and learning. Most important of all, UC Links benefits children by teaching them not only the basics of reading and mathematics but also computer and cognitive skills. Professor Cindy Pease-Alvarez utilizes the UC Links program as a research laboratory to expand the understanding of what works and what doesn't work in helping children learn.

The Education Department has also been enriched in its outreach efforts by current governmental focus on the importance of building a well-qualified teacher force in California. Merit-based state funding opportunities and loan deferment programs for prospective teachers willing to teach in low-income and low-performing public schools have attracted highly motivated undergraduates to teacher education programs. UCSC has widely and aggressively recruited its students to apply for opportunities like the APLE (Assumption Program of Loans for Educators), the Cal Grant for Teachers, the Gates Millennium Scholarship, the California Teaching Fellowship, and the California Teacher Scholars programs.

Programs such as those coordinated by our Educational Partnership Center are also playing an important role in directing the interest of our undergraduate students into education. Many of our students serve either as interns or employees of this center and, as a consequence, become immersed in projects that are conjoining UC Santa Cruz with partnering K-12 schools of our surrounding communities and helping to provide educational access to all Californians. The examples cited below are representative, not comprehensive, and are presented to show the scope of effort by UC Santa Cruz undergraduate students. These programs involve the contributions of our undergraduate students who serve as recruiters, computer resource personnel, outreach volunteers in schools, volunteers who run programs that interface K-12 students and their teachers to the university.

One particularly notable program has been the "Kids Around the University" program⁴. Out of this highly innovative and successful program grew our "Kids On Campus" program, which this year alone has brought nearly one thousand fourth and fifth graders from five surrounding counties to participate in programs on campus. Over thirty faculty and staff members and nearly 100 undergraduate students

⁴ "[Kids Around the University](#)" was conceived of and developed by a class of fourth graders in Aromas Elementary School, one of our regional partnering schools. Several years ago, this class decided to find out what a university was all about. They soon discovered that not a single book that described a university had been written for children. These fourth graders, with guidance from their teacher, set out to write the book they had been seeking. They chose their neighboring university – UC Santa Cruz. They interviewed faculty, the fire chief, the police chief, the chancellor, students and others. They wrote their stories in their own words. When the campus saw their book they offered to publish it. "*Kids Around the University*" is available in both English and Spanish. It is now available through a number of book dealers, and an on-line version is available at <http://www.collegenet.com/katu/>. The "Kids around the University" students received a guarantee of admission to UC Santa Cruz provided they meet eligibility requirements. These students are presently in middle school and well on their way to joining our university community in another few years.

participated as hosts. This experience has led many of these undergraduates to decide to pursue careers in education.

Another innovative program that is having a profound effect in recruiting our undergraduates into teaching has been our “Oakes Serves” program. Students in this program work with economically disadvantaged students from the Seaside School District as tutors in primarily sciences and mathematics. A similar program that is coordinated through Merrill College places bilingual students as mentors and tutors in primarily Hispanic schools in our surrounding rural communities.

The Division of the Arts’ *ArtsBridge* program⁵ has been successful in recruiting students into a career in teaching; a number of these students who participated in the program during 1999-00 are currently working on their teaching credentials or beginning their teaching careers.

In the Division of Social Sciences, the Education Department offers undergraduate courses that explore the theories of learning and teaching, while also providing multiple opportunities to participate in culturally and linguistically diverse learning environments with school-aged children. Topical educational issues are examined within the minor in Education program as well as in courses that integrate current research with practice in subject matter content areas.

A Stevenson College initiative, the *Junior Fellow program*, promotes the "teaching profession," and is offered during winter and spring quarters. Junior Fellows are undergraduates, usually seniors, who teach a section of the core course in teams of two. They work under the supervision of the course leadership and take part in all instructor meetings and other aspects of the course. The college considers this an excellent way to train students how to teach, and finds that the Junior Fellows bring valuable experience and enthusiasm to Stevenson Core.

3. Workforce Internships:

The Division of Social Sciences is “home” to the UCDC program on our campus. Twenty students go to Washington, DC, for study and internship during the fall and winter quarters each year. Next year the program will grow to three quarters. Each undergraduate maintains a full academic load, including an internship in the public or private sector.

Field study programs continue to be very popular. In 1999–2000, 1,429 students participated in field studies. Departments offering field studies are Community Studies, Economics, Education, Environmental Studies, Latin American and Latino Studies, and Psychology. Our undergraduates are placed in non-profit, for-profit, government, and educational agencies. The majority of students are in agencies in Santa Cruz County, but many are also in various counties throughout California and across the U.S. Last year, eighty-seven UCSC field Study interns were in foreign countries. The field studies internship programs offer training in pre-professional skills and help students decide on career choices.

⁵ The ArtsBridge program sends undergraduates to teach arts in local K-12 schools to work with students and teachers teaching art, music, theatre, film and dance. Orientation and regular meetings of undergraduate student participants of the program are held and students are supported to work for eight weeks in a K-12 classroom. Faculty mentors do site visits with their mentee and coach them in their teaching skills. Over twenty-five such site visits were made during 1999-2000, which demonstrates the commitment of the UCSC Arts faculty to this program.

In the School of Engineering, Computer Engineering and Computer Science students do not seem to want internships. Students are in demand by employers over a year before they graduate for part-time jobs that usually pay better than traditional internships and serve much the same function.

D. LOOKING TO THE FUTURE, 2000-01 AND BEYOND

1. Plans to Strengthen the Quality of Undergraduate Education:

AY2000-2001 will herald the opening of our first undergraduate college in twenty-six years. This college, known currently as the "Ninth College," is part of Social Sciences and its specific focus is in the area of international/global studies. This year it opened new apartment residences to nearly 300 upper-division students, and this new college serves as home to many of our EAP reciprocity students from around the world.

The campus Office of International Education, in anticipation of "Tidal Wave Two," undertook a re-assessment of its organizational structure and its ability to assist the campus as it manages enrollment growth. Under the guidance of a new faculty director, the office is making a number of internal changes designed to increase student participation in the systemwide Education Abroad Program (EAP), as well as to provide better advising services for international students attending UCSC. Currently, UCSC sends almost 5% of its students abroad each year (approximately 280 per year) through the systemwide EAP program. Recognizing that the greatest campus obstacles to student participation in EAP are related to academic credit for the major and/or general education requirements and funding during the term abroad, the director of the office has begun to work with campus departments, divisions, the Vice Provost and Dean of Undergraduate Education, and relevant senate committees to reduce the academic disincentives that inhibit student involvement in Education Abroad Programs. In addition, the office has initiated a faculty liaison group within each division. These groups will provide an important faculty dimension to the office's advising efforts, as they will serve to identify EAP courses that will satisfy the majors' requirements of their students.

This academic year, the UC Santa Cruz faculty is also examining the role that our current undergraduate colleges play in the academic lives of our students. A taskforce met over the summer and has issued a report⁶ with nineteen recommendations. One of the most major of these recommendations is to develop more synergism between the academic programs offered by divisions/departments with those of the colleges. One idea that is being explored is that of giving the colleges more authority in determining the general education requirements of their students, such as is the case at UC San Diego.

Another major initiative for 2000-2001 will be to determine exactly what our undergraduate (as well as our graduate) programs will be at the new Silicon Valley Regional Center. The faculty and administration is currently working with its business and higher education partners of this region to determine: (1) what programs are most needed to meet the needs of the workforce; and (2) how will programs that we establish there complement those of our higher educational partners in the region.

⁶ www.ucsc.edu/planbudg/vpdue/colleges/CollegeRpt.htm

The Division of Natural Sciences is currently involved in the development of two initiatives that address the training of undergraduates to meet the workforce needs of the future.

The Biology and Chemistry departments have collaborated with the School of Engineering in the development of the Bioinformatics undergraduate degree program. This Bachelor of Science program will train students in the areas of computational analysis, micromechanical robotics, microfluidics, imaging, and new structural and functional genomics methods that will be employed in the future as in-depth analysis of the human genome proceeds.

An initiative has been proposed by the Biology Department to establish a B.S. degree program and a B.A. degree program in Health Sciences. Projections by the U.S. Department of Labor indicate significant growth in careers in medicine, physical therapy, nursing and other professional health science areas. In fact, Federal Bureau of Labor statistics approximate that 14% of all wage and salary jobs created between 1998 and 2008 will be in health services. These majors are designed to train students who are interested in pursuing careers in medicine, biomedical research, or many of the allied health fields. We will expand discussions of this initiative to include other divisions and departments as we develop an interdisciplinary program in health sciences and policy.