

Research and Internship Opportunities at UCSC

Report of the UCSC WASC Research and Internship Committee

Educational Objectives of Undergraduate Research and Internships

There is now an extensive literature¹ demonstrating the positive impact of academic internships and research opportunities² for undergraduates. Students who participate in these activities have higher retention and graduation rates than those who do not. Internships and research opportunities help students make informed choices about graduate school, professional school, and careers as well as better preparing them to succeed in all of these areas of endeavor. Additionally, studies indicate that undergraduate research and internships increase self-confidence and self-esteem for students who participate in such activities and these students have a higher level of satisfaction with their undergraduate experience as a whole.

In addition, undergraduate students who participate in academic internships and research bring “real world” experience into the classroom, which improves the level of their participation in seminar discussions, their commitment to the learning environment and leads to improved grades. More subjective reports from faculty in several studies indicate that students who have undertaken focused research or internships bring their experience into classroom in a way that makes discussions more interesting to the other students and the faculty members themselves.

Availability of Internship and Research Opportunities at UCSC

Since its founding, the University of California, Santa Cruz has been a leader in the area of undergraduate research and internships. The relative scarcity of graduate programs

¹ Cf *Combining Service and Learning: A Resource Book for Community and Public Service*, Volume III, Edited by Janet Luce with Jennifer Anderson, Jane Permaul, Rob Shumer, Timothy Stanton, and Sally Migliore, Alexandria, VA: the National Society for Experiential Education

² In some sense, all or almost all of the academic work done by college students is “research” or preparation for “research.” Writing assignments, senior theses and other capstone requirements, and laboratory work are all forms of “undergraduate research.” However, in this section we are focusing on more limited kinds of focused research opportunities for undergraduates: 1) individual tutorial courses where students research a topic under the direction of a faculty member, 2) research programs whether organized through summer institutes or other institutional arrangements, 3) special courses designed to provide research opportunities, and 4) work that students do on the sponsored research projects of faculty members.

in the first two decades following the establishment of the campus, combined with an extraordinary focus on undergraduate education and a faculty committed to that orientation, led to an exceptional number of research opportunities for undergraduates. In many cases these research opportunities were not the “practice” research opportunities afforded the typical undergraduate, but research on the cutting edge in several fields of the type more typically offered to graduate students in most institutions of higher learning.

Although UCSC has now significantly expanded its graduate programs, the institution’s commitment to undergraduate research opportunities remains high relative to most institutions of higher learning. A significant number of undergraduates at UCSC engage in academic internships during their stay here. Last year, UCSC students provided more than a million hours of service to community schools, governmental agencies, and community non-profits. As graduate programs at UCSC continue to expand, it will be important to find a way to retain the earlier and present commitment to undergraduate research opportunities. This need has been recognized by the campus, which has resolved to be a “research university with an uncommon commitment to undergraduate education” – including undergraduate research.

In the area of internships, an important structural decision was made in the first decade of the campus’ existence. Unlike most colleges and universities, UCSC internships were primarily organized under the supervision of individual academic departments rather than through a career or internship center under the supervision of Student Services. While this structure has created some additional difficulty in publicizing internship opportunities to students and to potential internship opportunities in the community, it has also resulted in a significantly increased commitment of faculty in sponsoring internships for undergraduates and providing them with the kind of close academic supervision that has been demonstrated to increase the value of internships for students.

Currently at UCSC, every academic department offers students course credit for work on individual academic internships and individual research opportunities (also referred to as tutorials). Several programs in the Social Science Division provide organized field programs designed to help students develop and carry out academic internships under the supervision of faculty sponsors. The Community Studies Department requires all of its undergraduate majors to undertake a full-time, six-month internship with a community organization as part of the core curriculum in the program. There is also a new, organized field program in the Biology Department and one is being developed in the Engineering School. In addition, the Career Center offers a number of academic internship and research programs and four of the colleges at UCSC offer service-learning opportunities and credit for their students. The emphasis in all of these college-based internships is on increasing students’ sense of civic responsibility. The appendices in this exhibit provide a comprehensive inventory of current undergraduate internship and research opportunities at UCSC.

In an attempt to address the negative impact of integrating internships into individual academic departments in a decentralized fashion, the Career Center has recently been developing a campus-wide database of internship opportunities. This electronic database should help provide undergraduates at UCSC the best aspects of decentralized and integrated academic internships along with a centralized access point for information about opportunities.

Assessment of Research and Internship Opportunities

In order to develop the best assessment of the impact of research and internship opportunities for undergraduates, the University would develop a longitudinal life study of all or a significant portion of its graduates. Such a study would track life outcomes and measure and correlate the impact of various components of their undergraduate experience on life outcomes. Given current and even likely future resource availability, such a study is not feasible. In the field of experiential education, analysis of outcomes based on self-reporting of participants, including students, faculty, and sponsoring agencies, is essentially the state-of-the-art.

Currently, the campus collects a voluntary survey from graduating seniors. In 2003, the questionnaire had an impressive 34% response rate, however, there is some indication that self-selection of those completing the survey has resulted in data from which it is difficult to generalize to the graduating class as a whole. Although self-assessment on the part of graduating seniors is not as meaningful as a longitudinal life study, such an assessment can provide significant information useful to the assessment of the research and internship opportunities which UCSC provides its undergraduates.

Therefore, we would like to recommend that the survey become a mandatory requirement for all graduating seniors. Administered in a form that can be electronically scanned, with multiple-choice questions, the survey should not be an onerous requirement for the students, and data extraction and analysis would be greatly aided. A mandatory survey would provide significantly better data for assessment of the impact of various elements of the undergraduate experience including the impact of internships and research opportunities provided to undergraduates.

The literature on experiential education also indicates that the academic value of internships and undergraduate research increases when students have:

- Structured preparation before they undertake the work
- Structured opportunities for reflection on their experience
- Close faculty supervision of their work

In planning for future assessment of the research and internship opportunities for undergraduates at UCSC, it is important to capture information about the degree to which the opportunities for preparation, reflection, and faculty supervision exist with respect to each program. Consequently, we also would like to add a few questions to

the survey about research and internship experiences. These questions would gather data about the extent to which such experiences included preparation, opportunities for structured reflection, and faculty supervision.

It will be most important that the campus develop a systematic way to share the analysis of the senior graduation survey with the various departments and other campus units so they can use the assessment to improve their practices with respect to undergraduate internship and research opportunities. We believe that it would not be difficult for the campus to establish an *ad hoc* committee of field coordinators who would be interested as part of their general duties to undertake an annual analysis of the data provided by the senior exit survey. Such a committee could be charged with reporting back to each department with its findings related to their undergraduate research and internship opportunities.

In addition, the Deans of each of the Divisions and Schools should charge the committees they appoint to undertake external reviews of campus academic programs to pay particular attention to the question of undergraduate research and internship opportunities offered by the program under review. In particular, external reviewers should help academic units under review to focus on how they can provide increased preparation, opportunities for reflection, and close faculty supervision of the internship and research opportunities which they provide.

In terms of future assessment of undergraduate research and internships at UCSC, we have two other suggestions that would need to be implemented by the Academic Senate Committee on Educational Policy (CEP) and the Registrar's Office. The first involves changing the course numbers that are assigned to individual internship and student research courses so that opportunities offered in this area can be more easily tracked. Different departments and colleges now use a variety of different numbers for these types of courses and tracking the current opportunities required surveying department managers and college academic preceptors in order to clarify which courses were actually being used to award academic credit for different kinds of activities. Some work will need to be done to establish a clear and appropriate numbering system, but we believe that this can be done without significantly impacting the relatively autonomous decisions currently made by departments and other units about their course offerings.

As mentioned above, the Career Center offers a number of academically related internships and research opportunities. For some of these internships and research positions, students arrange the receipt of academic credit through one of the academic departments on campus. In other cases, however, the students do not necessarily seek academic credit, but there should be some way for the students to include information about these experiences on their academic transcripts. Some form of transcript notation should be developed and approved by the Committee on Educational Policy. It would be important to distinguish internship and research activities which have a clear academic component to them from other forms of volunteer service, which, while useful to society

and the student's development, may not be appropriate for inclusion in the academic transcript.

Finally, we want to close by addressing a growing concern with respect to the future of internship and undergraduate research opportunities at UCSC. We discussed above the way in which UCSC's early focus on undergraduate education created unique opportunities for undergraduate research and academic internships. Although the commitment has largely survived the growth of new graduate programs and persists in the face of a growing focus on faculty research in the tenure and promotion process, there are increasing pressures on many, if not all, faculty to turn their attention away from providing the time consuming, individualized research opportunities for undergraduates. This is less a question of intention on the part of individuals than the structural result of growing pressures on faculty time and focus.

We believe that the campus must find a way to specifically reward faculty commitments to supporting undergraduate research and internships. With the growth of graduate programs and measurably higher expectations with respect to the quantity and quality of faculty research, working with individual undergraduates may, unfortunately, come to be seen as a luxury that faculty, and particularly junior faculty, can ill afford. The Academic Senate and the Administration need to begin discussions of some form of course equivalencies or service values for faculty who focus their attention and energy on working with individual or small groups of undergraduates on research projects and internships. This is not an area where outcomes can be imposed on the faculty, but one that will require enlisting their collective support for programs and work which has, heretofore, been a significant part of the UCSC undergraduate experience and which we now believe is potentially at risk if the issue of faculty reinforcement and rewards is not addressed. If, on the other hand, we can find a way to address this issue, we have every expectation that UCSC will continue to provide leadership to the academic world with respect to the provision of opportunities for undergraduate research and internships.

General Internships and Research Opportunities for Undergraduates

Department	Course #	Title	Description	Number Enrolled
Career Center			Database containing approximately 1100 internships (both academic and applied and on campus and off campus).	
Colleges			All ten colleges offer field study and independent study.	
CUIP	Crown 184A-C	Chancellor's Undergraduate Internship Program	On-campus internships where under the guidance of a mentor, interns take a lead role in producing a product or result. Interns attend a leadership seminar taught by the Chancellor and the Dean of Undergraduate Studies.	38
GIIP	Soc. 30A-C, 35, 186	Global Information Internship Program	Training courses, specialized sections, thematic working groups and internships involved with incorporating information technology with social change.	
PTP	Comm. Studies 162A-B	Professions Training Program	Off-campus internships to gain professional-level work experience in a job related to academic or professional goals.	12
GLBT		Gay, Lesbian, Bisexual, and Transgender Resource Center	Internships on a variety of GLBT related projects; some campus based, others community based.	
Rape Prevention Program			Internships in areas of education, theater, research, survey, graphic design and outreach.	
Shakespeare Santa Cruz			Artistic and production internship opportunities offered by resident professional theatre company, Shakespeare Santa Cruz.	
SOAR		Student Organization Advising and Resources	Educational internships where interns gain skills in leadership, networking, program planning, and outreach through working with student organizations.	

General Internships and Research Opportunities for Undergraduates

UCCS	College 8 170A-C	UC Center in Sacramento	Quarter-long program in Sacramento. Students attend courses and complete an internship or conduct research in Sacramento	5 2003-04
UCDC	Social Sciences 194A-B	UCDC - UC in Washington D.C.	Quarter-long program where students attend courses and complete an internship in one of the many Washington D. C. area organizations or agencies.	61

Research and Internship Opportunities for Undergraduates in Science and Engineering

Department	Course #	Title	Description	Number Enrolled
Astronomy and Astrophysics	199	Tutorial		
Biology	99	Tutorial	Individual, directed research.	
	162	Marine Ecology Field Quarter	Total immersion in marine ecology for very motivated students. Students spend first four weeks on campus and then six weeks of directed research off campus (including international sites).	
	165	Field Ecology of Baja, California	Intensive, on-site learning experience in terrestrial field biology with Sea of Cortez as focus.	
	185F/L	Hughes Undergraduate Research Lab	The application of modern research techniques to unanswered questions in human molecular genetics. Designed for self-motivated students.	
	189	Health Sciences Internship	Quarter-long internships in community health care organizations.	
	193/193F	Field Study	Individual programs of study carried out under supervision of faculty and using resources not normally available on campus.	
	195	Senior Thesis Research	Individually supervised independent research.	
	198/198F	Independent Field Study	Individual program of study by means other than the usual supervision in person or most of work is done off campus.	
	199/199F	Tutorial	Reading, discussion, written reports and lab research.	
Chemistry & Biochemistry	99/99F	Tutorial		
	180ABC	Senior Research	Individually supervised course with emphasis on independent research.	
	199/199F	Tutorial		
Earth Sciences	98	Earth Sciences Internship	Supervised learning experience involving practical application of lower-division earth sciences knowledge while working with approved companies, governmental agencies, or research organizations.	
	99	Tutorial		

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	188A-B	Senior Field Internship	Six weeks of summer field study of geologically complex areas in the Eastern Sierra Nevada and the Mono Basin.	
	195	Senior Thesis		
	198/198F	Earth Sciences Internship	Supervised learning experience involving practical application of lower-division earth sciences knowledge while working with approved companies, governmental agencies, or research organizations.	
	199/199F	Tutorial	Introduction to research in laboratory, field, or theoretical subjects.	
Environmental Studies	83	Environmental Studies Internship		
	84	Environmental Studies Internship	2-unit internship	
	93/93F	Field Study	Supervised research or organized projects for lower-division students conducted near campus.	
	99/99F	Tutorial	Directed reading, supervised research, and organized projects relating to environmental problems.	
	164B	Alaska Field Course: Environments, People and Policies	17-day intensive field experience immerses students in Alaska environment/ecosystems in Southcentral and the Interior, in Euro-American and Alaska Native history, and in natural resources politics/policies.	
	181	Arboretum Internship	Supervised learning experience working with faculty and staff, utilizing facilities of the UCSC Arboretum.	
	183	Environmental Studies Internship	Supervised off-campus learning experience related to environmental problem solving.	
	183B	Senior Internship	Field work at an off-campus agency and a comprehensive analytical paper.	
	184	Environmental Studies Internship	Supervised learning experience related to environmental problem solving.	
	193/193F	Field Study	Individual field study.	
	195A	Senior Research	Independent research that results in thesis or project.	
	195B	Senior Thesis Group	Group or individual research that results in senior thesis or project or done in conjunction with an internship.	
	196H	Senior Seminar: Advanced Avian Research	Directed field research with independent or group research project.	
	196R	Advanced Research Topics in Applied Ecology	Faculty facilitated research projects conducted within a central theme to satisfy the senior writing requirement.	

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	198/198F	Independent Field Study	Off-campus field study for which faculty supervision is not in person but by correspondence.	
	199/199F	Tutorial	Advanced directed reading, supervised research and organized projects.	
Environmental Toxicology	195	Senior Thesis	Independent research culminating in senior thesis.	
	198	Independent Study	Individual program of study by means other than the usual supervision in person, or when most of the work is off campus.	
	199	Tutorial		
Mathematics	99	Tutorial		
	195	Senior Thesis	Research on a mathematical topic under the guidance of a faculty sponsor.	
	199	Tutorial		
Physics	99	Tutorial		
	195A/B	Senior Thesis Research	Research on various topics.	
	199	Tutorial		
Other Opportunities		Arboretum	Various internships in horticulture, habitat restoration and science illustration at the UCSC Arboretum.	
	CAMP	California Alliance for Minority Participation	Summer research experience with faculty, post-docs and graduate students in science, mathematics and engineering.	
		Center for Adaptive Optics	Eight week summer research experience for community college students and undergraduates.	
		Center for Agroecology & Sustainable Food Systems	Internships available to undergraduates by request.	
		Center for Biomolecular Science & Engineering	\$1500 grants awarded to six undergraduates to pursue research projects in areas relevant to the human genome.	6 2003-04
		Education Associates Program - NASA	Cooperative space grant education program sponsored by NASA Ames and UCSC Extension, that links students and faculty with projects at NASA Ames Research Center.	

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	IGPP	Institute of Geophysics and Planetary Physics	Research opportunities and undergraduate student research fellowships sponsored by the IGPP-UCSC Center.	
		Institute of Marine Sciences	Research projects with Long Marine Lab. Contact researchers directly.	
	MBRS	Minority Biomedical Research Support	Provides the opportunity to receive an in-depth experience in the academic and experimental aspects of biological research. Lab training during the summer and research projects during the academic year	15
	MARC	Minority Access to Research Careers	Research training to help prepare students compete successfully for entry into graduate programs leading to the Ph.D.	8
	MIRT	Minority Biomedical Research Training Program	International, biomedical research projects for underrepresented minority students and women who aspire to professional research careers in the biomedical sciences.	14
	REU	Research Experience for undergraduates in Organic Chemistry in Bangkok, Thailand	Research opportunities for undergraduates at Chulalonghorn University in Bangkok, Thailand.	8
		Seymour Marine Discover Center	Volunteer internships as Visitor Programs Presentation Intern, Visitor Programs Intern, and School Programs Intern.	
		STEPS Institute	Provides funds for graduate and undergraduate research projects in the Environmental sciences. Priority given to projects that research biodiversity, aquatic resources, and climate along California coastal environments.	0
				9
	SURF	Summer Undergraduate Research Fellowship	Research under close faculty supervision.	

Research and Internship Opportunities for Undergraduates in Science and Engineering

		UC LEADS	Two-year program of scientific research and graduate school preparation guided by individual Faculty Mentors. Intended for students with the potential to succeed in the sciences but have experienced situations or conditions that have adversely impacted their advancement.	21 summer 19 year
		UCSC Campus Natural Reserve	Internship and independent study dealing with the Natural Reserve.	
		UCSC Museum of Natural History Collections	Internships and independent studies to develop natural history and museum skills while working in the collections.	6
		UCSC Plant Growth Facilities	Internships and independent studies or research in the Plant Growth Facility with faculty sponsorship from MCD Biology, EE Biology, or Environmental Studies	

Research and Internship Opportunities for Undergraduates in Science and Engineering

Engineering				
Bioinformatics	193/193F	Field Study	Independent study under a faculty member using resources not normally available on campus.	
	194/194F	Group Tutorial	Independent research arranged between a group of students and a faculty member.	
	195/195F	Senior Thesis Research		
	198/198F	Individual Study or Research		
	199	Tutorial		
Computer Engineering	94/94F	Group Tutorial	Independent research arranged between a group of students and a faculty member.	
	99/99F	Tutorial		
	193/193F	Field Study	Independent study under a faculty member using resources not normally available on campus.	
	194/194F	Group Tutorial	Independent research arranged between a group of students and a faculty member.	
	195/195F	Senior Thesis Research		
	198/198F	Individual Study or Research		
	199/199F	Tutorial		
Computer Science	94/94F	Group Tutorial	Independent research arranged between a group of students and a faculty member.	
	99/99F	Tutorial		
	193/193F	Field Study	Independent study under a faculty member using resources not normally available on campus.	
	194/194F	Group Tutorial	Independent research arranged between a group of students and a faculty member.	
	195/195F	Senior Thesis Research		
	198/198F	Individual Study or Research		
	199/199F	Tutorial		

Research and Internship Opportunities for Undergraduates in Science and Engineering

Electrical Engineering	193/193F	Field Study	Independent study under a faculty member using resources not normally available on campus.	
	195/195F	Senior Thesis Research		
	198	Individual Study or Research		
	198F	Independent Field Study		
	199/199F	Tutorial		
Information Systems Management	193/193F	Field Study	Independent study under a faculty member using resources not normally available on campus.	
	195/195F	Senior Thesis Research		
	198/198F	Individual Study or Research		
	199/199F	Tutorial		

Department	Course #	Title	Description	Number Enrolled
American Studies	93	Field Study		
	99	Tutorial		
	190A-190C	Senior Seminars	Capstone seminars enable American Studies seniors to apply their overall training in interdisciplinary research and analysis to major problems in the field.	
	192	Directed Student Teaching	Teaching of a lower-division seminar under faculty supervision	
	193	Field Study	Individual studies program undertaken off campus	
	198	Independent Field Study	Individual study program off campus for which faculty supervision is not in person (e.g. supervision is by correspondence)	
	not a class	Undergraduate Endowment Fund	Annually sponsors American Studies students to do research and put on events. Funded by Alumni grants in 2002.	
German Studies	99 & 99F	Tutorial		
	194	Group Tutorial		
	199 & 199F	Tutorial		
History	99	Tutorial		
	192	Directed Student Teaching	Teaching of a lower-division seminar under faculty supervision	
	193	Field Study	To allow promising, well qualified undergraduates to pursue directed programs of archival or archeological study in the field under supervision of faculty	
	194C-194Y	Senior Research Seminar	An opportunity for advanced students to focus on specific research problems and acquire experience in	

			research skills and the writing of a substantial research paper	
	199 & 199F	Tutorial		
History of Consciousness	80Q	Science as Culture and Practice	Using tools from the analysis of social history, visual and material culture, narrative, and laboratory and field practice, introduces students to modern science, technology and medicine studies.	
	199	Tutorial		
Italian Studies	94	Group Tutorial		
	99 & 99F	Tutorial		
Linguistics	99	Tutorial		
	198	Independent Field Study	Provides for department-sponsored individual study programs off campus for which faculty supervision is not in person.	
	199 & 199F	Tutorial		
Literature	99 & 99F	Tutorial		
	199F	Tutorial		
	192	Directed Student Teaching	Teaching of a lower-division seminar under faculty supervision	
	197	Independent Field Study	Student's supervision is conducted by a regularly appointed officer of instruction by means other than usual supervision in person (e.g. correspondence).	
	198	Group Tutorial		
Philosophy	99	Tutorial		
	192	Directed Student Teaching	Teaching of lower division course under faculty's	

			supervision	
	199	Tutorial		
Russian	99 & 99F	Tutorial		
	194	Group Tutorial		
	199 & 199F	Tutorial		
Women's Studies	192	Directed Student Teaching	Teaching of a lower division seminar under faculty supervision	
	193 & 193F	Field Study	Individual field study in the vicinity of the campus under the direct supervision of a faculty sponsor	
	196	Feminist Methods of Teaching	Practicum for undergraduates assisting in the teaching of course 1A Introduction to Feminism, to conduct sections and evaluate papers.	
	198 & 198F	Independent Field Study	Provides for individual study program off campus for which faculty supervision is not in person.	
	199 & 199F	Tutorial		
Writing Program	93 & 93F	Field Study	For lower-division students: supervised study within communicating distance of campus. May include internships at magazines, newspapers, publishing houses, or newspapers of corporations, and civic or service organizations.	
	99 & 99F	Tutorial	Individual, directed study for lower division students in expository writing, editing, or journalism.	
	180	Seminar in Editing and Publishing	Newsriting seminar for <i>City on a Hill</i> editors and writers.	
	189	Methods of Teaching Writing	Supervised by a writing instructor, each student attends a weekly seminar on teaching writing and either assists in a class or serves a facilitator of a	

			small writing group in a course a UCSC or a public school.	
	191A-191D	Internships	Individual work in journalism, publishing or broadcasting.	
	192	Directed Student Teaching	Teaching of a lower-division seminar under faculty supervision	
	193 & 193F	Field Study	For upper-division students: supervised study within communicating distance of campus. May include internships at magazines, newspapers, publishing houses, or newspapers of corporations, and civic or service organizations.	
	194	Group Tutorial	A writing, editing, or publishing project undertaken by a small group of students under the direct supervision of a writing instructor.	
	198 & 198F	Independent Field Study	Individual study for which faculty supervision is possible only by correspondence. May include internships at newspapers, magazines, publishing houses, or the newsletters of corporations, and civic or service organizations.	
	199 & 199F	Tutorial	Individual, directed study for upper-division students in expository writing, editing, or journalism.	

Arts Division

Department	Course #	Title	Description	# Er
Film and Digital Media	198/198F	Independent Field Study	Provides for department sponsored, individual study programs off campus for which faculty supervision is not in person.	
	199/199F	Tutorial	Individual study in areas approved by sponsoring instructors	
	Film 42	Student directed seminar	The seminar topic is the student's choice in an area of research in conjunction with a faculty member	
	Film 192	Film 192	Students receive credit for teaching the course	
	Film 199	Independent Study	Students do research on material to develop material for Film 192	
	Film 195	Senior Thesis	Students do a senior thesis which develops material for Film 192	
History of Art and Visual Culture	198/198F	Independent Field Study	Provides for department sponsored, individual study programs off campus for which faculty supervision is not in person.	
	199	Tutorial	Individual study in areas approved by sponsoring instructors	
Music	199/199F	Tutorial	Individual study in areas approved by sponsoring instructors	
	195A & B	Senior Thesis	A small number of students are doing research with a faculty member for their senior thesis which is optional in this department	
Theatre	198/198F	Independent Field Study	Provides for department sponsored, individual study programs off campus for which faculty supervision is not in person.	
	199/199F	Tutorial	Individual study in areas approved by sponsoring instructors	
Visual Arts	193	Field Study	Supervised off-campus study under the immediate and direct guidance of a faculty supervisor.	
	196	Senior Project	Students concentrate on completing work for comprehensive exhibition under the direction of his or her art advisor.	
	198/198F	Independent Field Study	Provides for department sponsored, individual study programs off campus for which faculty supervision is not in person.	
	199	Tutorial	Individual study in areas approved by sponsoring instructors	
Digital and New Media Program			This is a graduate program beginning in the Fall '04. There might be some possibilities for undergraduates to enroll in graduate level courses.	
Art Division		Paid Research opportunities	There are nine undergraduate students who are being paid out of research grants working with faculty members on undergraduate research in their respective fields	

Social Sciences Division

Department	Course #	Title	Description	# Cr
College 8	90(1 unit)	Garden Internship	practical experience in sustainable agriculture	
	93	Field Study	Independent internships with community organizations under faculty supervision	
	99/99F	Tutorial (5 & 2 units)	Individual study in areas approved by sponsoring instructors	
	170B	Sacramento Internship	Students participate in the UC in Sacramento Program	
	193/193F	Field Study (5 & 2 units)	Independent internships with community organizations under faculty supervision	
	198	Field Study	Provides for department sponsored, individual study programs off campus for which faculty supervision is not in person.	
College 9	199/199F	Tutorial (5 & 2 units)	Individual study in areas approved by sponsoring instructors	
	86	College leadership (2 units)	Seminar for students involved in college leadership positions	
	193/193F	Field Study (5 & 2 units)	Individual internships with community organizations under faculty supervision. The College has staff assigned to assist students in finding, developing and carrying out internships.	
College 10	199/199F	Tutorial (5 & 2 units)	Individual study in areas approved by sponsoring instructors	
	86	College leadership (2 units)	Seminar for students involved in college leadership positions	
	193/193F	Field Study (5 & 2 units)	Individual internships with community organizations under faculty supervision. The College has staff assigned to assist students in finding, developing and carrying out internships.	
Community Studies	199/199F	Tutorial (5 & 2 units)	Individual study in areas approved by sponsoring instructors	
	10	Intro to Community Studies	Course includes a part-time field study requirement working with an organization in Santa Cruz County.	
	76	HIV Prevention	Course includes a part-time field study requirement working in the campus HIV program.	
	93/93F/93G	Field Study (5, 2 & 3 units)	Independent internships with community organizations under faculty supervision. Open to all students in at UCSC irrespective of major. The department has academic field coordinators to help students locate, develop and carry out internships.	
	99/99F	Tutorial (5 & 2 units)	Individual study in areas approved by sponsoring instructors	
	102	Preparation for Field Study	Prepares students in the major for full-time, six-month placement. Course includes a part-time field placement in Santa Cruz area.	
	103	Field Study Practicum	Provides credit for more extensive part-time placements associated with CMMU 102	
	189	Methods of Teaching	Provides credit and faculty supervision for students serving as classroom discussion facilitators	
	192	Directed Student Teaching	Provides faculty supervision and credit for teaching student-directed seminars	
	193/193F/193G	Field Study (5, 2 & 3 units)	Independent internships with community organizations under faculty supervision. Open to all students in at UCSC irrespective of major. The department has academic field coordinators to help students locate, develop and carry out internships.	
	198	Field Study (30 units)	Department offers an undergraduate major which requires and prepares students for a full-time, six-month internship anywhere in the world related to social change issues. Students take required courses before and after the internship and produce a senior thesis or project to graduate.	
	199/199F/199G	Tutorial (5, 2 & 3 units)	Individual study in areas approved by sponsoring instructors	

Social Sciences Division

Department	Course #	Title	Description	# Er
Economics	93/93F	Field Study (5 & 2 units)	Independent internships with community organizations under faculty supervision	
	99	Tutorial	Individual study in areas approved by sponsoring instructors	
	193/193F	Field Study	Independent internships with community organizations under faculty supervision. The department provides a staff person (field coordinator) to help Economics majors locate, develop and carry out these internships. Help is available to majors only in the junior year.	
	199/199F	Tutorial (5 & 2 units)	Individual study in areas approved by sponsoring instructors	
Education	80	Introduction to Teaching	Provides credit and faculty supervision for educational practicums in local public school classrooms.	
	99	Tutorial	Individual study in areas approved by sponsoring instructors	
	192	Directed Student Teaching	Provides faculty supervision and credit for teaching student-directed seminars	
	193	Advanced Field Study	Supervised off-campus study under the immediate and direct guidance of a faculty supervisor.	
	194/194F	Group Projects (5 & 2 units)	Students do collective independent projects under faculty supervision.	
	198/198F	Indep. Field study (5 & 2 units)	Independent internships in schools under faculty supervision.	
	199/199F	Tutorial (5 & 2 units)	Individual study in areas approved by sponsoring instructors	
Environmental Studies	93/93F	Field Study (5 & 2 units)	Independent internships with community organizations under faculty supervision. The department provides a staff person (field coordinator) to help any UCSC student doing environmentally related work to locate, develop, and carry out these internships.	
	99/99F	Tutorial (5 & 2 units)	Individual study in areas approved by sponsoring instructors	
	184	Environ. Studies Internship	Offered each year in focused areas of environmental concern for group independent studies under faculty supervision. A seminar is a part of the course work.	
	192	Directed Student Teaching	Provides faculty supervision and credit for teaching student-directed seminars	
	193/193F	Field Study (5 & 2 units)	Independent internships with community organizations under faculty supervision. The department provides a staff person (field coordinator) to help any UCSC student doing environmentally related work to locate, develop, and carry out these internships.	
	195A	Senior Research	Individual research on environmental issues under faculty supervision. Related to the production of a senior thesis in Environmental Studies.	
	199/199F	Tutorial (5 & 2 units)	Individual study in areas approved by sponsoring instructors	
Latin American & Latino Studies	192	Directed Student Teaching	Provides faculty supervision and credit for teaching student-directed seminars	
	193	Local Field Study	Independent internships with community organizations under faculty supervision	
	198	Non-Local Field Study	Independent internships with national and international organizations under faculty supervision. The department designates one faculty member to oversee the process for majors in locating, developing, and carrying out these placements.	
	199/199F	Tutorial (5 & 2 units)	Individual study in areas approved by sponsoring instructors	
Merrill College	85A/85B	Merrill Classrooms Connection	Hands on experience in local classrooms and afterschool programs in local public schools. Combined with a seminar and one-on-one faculty mentoring.	

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Department	Course #	Title	Description	# Cr
	93/93F/93G	Field Study (5, 2, & 3 units)	Independent internships with community organizations under faculty supervision	
	99/99F	Tutorial (5 & 2 units)	Individual study in areas approved by sponsoring instructors	
	192	Directed Student Teaching	Provides faculty supervision and credit for teaching student-directed seminars	
	193/193F/193G	Field Study (5, 2, & 3 units)	Independent internships with community organizations under faculty supervision	
	194	Group Tutorial	A program of independent study arranged between a group of students and a faculty member.	
	198	Independent Field Study	Independent Internships where communication with the faculty member is by correspondence.	
	199	Tutorial	Individual study in areas approved by sponsoring instructors	
Psychology	191	Teaching College Psychology	Provides an opportunity for upper-division Psychology majors to participate in <u>planning and teaching college psychology courses</u> .	
	192	Directed Student Teaching	Provides faculty supervision and credit for teaching student-directed seminars	
	193	Field Study	Independent internships in the community related to field of psychology under faculty supervision. Open to Psychology juniors and seniors. The department provides a staff person to help students in locating, developing, and carrying out these placements.	
	193A	Developmental Field Study	Work in a community based setting while completing self-directed academic work focused in this area of psychology under the guidance of a faculty member. <u>Junior and Senior Psychology majors only.</u>	
	193B	Cognitive Field Study	Work in a community based setting while completing self-directed academic work focused in this area of psychology under the guidance of a faculty member. <u>Junior and Senior Psychology majors only.</u>	
	193C	Social Field Study	Work in a community based setting while completing self-directed academic work focused in this area of psychology under the guidance of a faculty member. <u>Junior and Senior Psychology majors only.</u>	
	193D	Clinical/Personality Field Study	Work in a community based setting while completing self-directed academic work focused in this area of psychology under the guidance of a faculty member. <u>Junior and Senior Psychology majors only.</u>	
	194	Advanced Research/Special Topics	Provides a means for a small group of students to do research on a particular topic <u>in consultation with a faculty member</u>	
	194A	Advanced Develop. Research	Provides students with an intensive experience conducting current research in the field.	
	194B	Advanced Cognitive Research	Provides students with an intensive experience conducting current research in the field.	
	194C	Advanced Social Research	Provides students with an intensive experience conducting current research in the field.	
	198	Independent Field Study	Provides an opportunity for advanced Psychology students to conduct independent field work under the direct supervision of a professional in the field and includes <u>consultation with a faculty supervisor.</u>	
	199	Tutorial	Individual study in areas approved by sponsoring instructors	

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Department	Course #	Title	Description	# Er
UC in DC			UCSC participates in the UC in DC program in which students spend a quarter in Washington, D.C. at the University of California Center there. They take seminars and undertake internships with governmental and non-profit organizations located in the nation's capital. Housing is provided and students receive credit directly from UCSC for their academic work in the program.	
UC in Sacramento			UC participates in the UC in Sacramento program in which students spend a quarter in Sacramento where they take seminars and engage in internships with governmental and non-profit agencies located in the State capitol. Housing is provided and students receive credit directly from UCSC for their academic work in the program.	
All Social Science Dep	193	Field Study	Offer a mechanism through which students can do independent internships under faculty supervision.	
All Social Science Dep	199	Tutorial	Individual study in areas approved by sponsoring instructors	