

SPECIAL UNIVERSITY CENTERS

APPAREL TECHNOLOGY AND RESEARCH CENTER

Professor Jean Gipe, *Director*

The Apparel Technology and Research Center provides a unique learning environment for the Apparel Merchandising and Management degree. The Center houses a model manufacturing plant featuring state-of-the-art equipment and advanced manufacturing systems. Through hands-on experience, students have the opportunity to work in a real time setting to solve industry problems the ATRC also provides assistance to domestic apparel companies through research, demonstration, and training programs. The ATRC is the only recipient on the West Coast of both a research and demonstration contract from the Department of Defense—Defense Logistics Agency. These contracts provide over \$13 million in funding to expand the capabilities of the ATRC to work with industry.

W.K. KELLOGG ARABIAN HORSE CENTER ARABIAN HORSE PROGRAM

Gene Graham, *Interim Director*

The oldest campus tradition is the Arabian horse show, first started by W. K. Kellogg in 1926, and continued after his ranch became a university campus. Public performances are given on the first Sunday in October through June at 2 p.m. The program, featuring the Arabian as an English, western, stock, trick and jumping horse, is planned and produced by students working with horses they have trained.

The shows are designed to promote interest in the Arabian breed and point out the horse's versatility, beauty, and intelligence, as well as to offer valuable experience for students in handling horses. The Arabians are utilized in the animal science courses related to the ever expanding field of light horse production, research and training. The Kellogg Ranch has been one of the world's outstanding Arabian horse breeding farms, and the university continues the breeding program today, perpetuating the Arabian and making valuable blood lines available to the public. The Kellogg Arabians are a noted attraction for thousands of Southern Californians and tourists who view the show each year.

EQUINE RESEARCH CENTER

Dr. Steven J. Wickler, *Acting Director*

The Equine Research Center founded in 1980 complements the program of the W. K. Kellogg Arabian Horse Center. The Research Center, unlike the Kellogg Center, deals with all horse breeds and not only the Arabian. The Research Center conducts investigations in the areas of equine nutrition, physiology, and management. The Research Center is a self-support center funded through national donations with the major contributor being the Oak Tree Racing Association of California.

INTERNATIONAL CENTER

Dr. Richard F. Pedersen, *Director*

Ms. Saeeda Wali-Mohamed, *Assistant*

Director for Grants and Contracts

Ms. Darcee Grider, *Financial Coordinator*

Mr. John Berne, *International Student Advisor*

Ms. Dana Crisp, *Study Abroad Coordinator*

Ms. Marisela Cordero, *Administrative Secretary*

The International Center, located in the Campus Center Building (Bldg. 97) is the focal point for international activities across the campus. These activities include international exchanges of both faculty and students, advising of international students, development and technical assistance projects abroad, short term technical workshops, promotion of international symposia and other international events on campus, and women in development.

The International Center also works closely with the various colleges and departments in the university-wide effort to internationalize the curriculum and to bring international speakers and programs to the campus. Various student services are also available at the International Center including advising for international students, international student identification, Eurail/ Britrail passes and passport information.

In the area of technical assistance, the International Center develops proposals for and manages projects in a number of world regions. In the past the university has implemented development projects in such diverse nations as the Yemen Arab Republic, Tanzania, Greece, and Costa Rica. Currently the Center is involved in development activities in Cameroon, and Swaziland and in the training of government-sponsored students from Africa and Asia in both regular degree programs and specially designed workshops.

The Center is actively involved in the placement of Cal Poly students in the CSU International Programs in seventeen different countries and in Cal Poly exchange programs in Germany, Japan, Mexico, France, and China.

The Center's lounge provides a place for foreign and American students to associate, and provides information on foreign countries through periodicals from all continents and daily foreign language TV News from around the world.

OCEAN STUDIES INSTITUTE

The Ocean Studies Institute (OSI) is the educational and research outlet for the growing marine programs of five state universities in the southern California area. Those participating institutions include Dominguez Hills, Fullerton, Long Beach, Northridge and Pomona. Representatives from each campus, consisting of a teaching and administrative faculty member, along with two community members, make up the OSI Board of Governors. In addition, an advisory board representing a cross section of disciplines adds to the Institute's community responsiveness.

The Ocean Studies Institute provides an outlet for shipboard instruction to Institute members, as well as the community, aboard the fully equipped and crewed research vessel, R/V Yellowfin.

Through the Institute's participating intercampus faculty and graduate students, a large reservoir of diverse expertise is coordinated for multidisciplinary projects involving the biological sciences, microbiology, chemistry, geology/earth sciences, economics, geography, archaeology, and engineering.

The five member campuses are located within a 50-mile radius of the Institute's office and the R/V Yellowfin slip in downtown Long Beach. The close proximity of the schools allows for easy student accessibility and personal communication between faculty members involved in interdisciplinary projects. For information regarding Cal Poly's participation in the Institute please contact the Associate Vice President for Academic Programs (Building 98).

DESERT STUDIES CONSORTIUM

Built in the 1940's as a health resort in the Mojave Desert, the former Zzyzx installation was repossessed by the Bureau of Land Management in 1974 and assigned to the Desert Studies Consortium composed of seven California state universities including Cal Poly Pomona. The Desert Studies Center is under the direction of a Board of Governors composed of one administrator and one professor from each member campus plus representatives from the Bureau of Land Management, and the general public.

Potentially the Desert Studies Center can supplement some 110 courses enrolling 4,700 students annually at the seven Consortium universities whose total enrollment approaches 200,000 students. Since the start of the Center, students, faculty, and other users have averaged 1,759 a year.

Biological and ecological studies mix with more practical investigations of desert land utilization and limitations, including issues of special interest to the Bureau of Land Management. Meteorological problems peculiar to the desert environment can be studied readily, including the transport of smog from the Los Angeles basin, 150 miles away, and such practical questions as utilization of power from sun and wind. Desert hydrologic and limnologic studies are conducted, and geology field trips study exposed rocks.

Immediately around the study center, as well as farther away, many primitive sites await archeological excavation and investigation.

Besides students and faculty from the seven sponsoring campuses, persons from other universities and groups interested in desert educational activities are welcome to use the Center facilities. For information on Cal Poly's participation in the Desert Studies Center, contact the Associate Vice President for Academic Programs (Building 98).

FACULTY CENTER FOR PROFESSIONAL DEVELOPMENT

Dr. Carol R. Holder, *Director*

The Faculty Center for Professional Development, established in September 1990 and located in Building 1-227, initiates, coordinates, and supports programs that assist faculty members in achieving their own professional goals and improving their teaching abilities. An elected faculty Advisory Committee guides the Center in setting priorities and planning new programs.

The Faculty Center provides individual assistance and sponsors campus discussion groups and workshops on exploring alternative teaching strategies, learning uses of new technologies, improving classroom instruction, and advancing research and scholarly activities. These workshops, offered throughout the year and conducted by Cal Poly faculty, enhance collegial relations and promote a multidisciplinary exchange of insights and support for efforts at improvement and innovation. A fall and spring Faculty Forum provide an opportunity for faculty to present their research or creative work to colleagues. At the February Symposium on University Teaching, faculty share successful teaching strategies and discuss issues that affect student learning.

The Center also helps faculty prepare proposals and applications for campus and CSU programs and for extramurally supported fellowships and awards. Bulletins from the Center inform faculty of development opportunities—awards and fellowships, conferences and workshops, etc. The Center's resources include books, periodicals, and other publications with information for faculty on teaching, learning, research and writing, and development opportunities.

CENTER FOR COMMUNITY AFFAIRS

Dr. Maria Harris, *Director*

To support research in communities in the Cal Poly service area; to support opportunities for faculty and students to participate in community service; to provide work shops and training on leadership and diversity for local officials and community groups.

Community service projects directed by College of Arts' faculty and affiliated with the Center include: the Motor Development Clinic, the Institute for California Women in Politics, the Mobile Clinic for Child and Family Services, and the Social Data Center.

INSTITUTE FOR ETHICS AND PUBLIC POLICY

_____, *Director*

To sponsor events and activities that will encourage broad community discussion of pressing social problems and more issues; to encourage and support creative and effective ways to teach about diverse moral traditions; to foster a community scholars and students who will critically examine the moral dimensions of our public policies.

REPRODUCTIVE PHYSIOLOGY CENTER

The mission of the Reproductive Physiology Center is to provide an undergraduate teaching and graduate student research laboratory for the investigation of physiological events responsible for reproduction in domestic farm animals. The primary emphasis of the Center is to utilize new biotechnology procedures to manipulate and preserve male and female gametes collected from ruminant and non-ruminant animals. The Center is equipped to collect, analyze and freeze spermatozoa for improving the procedures associated with artificial insemination. In addition, the Center is capable of collecting,

culturing and in vitro fertilization of oocytes for embryo manipulation and embryo freezing to improve the reproductive efficiency of the female.

INSTITUTE FOR CELLULAR AND MOLECULAR BIOLOGY

Dr. Jill Adler, *Director*, Institute for Ethics and Public Policy

The Institute for Cellular and Molecular Biology (ICMB) is composed of some 25 scientists from the departments of Biological Sciences, Chemistry, Ornamental Horticulture and Animal Science. The Institute is committed to the goal of enhanced communication between scientists, in fields ranging from physiological ecology to viral nucleic acid synthesis. This multidisciplinary scientific exchange is based on shared interest in the various research applications of molecular biological techniques. To achieve this objective, the ICMB has instituted the following activities:

- 1) regularly scheduling informal luncheon meetings and poster displays to familiarize one another with various research projects;
- 2) reviewing current literature by participation in a quarterly Journal Club;
- 3) financially supporting innovative pilot research projects and expansion of ongoing research programs in new directions;
- 4) sponsoring one yearly symposium for ICMB members to summarize the progress made on their research;
- 5) supporting graduate student research by creating a professional research environment.

The ICMB Journal Club activities and Symposia provide students with the opportunity to hear about recent advances in molecular biology presented by researchers who do this kind of work. They learn how to listen and learn from material presented in a seminar-type format rather than a lecture-type format. This is especially important for those students who plan to further their education in a graduate or professional school program.

Students interested in participating in the activities of the Institute should contact the Director, Dr. Jill Adler.

INSTITUTE FOR ADVANCED SYSTEMS STUDIES (I.A.S.)

Dr. Len Troncale, *Director*

This Institute sponsors educational and research programs in the new field of the Systems Sciences. This transdisciplinary field unifies the new sciences of complexity with advanced approaches to systems from many specialties.

The Institute is staffed by 20 to 25 Faculty and Associate Fellows selected for their outstanding accomplishments in their home departments combined with their demonstrated ability for and interest in crossing disciplinary lines. The Fellows are authorized to offer a 32-unit Minor in Comparative Systems Analysis (see description in this catalogue at the end of the College of Science entries) and a Certificate in Comparative Systems Analysis through the Office of Continuing Education. Also offered are interdisciplinary courses for on-campus credit such as those planned for the new Integrated Science General Education Program.

The Fellows of the Institute conduct both basic and applied research on both natural and social systems. Students are organized into research Task Forces under the supervision of one or more Fellows and can receive credit from their home department (at the 200 and 400 level) for working on Institute projects. This encourages and accomplishes significant cross-fertilization across the Colleges and departments. Examples of ongoing projects in the domain of basic systems research include: (1) computer analysis of natural hierarchical levels using clustering analysis; (2) systems allometry across physical, biological, and sociological systems; (3) systems analysis of symmetry and duality across the natural sciences; (4) linkage propositions between eighty systems isomorphies; (5) design and testing of cooperation equations in ecology and economics. Examples of ongoing projects in the domain of applied systems research include: (1) fractal analysis of solid tumors for cancer diagnostics and prognosis; (2) ecohouse research for optimized interaction and cooperation among the sub-systems of American homes; (3) design of a knowledge-based computer system on general systems theory for education and design. Another function of the Institute is to attract funding to our University.

Its Fellows have received grants from a diverse set of sources including the National Science Foundation, the U.S. Office of Education, the Chancellor's Office, the U.S. Dept. of Housing and Urban Development, and various Foundations.

Students interested in earning a Minor in Comparative Systems Analysis must declare their interest and intended start and completion dates by obtaining a form from Dr. Len Troncale, Bldg. 3, Room 106 of the Biological Sciences Dept., Phone: (909) 869-4040.

INSTITUTE FOR REGIONAL AND INTERNATIONAL STUDIES

Dr. George Eisen, *Director*

The Institute for Regional and International Studies is the flagship of international education in the California State Polytechnic University, Pomona. It is a cluster of six regional study programs: African Studies, Asian Studies, European Studies, Latin American Studies, Middle Eastern Studies, and North American Studies. An all-university entity sponsored by the College of Arts, the International Center, and the Office of Academic Affairs, the Institute is an academic component of the International Center.

The principle purposes and functions of the Institute are as follows:

- The Institute is the central mechanism through which Cal Poly Pomona organizes interdisciplinary teaching and research about different regions of the world, their complex interaction, economies, political systems, culture and people. The Institute serves as a conduit to the outside intellectual world by bringing internationally recognized scholars and scientists to campus. This will promote the dissemination and discussion of important ideas and theories in a multi-ethnic and multicultural Cal Poly Pomona.
- The Institute is a scholarly forum through which Cal Poly Pomona faculty and students can pursue collaborative scientific and scholarly relationships and promote cooperation with institutions around the world.
- The Institute organizes international conferences dealing with cultural and social change, politics, religion, environment, peace, conflict-resolution, and other global issues.
- The Institute is in the forefront in promoting foreign language acquisition at Cal Poly Pomona. In order to understand global diversity, our students and faculty are committed to the acquisition and practice of foreign languages.

Institute Programs. In addition to the six Regional Studies Programs, the Institute also sponsors the following Programs, Series, and Studies: International Scholar in Residence Program; International Conference Series; Foreign Languages Program; "X"change Programs; and The Center for Immigration and Refugee Studies.

CENTER FOR SCIENCE AND MATHEMATICS EDUCATION

Dr. Judith E. Jacobs, *Director*

The Center for Science and Mathematics Education has been established in the College of Science to try to meet the needs of K-12 teachers in the local school districts. The Center provides courses, workshops, and a resource center providing information to districts and teachers about innovative programs, teaching techniques, writing of grant proposals and opportunities for professional development. For further information please contact the Dean of the College of Science.

CENTER FOR BUSINESS EDUCATION

The purpose of the Center for Business Education is to improve the quality of business education in the secondary schools, adult schools, and regional occupational programs and centers in Southern California. This includes recruitment of candidates for the university's teacher preparation program, retraining of existing business teachers, research, and curriculum development. A major objective is to conduct in-service workshops for business teachers to provide them with opportunities to acquire new skills, especially those related to the new technologies impacting office and marketing occu-

pations. Professional development activities also emphasize curriculum design and instructional strategies.

The Center currently provides programming to two audiences: advanced high school students and employed workers in high technology industries. Throughout the school year, Cal Poly Pomona broadcasts undergraduate courses for advanced students in high schools in the greater Los Angeles area. These same courses are also transmitted by satellite to more distant high schools in the High Sierras and the Imperial Valley. In the late afternoon and evenings graduate computer science and engineering courses are broadcast to seven aerospace firms in Southern California.

For information about distance learning at Cal Poly, contact the program director (Building 66-104).

CENTER FOR ECONOMIC EDUCATION AND RESEARCH

Dr. Robert T. Bray, *Director*

To initiate programs which will increase the understanding of economics with an emphasis on incorporating economics in K-12 curricula; to encourage research in economics and economic education; to encourage interdisciplinary research involving economics.

LANDLAB—A Center for Education and Research in the Sustainable Use of Resources

Dr. Edwin A. Barnes III, *Director*

In 1985, Cal Poly Pomona signed an historic agreement which established the Spadra Landfill and Resource Conservation Project, a joint project between The California State University, the County Sanitation Districts of Los Angeles County, and The County of Los Angeles. Combined with adjacent lands, this agreement authorized the creation of a 339-acre landfill and land resource laboratory (LandLab) adjoining the Cal Poly campus.

Most of the LandLab site is being shaped by the 197 acre Spadra sanitary landfill which was established in 1957 to serve the disposal needs of the Pomona and San Gabriel valleys. The Spadra landfill currently operates as a class III landfill (according to the State of California classification system) accepting only nonhazardous solid and liquid wastes. Under the terms of the agreement, this active sanitary landfill provides unique opportunities and funding for the university to conduct research on landfill, refuse recycling, and refuse to energy processes and their effects on the environment. The university receives more than \$200,000 annually for research and master plan implementation activities and will continue to receive these funds as long as the landfill is operational.

The initial phase of the project is being established on 129 acres of land that are available now. This land includes completed fill areas and peripheral lands not involved in the landfill process.

Planning and implementation of the Spadra Landfill and Resource Conservation Project are being carried out jointly. The Districts will continue managing the landfill operation until it is filled. As each portion of the landfill is completed, the Districts will finish grading it, prepare the soil as necessary, and assist in planting the finished surface according to an agreed upon planting plan. The Districts will also install an irrigation system and provide reclaimed water for landscape irrigation before turning the land over to the university.

The university was charged with developing the master plan—a design for long-term landform and land use and for phasing and implementation of the project. A Joint Advisory Committee has been established to coordinate research, instruction, laboratory, facilities, and other activities relating to land, water, gas, energy, environment and other areas of interest in the university's program and the District's operations.

As an active laboratory for experimenting with and demonstrating ways of using and sustaining resources, LandLab will ultimately support a diverse range of activities designed to serve the educational, research, and leisure needs of the university and the community.

Among the public areas envisioned in the master plan (completed in 1987) are an Information Research Center, a Center for Regenerative Studies, a California Indian Community Demonstration, experimental structures, recreational facilities, and botanical gardens.

LEARNING RESOURCE CENTER

Dr. Frank Torres, *Director*

The Learning Resource Center, located in the University Library, provides a universitywide student service devoted to developing students' academic achievement through a variety of methods. It is a facility which provides students with dedicated personnel and individualized instruction. Programs at the Center emphasize developmental and critical reading (including speed reading), study skills, writing preparation, and basic math preparation. Tutoring in most areas is available by arrangement, and workshops in math and GWT preparation are provided each quarter.

The Center encourages students to refine their academic performance through the use of programs designed to meet individual needs. Students proceed at their own pace and receive periodic evaluation of their progress. The Center also provides an extension of academic programs by placing in the Center materials prepared by faculty: language guides, literature guides, advanced language cassettes. Test proctoring, another service provided by the Center, sometimes includes critical essays on articles prepared by faculty. For further information contact Dr. Frank Torres.

Learning Resource Center Courses:

LRC 090 College Reading Skills (1)

Beginning course in reading skills development for students in the College Reading Skills Program. Diagnosis of reading skills; individual placement in developmental reading materials; individual tutorial programs; workshops. 1 independent study/supervised activities. Does not count toward the bachelor's degree. Prerequisites: See the director of the College Reading Skills Program.

LRC 091 College Reading Skills (1)

Continued work in developmental reading for students in the College Reading Skills Program. Evaluation of reading strengths and weaknesses; individual placement in developmental reading materials; individual tutorial programs;

workshops. 1 independent study/supervised activities. Does not count toward the bachelor's degree. Prerequisites: See the director of the College Reading Skills Program.

LRC 092 College Reading Skills (1)

Developmental reading for students in the College Reading Skills Program who wish to augment the reading skills developed in SA 091. Evaluation of reading strengths and weaknesses; individual placement in developmental reading materials; individual tutorial programs; workshops. 1 independent study/supervised activities. Does not count toward the bachelor's degree. Prerequisites: See the director of the College Reading Skills Program.

LRC 093 College Reading Skills (1)

Developmental reading for students in the College Reading Skills Program who wish to augment the reading skills developed in SA 090, SA 091, and SA 092. Evaluation of reading strengths and weaknesses; individual placement in developmental reading materials; individual tutorial programs; workshops. 1 independent study/supervised activities. Does not count toward the bachelor's degree. Prerequisites: See the director of the College Reading Skills Program.

LRC 229/299A/299L Special Topics for Lower Division Students (1-4)

Group study of a selected topic, the title to be specified in advance. Total credit limited to 8 units with a maximum of 4 units per quarter. Prerequisite: Permission of instructor. Instruction is by lecture, laboratory, activity, or a combination.

Other Programs

Other special centers exist in the various colleges of the university. Information on these special programs is listed in the college sections of this catalog.

Motor Development Clinic

Dr. Priscilla Stomer, *Director*

The clinic serves children with disabilities between the ages 3 and 13 by providing the children with a movement therapy program and assisting parents to enable them to supplement clinic's program at home. The clinic staffed by undergraduate and graduate students providing a valuable learning experience.