

POLY REPORT

California Polytechnic State University
San Luis Obispo, California 93407

May 29, 1980

Volume 31, Number 38

Summer work hours announced

President Warren J. Baker has announced that the current flexible work hours for the 1979-80 academic year will remain in effect for the 1980 Summer Quarter. Normal university office business hours are from 7:30 am to 5 pm. Within these normal business hours, supervisors are to develop work schedules for an eight-hour work day with a minimum of 45 minutes for

lunch. Schedules might be 7:30 am to 12 pm (45 minute lunch), 8 am to 5 pm (hour lunch), 8:15 am to 5 pm (45 minute lunch) etc. Faculty work hours will be based upon class schedule, office hours, and other on campus commitments.

Retirements

A reception is planned for four School of Agriculture and Natural Resources faculty members who are retiring at the end of this school year. They are: Frank Thrasher (1963), Ralph Vorhies (1946), both Crop Science, Robert Hadley (1967), Animal Science, and Leo Sankoff (1946) presently Ag. Engineering, but who previously worked in many of the agriculture departments. The reception will be held in Staff Dining Rooms A and B on Tuesday (June 3) from 2 pm until 4 pm. Faculty and staff are invited to come and recognize their years of service, which marks the culmination of 3 years of service to Cal Poly, and wish them well in their retirement.

Wind Benefits OH Department

The Ornamental Horticulture Department is using a 60-foot windmill to generate energy for a solar greenhouse's heating and cooling fans to learn whether alternate energy sources are viable for the horticulture industry. The windplant, which began operation April 27, has been providing 70 percent of the greenhouse's energy requirements so far, according to Ronald Regan (Head, Ornamental Horticulture).

Meters record the amounts of energy generated and consumed, and it is hoped the windplant will supply 80 percent of the energy needed. The windplant, provided by the EnerTech Corp. of Norwich, Vt., is designed as a secondary power source which converts energy available on windy days into instantly useable electricity. It generates alternating current electricity as used by most households instead of the direct current, battery-type energy common to most windmills.

The distinctive feature of the windplant that makes this possible is its generator, actually a heavy-duty induction motor of the same kind used in elevators and washing machines. The windplant can operate as either a motor or a generator, operates at a common speed, and only when connected to a source of utility power.

It is activated when wind speed approaches 10 miles per hour and a

control system turns the system off when winds reach an unsafe level, at about 40 miles per hour. "This system puts out straight power and could be plugged right into your home's electrical system as a secondary source of electricity," said Marshall Ochylski, an Ornamental Horticulture Department faculty member involved with the construction and operation of the system.

The wind generator has a rated output of 1,500 watts at wind speeds of 21 miles per hour and is capable of producing 36 kilowatt hours per day under optimum conditions. The manufacturer says this is the equivalent of the daily electric requirements of three to four average households.

The windplant sits atop a 60-foot tower provided by the Tri-Ex Tower Corp. of Visalia. The tower was assembled by students and faculty of the Ornamental Horticulture Department. Funding for the tower's cement platform and wiring was provided by the Agricultural Education Foundation.

Ochylski said the windplant is in a good location which receives wind from three directions and shows potential for being a productive source of small-scale electricity needs. He said the installation and monitoring of the system has also provided ornamental horticulture students with a valuable practical research project.

Rolla May lecture rescheduled

The lecture that Rolla May, the man recognized by many as one of the 20th century's foremost psychologists and philosophers, was to have given at Cal Poly in late April has been rescheduled for Wednesday (June 4). Now planned for 11 am in Chumash Auditorium, Dr. May's previously scheduled talk was postponed when he was ill and not able to travel. Admission to his June 4 lecture will be free and the public is invited.

Presently a resident of Marin County, Dr. May is retired after having been a lecturer and faculty member at such prestigious universities as Harvard, Yale, and Princeton; a psychoanalyst; and author or editor of ten major books.

In addition to his more recent books, *The Courage to Create* (1975) and *The Meaning of Anxiety* (revised 1977), his

recent scholarly papers have been on such topics as the bearing of science on man and his nature, the nature of creativity, and anxiety and values.

Dr. May's contributions to the discipline of psychology have been recognized by Michigan State University, University of Oklahoma, and four other universities that have presented him honorary doctor's degrees. Other organizations that have recognized his contributions have included Phi Beta Kappa.

Titled "Freedom in a Technological Society," Dr. May's lecture at Cal Poly is being sponsored by the Counseling Center and Psychology Department in cooperation with Atascadero State Hospital, the San Luis Obispo County Mental Health Services, and the San Luis Obispo County Psychological Association.

Jazz night coming

Appearances by the current Miss San Luis Obispo, Pat Jackson's American Dancers, and saxophone soloist Tom Peterson are all being planned for the Jazz Night Concert on Friday (May 30). The concert, which will feature the University Jazz Band and Dixie Jazz Band, will begin at 8 pm in the Cal Poly Theatre.

General admission tickets priced at \$2 for students and \$4 for the public are being sold at the University Union ticket desk. Peterson, who plays both the tenor and soprano sax, is a featured soloist with the Toshiko Akiochi-Lew Tabackin Big Band. He also plays with the Doc Severinson Band which is featured on NBC Television's "Tonight" show.

Jennifer Lemoine, who won the Miss San Luis Obispo County title recently, will sing several songs, including the number she expects to use in the Miss California competition. Her Jazz Night performance will be one of her last before the state-wide contest, which will take place next month in Santa Cruz.

Two jazz-oriented dances will be presented by the American Dancers, a San Luis Obispo-based ensemble that has recently returned from a Northern California concert tour. The group will appear soon in a special benefit concert for the Special Olympics in the Civic Auditorium in Yuba City.

Programmed for the University Jazz Band, according to Graydon Williams (Music), director of the 20-member student ensemble, are several new compositions. The band specializes in big band blues and contemporary big band jazz.

The Dixie Jazz Band, a six-piece combo consisting of members of the Cal Poly Symphonic Band, will be using several arrangements from the repertoire of the Basin Street Regulars of Pismo Beach. The DJB most recently appeared with the Basin Street Regulars and is scheduled for a return engagement in Pismo Beach. The Jazz Night Concert is being presented by the Music Department.

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STAFF VACANCIES

Vacant support staff positions have been announced by Robert M. Negranti, Staff Personnel Officer. Descriptions of the positions and other vacancies are posted outside the Personnel Office, Adm. 110, Ext. 2236. Contact the Personnel Office to obtain an application. The University is subject to all laws governing Affirmative Action and equal employment opportunity including but not limited to Executive Order 11246 and Title IX of the Education Amendments Act and the Rehabilitation Act of 1973. All interested persons are encouraged to apply.

CSUC Board of Trustees has recommended a general 11% cost of living increase effective July 1, 1980

Clerical Assistant II-A, \$843-\$1,007/month; one-year leave replacement. Audiovisual Services. Duties: Act as receptionist; type; file; maintain catalogs of AV equipment and materials; schedule and check out AV equipment/materials; keep records. Requirements: One year of general clerical experience, type 45 wpm, and must have taken the General Clerical Test. This is not a training position. Closing date: 6-12-80.

Clerical Assistant II-B, \$901-\$1,077/month. General Office. Duties: Typing, shorthand, machine dictation and general office support for all campus areas. Major part of the duties is the operation of various work processing equipment. Requirements: One year of general office experience, type 45 wpm, shorthand 80 wpm, and must have taken the General Clerical Test. Knowledge of work processing equipment is desirable. Closing date: 6-12-80.

Clerical Assistant II-B, \$901-\$1,077/month. Physics Department. Duties: Type technical papers, course handouts, exams take and transcribe dictations; file; operate copying machines and collator; distribute mail; answer telephone; act as receptionist. Requirements: One year of clerical experience, type 45 wpm, shorthand wpm, and must have taken the General Clerical Test. Closing date: 6-12-80.

Departmental Secretary I-C/Stenography, \$785-\$939/month; 10/12 Pay Plan; one-year leave replacement with possibility of permanency. Civil Engineering Department. Duties: Provide clerical support to department head and faculty including: Acting as receptionist; typing course materials; composing routine correspondence.

Three years of clerical experience, type 45 wpm, shorthand 80 wpm, and must have taken the General Clerical Test. Cal Poly instructional department experience preferred. Closing date: 6-12-80.

Departmental Secretary I-A/B, \$460.50-\$563.50/month; half-time temporary as Science correspondence, class handouts and exams; maintaining budget records and processing student payroll. Requirements: Three years of clerical experience, type 45 wpm, shorthand 80 wpm (to qualify as "B"), and

te: 6-12-80.



Retirement coffee for Lillian Hooks

Lillian Hooks (Library) will retire on Friday (June 6) after more than 15 years of service to Cal Poly. A retirement coffee will be held in her honor on that day in the Staff Dining Room from 2 pm to 4 pm. All faculty, staff and friends are invited to attend.

May payday

Day of the pay period. Authorized representatives from departments whose checks are batched may pick up department checks from the Cashier's Office, Adm. 131.

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FOUNDATION VACANCIES

The Foundation is accepting applications for the following open positions as announced by J.L. Fryer, Personnel Officer. Interested applicants may apply at the Foundation Personnel Office, University Union Building, Room 212, 546-1121. California Foundation is subject to all laws governing Affirmative Action and equal employment opportunity including but not limited to Executive Order 11246 and Title IX of the Education Amendments Act and the Rehabilitation Act of 1973. All interested persons are encouraged to apply.

Cashier, \$4.09-\$4.87. Campus Store. Duties: Cashiering; taking inventory; preparing deposits; supervising store helpers. Requirements: High School or equivalent (two years of college preferred); one year cashiering experience; food handling and cash handling experience preferred. Closing date: 6-12-80.

Production Manager, \$1,422- Responsible for production of mulas for all livestock species. B.S. degree in Agriculture and minimum of two years feedmill work experience. Some supervision experience preferred. Operational competency in all common feedmill equipment. Ability to organize and implement effective employee training program. Ability to relate to student employees. Closing date: 6-19-80.



FACULTY VACANCIES

Candidates for positions on the faculty of the University are presently being sought, according to Donald L. Shelton (Director of Personnel Relations). Those interested in learning more about the positions are invited to contact the appropriate dean or department head. This University is subject to all laws governing Affirmative Action and equal employment opportunity including but not limited to Executive Order 11246 and Title IX of the Education Amendments Act and the Rehabilitation Act of 1973. All interested persons are encouraged to apply.

CSUC Board of Trustees has recommended a general 11% cost of living increase effective July 1, 1980.

Lecturers, \$14,940-\$24,828/year. dependent upon qualifications and experience. Mathematics Department, School of Science and Mathematics. Duties and responsibilities include teaching a minimum of 12 units per week of undergraduate mathematics courses including some night classes. Minimum of Master's Degree in Mathematics; some successful college teaching experience. Positions available commencing Fall Quarter 1980-81. Closing date: 7-1-80.

Lecturers, \$5,456-\$6,560/quarter: based on a 15-unit load; salary varies according to teaching load. Political Science Department, Division of Social Sciences. Openings for part-time lecturers are anticipated during the Fall, Winter, Spring or Summer Quarters, 1980-81, to teach American Government. M.A. or Ph.D. in political science required, with preference given to those with doctorate. Closing date: 6-30-80.

Lecturers, \$4,980-\$6,560/quarter, based on a 15-unit teaching load; salary varies with teaching load and experience. Chemistry Department, School of Science and Mathematics. Duties include teaching undergraduate chemistry lecturers and laboratories. Prefer Ph.D. in chemistry, biochemistry, or chemical engineering as well as professional and teaching experience. Positions available Fall, Winter, Spring, and Summer Quarters, 1980-81. Closing date: 8-1-80.

Lecturers, \$277-\$303/unit/quarter. Chemistry Department, School of Science and Mathematics. Part-time positions available Fall, Winter, Spring and Summer Quarters, 1980-81. Duties include teaching lower division chemistry laboratories. Candidates must be enrolled in Chemistry Graduate Program and have passed Chemistry qualifying exams. Closing date: 9-19-80.

Lecturer, \$4,980-\$10,472/quarter: based on 15-unit teaching load; salary varies with teaching load and qualifications. Psychology Department, School of Human Development and Education. Part-time position for the 1980-81 academic year. Teaching assignment could include courses in introductory psychology, childhood disorders, assessment of learning disabilities, death and dying, and environmental psychology. Preference will be given to applicants with appropriate academic preparation and experience. Requirements: Ph.D. in Psychology from an accredited college or university. Closing date: 6-30-80.

WHO...WHAT...WHEN...WHERE???

Elton Drandell, Management, has been appointed as a Visiting Research Scholar at the University of California at Santa Barbara for his sabbatical during the Spring Quarter 1980. During this time Dr. Drandell will attend faculty and graduate student seminars and symposia and engage in research activities.

Ma Naudin de Hartig, Foreign Languages, has had an article accepted for publication by *Romance Notes*, published by the University of North Carolina. The article is titled, Nueva vision del colorido de Los Pazos en Ulloa de Emilia Pardo Bazan.

Amela Cook Miller, Speech Communication, had an article titled "Self-reference in Interpretive Performance" in the winter issue of *The Texas Speech Journal*. The article applied a theory about how language works to better understand how performance of literature works.

Donald Lazere, English, has had the course syllabus for his Humanities 270 class on Popular Culture and Political Consciousness appear in *Currents of Warm Life: Popular Culture in American Higher Education*, a book just published by Popular Press in conjunction with the Popular Culture Association of America.

Judy D. Saltzman, Philosophy, attended a conference on "In Her Image: the Goddess in East Asia and the Madonna in Christian Culture" sponsored by the University of California, Santa Barbara, Religion Studies Department, April 22-24. She also participated in a dialogue on the Gnostic Gospels at the Hutchins Center for the Study of Democratic Institutions while in Santa Barbara.

Norman Eatough, Chemistry, is the author of *Study Guide to Accompany Russell - General Chemistry*, published this month by McGraw-Hill Book Company.

Lee Coombs, Chemistry, has received a Photo Award from *Astronomy* magazine for his astrophoto of a galaxy, and he has been invited to submit an article describing his photographic techniques.

Jack Willson, Agricultural Engineering, a member of the Science and Education Administration Task Force on Energy attended a meeting of that group on May 6-8 in Washington, D.C. The task force has been charged with the responsibility of developing an agricultural energy plan for use by USDA-SEA. Dr. Willson represents non-land grant universities with significant agricultural programs on the task force.

Royden Nakamura, Biological Sciences, was awarded a Research/Travel Grant by the Council for the International Exchange of Scholars (Washington, D.C.) and the University Grants Commission, 1979-80, (Government of India).

WHO..WHAT..WHEN..WHERE???

Moon Ja Minn Suhr, *Physical Education*, directed a dance concert at Atascadero State Hospital on March 4. Mrs. Suhr and her students in Introduction to Dance, presented various types of modern dance and folk dance numbers for the patients of the hospital. The concert programs were originally choreographed as a partial requirement for the completion of the course.

Gerry Gentilucci, *Plant Operations*, attended a Shoring Safety Training School put on by Robert A. Breckenridge of American Society of Safety Engineers. The class was held in Sacramento on March 20.

Robert E. Blesse, *Library*, attended a seminar for the Administration of Photographic Collections at the Oakland Museum, March 16-20. Sponsored by the American Association for State and Local History and the Smithsonian Institute, the seminar featured presentations by representative of the Library of Congress, the National Archives, and the Public Archives of Canada.

Satwant S. Rihal, *Architectural Engineering*, was an invited participant in the National Science Foundation supported Workshop on Seismic Performance of Low-Rise Buildings held at the Illinois Institute of Technology, Chicago, May 13-14. He served as the chairman for the workshop group on Seismic Performance of Manufactured Building Components.

Don E. Swearingen, *Architecture*, has been appointed Resident Director of the CSUC International Programs study centers in Sweden and Denmark for the 1981-82 academic year.

Michael R. Malkin, *Speech Communication*, published an article, titled "Class Acts/Acting: the rhythm method," in the May 1980 issue of *Dramatics*, the educational theatre magazine. The photo accompanying the article is by **Howard A. Gee**, also *Speech Communication*.

Jim Webster and James B. Zetzsche, *Both Agricultural Engineering*, traveled to Carmel May 1 to make a presentation to Leonard J. Fletcher, past president of the American Society of Agricultural Engineers. Mr. Fletcher was president in 1931-1932. The luncheon celebrated the presentation of the plaque and Mr. Fletcher's 89th birthday.

Mr. Webster & Mr. Zetzsche are both active members of the Pacific Region of ASAE, having just been re-elected to the executive board at their March meeting in Hilo, Hawaii. Mr. Zetzsche is secretary-treasurer, Mr. Webster is on the nominating committee for region.

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Allce C. Loh, *Landscape Architecture*, served as a member of the American Society of Landscape Architects Accreditation Team for on-site evaluation of the Bachelor of Landscape Architecture program at University of Idaho on April 20-23.

George J. Suchand, *Social Sciences*, organized and chaired a session, "Innovations in Geography" and presented a paper titled, "Geography of World Hunger" at the California Council for Geographic Education meeting in Redding, May 2-3.

Katharine L. Fuess, *Social Sciences*, presented a paper, "Pismo Beach: Environment Versus Economics" at the annual meeting of the Association of American Geographers held in Louisville, Ky., April 13-15.

Calvin H. Wilvert, *Social Sciences*, presented a paper titled "Kikuyu Grass: An Aggressive African Introduction Along the Coast" at the California Council for Geographic Education meeting held in Redding, May 2-3.

Barbara E. Cook, *Social Sciences*, attended the meetings of the Southwestern Anthropological Association held April 9-12 in San Diego.

Donald R. Floyd and Katharine L. Fuess, *Social Sciences*, participated in a field trip of Lake Shasta and the nearby caverns while attending the California Council for Geographic Education meeting in Redding, May 2-3.

Donald McCaleb, *Director of Public Affairs*, *Acting*, presented a workshop session on investigative report writing and interviewing during annual conference of California Association of Superior Court Investigators held at Royal Oak Inn in San Luis Obispo on May 8-9.

Leonard Davidman, *Education*, spoke with teachers and parents of Shandon Elementary School on May 14. His topic was "Encouraging Creativity: What Parents and Teachers Can and Should Do."

Randall L. Murray, *Acting Head, Journalism*, attended the California Newspaper Publishers Association Editors Conference in Palo Alto on May 16-17. During the conference he also attended a meeting of the California Journalism Administrators. One of the speakers was Jack Landau, chairman of the Reporters Committee on Freedom of the Press. Among the subjects discussed were regulation of reporters and news layout and design.

Royden Nakamura, *Biological Sciences*, was selected Senior Fulbright-Hays Scholar (1979-1980); U.S. Board of Foreign Scholarships.

Robert L. Logan, *Journalism*, traveled to Alcapulco on May 22 to present a paper titled "Some Considerations in the Diffusion of Medical Technology: Medical Information Systems" to the International Communication Association's annual convention. The paper was rated one of the top three papers by the ICA's Health Communication Division. It was co-authored by Logan and Dr. Donald Brenner, associate director of the Health Care Technology Center at the University of Missouri School of Medicine.

Arthur L. Schwartz Jr., *Business Administration*, represented Cal Poly at the CSUC Real Estate Education Conference held April 18 at San Diego State University.

Joanne B. Ruggles, *Architecture*, has been informed that her etching, "Bromeliad," which appeared in the "55th Annual Competition" of the Philadelphia Print Club was selected for the traveling exhibit of that show and has since been on view at Chester County District Center Gallery, Exton, Pennsylvania, and "ART/EXPO," Cherry Hill, New Jersey.

R.A. Wysock, *Industrial Technology*, and **L.F. Talbott**, *Engineering and Technology*, attended the California Association of Industrial Technology meeting at San Jose State University on May 2. Five universities and colleges having Industrial Technology programs presented slide shows of their particular programs for the benefit of community college members. Students Kim Wakefield, Virginia DuPree and Rik Kimble presented the Cal Poly program.

Robert S. Quan, *Social Sciences*, recently delivered a paper titled, "Territoriality in American Chinatowns," at the 1980 Pacific Sociological Association annual meeting in San Francisco.

Royden Nakamura, *Biological Sciences*, presented a paper and was rapporteur at the International Symposium on Coastal Aquaculture, Manpower, Development and Training in Aquaculture Session held in Cochin, India in January, 1980.

Arthur L. Schwartz Jr. and John R. Lindvall, *both Business Administration*, were awarded a \$6,300 grant by the CSUC Real Estate Education Endowment. The grant will be utilized for research on the subject of housing prices and energy costs.

Robert L. Logan, *Journalism*, has received a post-doctoral fellowship from the National Library of Medicine and the Health Care Technology Center at the University of Missouri. This summer he will be researching physicians' attitudes toward the increasing computerization of medical practices.

encouraging notes

May 29, 1980

*** AMERICAN COUNCIL OF LEARNED SOCIETIES - TRAVEL GRANTS FOR HUMANISTS:

Travel grants are available to scholars in the humanities to participate in international scholarly congresses and research conferences held outside the U.S., Canada, and Mexico. Only scholars who are to read papers or have a major, official role in the conference are eligible. Funds will be granted in the form of reimbursement for documented travel expenses. This deadline applies to conferences to be held between November and February. To request application forms, persons should address an inquiry to David Arentz, Travel Grant Program, 345 East 46th Street, New York, NY 10017. The letter should set forth the name, dates, place, and sponsorship of the meeting, as well as a brief description of the nature of the applicant's scholarly interests and his or her proposed role in the meeting.

DEADLINE: JULY 1, 1980

* COUNCIL FOR INTERNATIONAL EXCHANGE OF SCHOLARS - FULBRIGHT-HAYS AWARDS FOR UNIVERSITY TEACHING AND ADVANCED RESEARCH ABROAD:

Awards are available to scholars in all academic fields for university teaching and advanced research abroad. An award generally consists of a maintenance allowance for the grantee and accompanying family members, roundtrip travel for the grantee, and one or more allowances. Travel is usually provided for one dependent of lecturing grantees appointed for a full academic year. Eligibility requirements include: U.S. citizenship; for lecturing--college or university teaching experience at the level of the award sought; for research--a doctoral degree at the time of application or, in some fields, recognized professional standing as demonstrated by faculty rank, publications, compositions, exhibitions, etc.; for some awards, foreign language fluency. Application forms and a list of the program officers (including telephone numbers) for the various countries as well as a list of current openings for positions abroad are available in the Research Development Office.

DEADLINES: Application deadlines are JUNE 1st for Australia, New Zealand and American Republics, and JULY 1st for Africa, Asia and Europe; deadlines are 12-18 months in advance of the grant period.

* NATIONAL SCIENCE FOUNDATION - UNDERGRADUATE RESEARCH PARTICIPATION PROJECTS:

SUMMER 1980. NSF supports student studies and research through Student-Oriented Programs (SOP) which share the following goals: 1) to provide talented students with science learning opportunities beyond those normally available in formal science programs; 2) to increase the variety of instructional patterns, by demonstrating the capacity of students to accept greater responsibility for planning and carrying out their own learning experiences; and 3) to identify science and engineering talent and encourage its development on an individual student basis. In the summer of 1980 there are 126 projects which will permit collaborating colleges and universities to accept at least 1003 students. To be eligible, participating students must be U.S. Citizens and enrolled as full-time undergraduates at the time of application, and should be between their junior and senior years. Previous recipients of either URP or SOS stipends are ineligible for additional URP stipend support. Students selected for participation may be provided with stipends, not to exceed \$1,000, at a rate of \$100 per week up to a maximum of 10 weeks, although the period of participation may be longer. Each student is required to participate a minimum of 40 hours per week for 10 weeks, without concurrent employment or formal classes. A list of participating projects and institutions is available in the Research Development Office. Interested students should react immediately.



RESEARCH DEVELOPMENT • ADMINISTRATION 317 • TELEPHONE 546-2982
CALIFORNIA POLYTECHNIC STATE UNIVERSITY • SAN FRANCISCO CALIFORNIA 94320

* NATIONAL SCIENCE FOUNDATION - DIRECTORATE FOR ENGINEERING AND APPLIED SCIENCE UNSOLICITED RESEARCH PROPOSALS: This program supports projects that accelerate the rate of technological innovation growing out of significant advances in selected fields of science and engineering and provide information of relevance on public policy issues requiring a high degree of scientific input. Proposals are invited in the following areas:

--Biological and Ecological Applications: To accelerate the rate of technological innovation based on basic advances in the biological and ecological disciplines. Areas of interest include, but are not limited to: utilization of plant cell and tissue culture techniques for production of secondary metabolites; protoplasmic fusion to speed tests of new plant materials; microbial ecology of disturbed soils; the modeling and management of ecosystems as a way of increasing effective use of land, water, and renewable resources; aquatic animal and plant culture using nutrient and water recycling in natural and artificial systems; and the effects of harmful substances on the physiology, behavior, and biochemistry of organisms, including movements through trophic levels and food chain dynamics.

--Geophysical Applications: To increase the rate of technological innovation growing out of discoveries in the geophysical and environmental sciences. Special emphasis is placed on improvement in techniques and instrumentation for exploration of terrestrial and marine mineral resources.

--Chemistry Applications: To explore the feasibility of new research tools, such as lasers or plasma, to carry out specific chemical reactions in the production of industrial chemicals and feedstocks; and to examine the influence of trace elements, or metallurgic impurities in the various stages of mineral extraction.

--Physical, Engineering Applications: To increase the rate of technological innovation growing out of discoveries in the physical and mathematical sciences and engineering through the extension of basic research in such fields as materials science, artificial intelligence, computer science, electric engineering, and mathematics to applied problem areas of the investigator's own choosing. Special emphasis is placed on projects which have potential applications to manufacturing, especially batch processing.

DEADLINE: JULY 18, 1980

** LAW ENFORCEMENT ASSISTANCE ADMINISTRATION - UNSOLICITED RESEARCH PROGRAM: Approximately \$500,000 is available for unsolicited research projects in FY 1980. Approximately one-third of the amount available will be allocated for grants of \$60,000 or under. The range of funding for each grant will be from \$10,000 to \$120,000 for research of up to two years' duration. Projects should address significant issues pertaining to adult criminal justice and be of sound methodological design and have potentially important implications for criminal justice policy, practice, research and/or theory.

DEADLINE: JUNE 30, 1980

REQUEST has been issued to develop, produce and furnish proficiency test items and tapes to measure listening and reading and comprehension in Korean, German and French languages for the Defense Language Institute, Presidio of Monterey, CA. Contact the Research Development Office immediately for further information.

* Guidelines and/or Application Forms Available in the Research Development Office.

** Information Requested/Available Soon.

*** Contact Agency Directly.