

Research Importance Termed Far-Reaching

By CLAUDIA HEISEL
The importance of research at the University cannot be stressed strongly enough. In the past years, progress in many fields has been far-reaching and of value to the state and nation.

To obtain research grants, the interested faculty member must first submit a proposal in which he states his project in detail, tells how long it will take and how much it would cost, and also gives his qualifications for the work.

This proposal is then submitted to research sponsors such as the federal government, private individuals and companies. If the sponsor is interested in the research, a grant or contract is then awarded.

Various Sponsors
According to Ralph E. Montgomery of the University Research Office, the largest project at the University at the present time is the Ordnance Research Laboratory which is sponsored by the Department of the Navy. Other important sponsors include the National Science Foundation, National Aeronautics and Space Agency, Atomic Energy Commission, and the Department of Agriculture.

The sources of support fall into two categories, Montgomery said. The federal government supplies the largest amount of funds. The other category is non-federal funds, which include companies, foundations, individuals, and state, local and county governments.

Some of the most significant research projects in recent years have been: The discovery by University physicists that the hydrogen atmosphere surrounding Jupiter is ten times deeper than the highest previous estimates; the patenting of a method of producing powdered milk that retains full flavor and caloric content; and a microbiologist's identification of a class of organisms believed to be the most abundant form of life on earth.

Agricultural Advances
The agricultural scientists introduced the following new crop strains during the year: Pennchip, a new potato variety for chipping and table

use; geneticists found new lines of sweet corn that retained their high sugar content and low starch for many days after harvest; a method of removing the combustible material from coal cull banks was developed.

These are but a few highlights of a research program that consists of more than 2,000 separate projects conducted through a \$17,500,000 budget.

An essential counterpart to the discovery of new knowledge is the role of research in the education of the University's 2,500 graduate students. The University offers several fellowships to talented graduates.

Fellowship Offered
A few of these are the study fellowships for international development, U.S. Public Health Service predoctoral fellowships, Woodrow Wilson national fellowships and National Science Foundation traineeships.

Edward B. Van Ormer, assistant dean of the Graduate School, stated that there were approximately 108 students on fellowships at this time. He also said that contrary to popular belief, these fellowships are always utilized.

Campus Pacs for Men, Too

The Hetzel Union Building Special Events committee is offering a new feature in the HUB this weekend.

It's a boy's version of the Campus Pac—which the committee has sold several times before—but previously, strictly for girls.

The boy's "pacs" are similar to those sold before. They contain a tube of toothpaste,

deodorant soap, hair cream, after shave lotion, Absorbine Jr., No-Doz tablets, eye drops, and a tobacco mixture.

The whole box of items can be purchased for 35 cents. Girl's packets are also on sale.

Robert Katzenstein, president of the HUB committee, said all the money from the sale of the "pacs" goes directly back to the students through HUB committee-sponsored activities.

Katzenstein also announced more details on the proposed trip to New York City, sponsored by the HUB Travel committee.

He said the cost of the whole weekend will be \$30. This fee will include accommodations at the Henry Hudson Hotel, a ticket to see the Broadway musical, "Golden Boy," starring Sammy Davis Jr.; and the bus ride.

The bus will be leaving the HUB parking lot at 1 p.m., April 2, and the students will return to the University-Sunday, April 4.

Katzenstein said that although only 40 students came to the organizational meeting, he is hopeful that others are

interested and were just not able to attend the meeting.

There will be a final meeting at 7 p.m., Wednesday. It is imperative that all who wish to go to New York attend this meeting, he said.

Katzenstein added that anyone interested in joining the HUB Travel committee may come to 206 HUB, Tuesday, to join.

EPISCOPAL SERVICES during LENT

Wednesdays at 9 p.m.
The Holy Eucharist

Fridays at 3 p.m.
Evening Prayer
Stations of the Cross

Eisenhower Chapel

SCCC Seeks Volunteers To Aid Freedom Schools

The Student Council for Christian Concern is recruiting volunteers for a "Work Day for Freedom," on April 3. Students will be asked to do yard work, spring cleaning, and other similar chores from 1:30 p.m. to 4:30 p.m. to earn money for the Mississippi Freedom Schools.

Interested students must register with the University Christian Association office before April 1.

The Mississippi Freedom

Schools, the backbone of present voter-registration effort in that area, were set up to encourage Mississippi Negroes to pass the literacy test and to register to vote.

The schools are sponsored by the Council of Federated Organizations, which includes such civil rights groups as the Congress on Racial Equality, Students Nonviolent Coordinating Committee, and the Rev. Martin Luther King's Southern Christian Leadership Conference.

Other Campus Capers

MSU Present Housing Petition
A petition signed by more than 4,200 (15 per cent) Michigan State University students and calling for more liberal housing rules has been presented to officials of the University's student affairs office by the Committee for Student Rights (CSR). CSR is an unchartered student group organized during January to protest the lack of effective communication between the students and the faculty and administration.

The housing petition was circulated to gauge student sentiment for liberalization of housing rules after a subcommittee asked interested students to present their ideas to help the subcommittee make recommendations for future policies. The subcommittee includes three faculty members, three appointed student members and two members of the student affairs office.

The four recommendations called for by the petition are among 12 proposed earlier by CSR, intended to lead to improvements in the atmosphere for intellectual and social development in the University. The four proposals are:

- Students over 21 may live in housing of their choice, subject only to local, state and federal laws.
- Juniors and seniors, regardless of sex or age, may live in housing of their choice with parental consent, subject only to local, state and federal laws.
- Senior women, and those women over 21, living in residence halls, shall have no hours; junior women shall have no hours Friday and Saturday nights. Hours for other women shall be 12 midnight Sunday through Thursday, 1 a.m. Friday and 1:30 a.m. Saturday.
- The University shall respect the students' civil rights and liberties on and off campus; any entrance into a

student's living quarters unauthorized by said student shall be in accordance with state and federal laws, especially those regarding search and seizure.

College Coeds Discriminated
Women are discriminated against in higher education because of the limited housing available to them, according to two representatives of state universities. The difficulty in providing housing for women and state universities' traditional insistence upon supervised dormitory housing for women have cut off a number of qualified women from university entrance, Helen LeBaron, Dean of the College of Home Economics of Iowa State University, has said.

In every other aspect of women's education, however, "more and more programs are opening to women," she said. "The old tendency to keep girls out of fields like veterinary medicine is changing now."

George Kramer, Dean of Admissions at Rutgers College, viewed the limited space in liberal arts colleges as the single source of discrimination against women. "In the state of New Jersey," he said, "about half of the high school seniors who intend to go to college are women, but only one-third of the student population in liberal arts colleges is female." This imbalance comes from the limited housing available for women students, he added.

Other educators have noted that for those women who do get into college the barriers of discrimination in specific fields are breaking down. Vernon Anderson, Dean of the College of Education at the University of Maryland, said that although the opportunity is almost unlimited, "girls seem to shy away from science and math. But the tremendous shortage in fields like industrial arts make them very

promising for women students," he said.

Dean Anderson noted that there was a "leveling of careers" for men and women. "It is now perfectly proper to go into fields that previously were dominated by either men or women," LeBaron said that the pattern of employment for women is now "in and out" throughout their lives, and that their education must recognize this pattern. "The emphasis today is on giving women a basic professional education which will serve as a launching pad even a decade later for further study or training," she said.

No Cars Till Student Aid Cut
Officials at Lehigh University recently announced that students receiving financial aid will not be permitted to own or operate a car in the Bethlehem area unless they are willing to take a \$300 cut in their aid. A study conducted last year revealed that 63 students receiving aid did not note on their financial aid application that they had cars on campus. Theron L. Kropp, executive secretary for the Committee on Undergraduate Financial Aid, said the committee felt that "the ownership or operation of motor vehicles by undergraduates is a luxury, not a necessity."

"We're out to help kids, not to shoot them down," Kropp said. Acquiring a college education is the most important objective of the student, he said, and the student must be willing to sacrifice some of the more immediate luxuries in order to achieve this. But he added that "students have difficulty thinking in terms other than the immediate."

A few exceptions to the new rule will be permitted, but they will be limited primarily to students who commute. Students who fail to abide by the regulation "will lose their aid, they will be billed for that part already used, and all consideration for future financial aid will be forfeited."

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Probation Given To Six Students - Rule Infraction
Six male students received disciplinary action during the past week.

A North Halls resident, aged 18, was suspended until the end of the summer term 1965 for fraudulent use of telephones and vending machines. The student's action was compounded by a shoplifting charge.

Two sophomores were suspended until the end of the summer term for spending a night with two females.

Another sophomore, living downtown, was placed on disciplinary probation after being apprehended drinking under age, as was an eighth term East Halls resident. A second term freshman was also placed on disciplinary probation for drinking as a minor.

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The Naval Oceanographic Office needs engineers as well as oceanographers for its long-range research program

The sharply-increased emphasis on finding ways of exploiting "inner space" has opened new and broadened opportunities involving the design, development, testing and evaluation of electronic, mechanical, electromechanical, and optical instruments and systems. Electronic engineers, mechanical engineers and engineering physicists carry out challenging assignments in modern laboratories, in managing systems development with industry, or conducting field experiments in ships, submarines and aircraft. So, when we speak of a long-range technical and scientific research program, we speak of a massive effort over the course of years in these important areas:

- 1/ **General Oceanography**—the physical, biological, chemical, and geological makeup of the oceans and ocean floor. Not only does this involve the study of waves, sea ice, tides and currents . . . but also the propagation of sound and sonar in the sea . . . the analysis of the sediments on the bottom as they might apply to undersea warfare . . . and biological reports on marine vegetation, animal life, and organisms with special regard to fouling and boring.
- 2/ **Geophysical & Geodetic Surveys**—on land and at sea. Analyses and measurements of gravity and magnetic fields to provide accurate positional data for the Navy (sites for missile range stations, air and marine navigation aids, etc.).
- 3/ **Bathymetry**—use of new precision electronic depth and location techniques to accurately portray ocean floor. Survey ships the world over are probing the ocean depths in the deepest regions of the world to improve nautical charts, and enlarge scientific understanding of heretofore unknown environmental elements.
- 4/ **Oceanographic Instrumentation**—involving the latest principles of electronics, optics, and nucleonics, EE's and ME's initiate and carry out contractual systems programs with industry, and perform hydrodynamic studies leading to the design of components for instrumentation.
- 5/ **Information Processing**—through the use of computer systems. Programming of statistical, scientific and technical data such as Loran navigational tables and survey coordinates . . . sea water densities . . . underwater sound velocities . . . dynamic depth and grid transformations.
- 6/ **Cartography**—including modern portrayals of charts, reports, and diagrams required for navigation by the Navy and Merchant Marine. Designing charts showing depths, contours of the ocean floor, channels and shoals, coastal topography, etc., with the aid of aerial photography and photogrammetric equipment.

From the foregoing it should be obvious that oceanographic research today and in the future offers a new horizon of opportunity for talents not ordinarily thought of as related. Among those talents needed immediately by the Oceanographic Office are Mathematicians, Physicists, Chemists, Meteorologists, Cartographers, Geophysicists . . . and Engineers of all kinds (Civil, Electronic, Mechanical and General). Openings exist at all levels, from recent graduates to recognized authorities in the \$8945 to \$13,445 range, with the full benefits of Career Civil Service.

You must have your degree, and a U.S. Citizenship. Other than these "musts", you should be able to offer an applied research capability in your specialty, and a willingness to spend a reasonable amount of time on field work involving travel.

ON-CAMPUS INTERVIEWS
Representatives from the Naval Oceanographic Office will be on campus Fri., March 12th, 1965, Penn State. Contact your College Placement Officer to arrange an interview.

U.S. Naval Oceanographic Office
SUITLAND, MARYLAND
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