

NUCLEAR RESEARCH

New studies in the nuclear field are
creating positions on our staff for
those possessing unusual ability in:

Theoretical Nuclear Physics
Experimental Nuclear Physics
Reactor Physics
Reactor Engineering
Instrumentation Physics
and Engineering

Lockheed

MISSILE

research and engineering staff

SYSTEMS

LOCKHEED AIRCRAFT CORPORATION

DIVISION

VAN NUYS • CALIFORNIA

have been awarded to universities and research institutions in the United States. Of these, six are for new projects to be carried out by the following institutions: Kansas State College (R. G. Taecker), research reactor studies; Northwestern University (M. Dole), the mechanism of high-energy radiation effects on polyethylene; University of Pennsylvania (J. Bockris), a study of the structure of molten salts and silicates; Purdue Research Foundation (J. W. Cobble), chemistry and nuclear chemistry of the heavy elements; University of Tennessee (J. F. Eastham), determination and application of separation factors for some chemical fractionations of hydrogen isotopes; and University of Wisconsin (W. F. Fry and W. D. Walker), high-energy interactions.

Shell Companies Foundation, Inc., announced in June that it has made available nearly \$350 000 for research fellowships and grants. 49 postgraduate fellowships will be offered by 36 institutions for studies in various sciences and business administration. Shell fellowships in non-nuclear physics will be awarded at the University of Chicago, Duke University, Massachusetts Institute of Technology, Rice Institute, Washington University (St. Louis), and Harvard University. Each fellowship includes a stipend of \$1500, tuition fees, and a "cost of education supplement" to the institution that may vary from about \$500 to \$1000. Twenty research grants have been awarded to 15 institutions, each of which will receive a basic fund of \$5000 and a supplemental grant of \$2500. Three schools (California Institute of Technology, Harvard, and MIT) have received grants in physics.

An \$800 scholarship has been established at Illinois Institute of Technology for a senior or graduate student specializing in acoustics. The scholarship, which covers tuition costs for one year, was created by Shure Brothers, Inc., Chicago manufacturers of microphones and acoustic devices. First award will be made for the 1955-56 scholastic year. Known as the Shure acoustics scholarship, the grant will be awarded on the basis of scholarship, need, and interest in electroacoustics. Further information may be obtained by contacting Dr. William A. Lewis, Dean of the Graduate School, Illinois Institute of Technology, 35 West 33rd Street, Chicago 16, Illinois.

The Franklin Institute has announced a \$10 000 grant from the Leeds and Northrup Foundation for the purpose of establishing a Charles S. Redding Lecturship. Mr. Redding, chairman of the board at Leeds and Northrup, was president of the Institute from 1941 to 1946. The money will be used to support one of the Institute's series of lectures which are given the third Wednesday of each month by outstanding speakers in various fields of science.

Summer Programs

The University of Minnesota has received a grant of \$54 000 from the Louis W. and Maud Hill Family Foundation for the support of summer institutes for high school teachers of mathematics and the physical

sciences. The program will begin in the summer of 1956. The departments of physics, chemistry, and mathematics of the University will cooperate in organizing programs designed explicitly for high school teachers. The expenses of those selected to attend the institutes will be covered by the grant. A second series of institutes is planned for 1957. Information may be obtained from J. W. Buchta, University of Minnesota, Minneapolis 14, Minnesota.

The General Electric Company, as part of its extensive series of programs of assistance to education, is again co-sponsoring six-week summer fellowship programs for science and mathematics secondary and college teachers. More than two hundred teachers from twenty-four states and the District of Columbia are taking part in summer institutes offered at Union College, Case Institute of Technology, Rensselaer Polytechnic Institute, and Purdue University, the four participating colleges. In addition to the secondary school teachers, each school has selected a small group of professors of physics, chemistry, and mathematics from state teachers' colleges to join in the program. GE supports the project, paying all expenses of the teachers as well as placing some of its facilities and personnel at the disposal of the colleges and arranging for trips to its local laboratories and plants. By the end of this summer, a total of 1350 secondary school teachers will have participated since inception of the programs ten years ago—at a total cost to GE of about \$700 000.

Special Courses

Nuclear engineering, a two-semester master's degree program, is being offered by the University of California's division of mechanical engineering at Berkeley in cooperation with the University's Radiation Laboratory and the Livermore Laboratory. Attention will be given to problems of analysis, design, performance predictions, and cost of nuclear power systems. Further information may be obtained from Professor E. D. Howe, Chairman of Mechanical Engineering, University of California, Berkeley 4, California. Application for admission should be made to the Graduate Division, Administration Building, at Berkeley.

Beginning with the fall term, New York University's College of Engineering will offer a graduate program in nuclear engineering and engineering science. The program is designed to answer the need for individuals who are "well-trained in the fundamentals of engineering yet who have a thorough knowledge of the unique problems encountered in the development of nuclear energy." The College has also announced plans for the construction this summer of a "sub-critical nuclear reactor" for laboratory use. If the project is approved by the AEC the device will be tested at Brookhaven National Laboratory before its installation in the basement of Butler Hall on NYU's Bronx campus. Costing a few thousand dollars, the reactor will consist of an arrangement of uranium rods immersed in a

*Your
future
in*

MICROWAVES

*Positions
are
open
for
ENGINEERS
and
PHYSICISTS
qualified
in this
area.*

THE MICROWAVE LABORATORY at Hughes conducts fundamental research and long-range development in the field of microwave components and techniques. The antenna program is concerned with research on linear and two-dimensional arrays of slot radiators; transmission and radiation of surface-guided waves; very high resolution radar antennas; and the development and engineering of airborne communication, navigation and fire control antennas.

INSTRUMENTATION

is developed for new measuring equipment to meet needs of the program. This has included development of automatic impedance and antenna pattern recorders, microwave power supplies stabilized in amplitude and frequency, microwave circuitry, and microwave applications of ferrite devices.

*Scientific and
Engineering Staff*

HUGHES

RESEARCH AND DEVELOPMENT
LABORATORIES

*Culver City
Los Angeles County
California*