

SCIENCE EDUCATION

Summer Institutes

During the summer of 1961, the National Science Foundation will support 395 summer institutes at 260 colleges and universities. Some 140 of the institutes will offer courses in multiple fields, with physics included in 122 cases. Other institutes will specialize in mathematics (88), biology (29), chemistry (22), and physics (17). Of the 139 summer institutes which will offer training in physics, 131 are for high-school teachers only, six will accept both high-school and college teachers, and two are for college teachers only. Seven of the multiple-field institutes will include training in astronomy for high-school teachers, and five will offer study in the history and philosophy of science. Two institutes will specialize in the latter subject and will be for college teachers only.

The 1961 program, made possible by NSF grants totaling nearly \$22.7 million, will permit 20 000 teachers to take courses designed (1) to refresh their knowledge of fundamentals in science and mathematics, (2) to enable them to learn of recent scientific developments, and (3) to acquaint them with new approaches in presenting subject matter. Most institutes accept about fifty applicants. The courses are six or eight weeks in length and include lectures, demonstrations, discussion sessions, and classroom and laboratory work. Instruction is given by members of the host institution's faculty, augmented on occasion by visiting scientists, lecturers, and teachers. Participants in the institutes have the opportunity to work closely with faculty members in both formal and informal sessions. Tuition and fees are paid under the Foundation grants, and participants receive stipends (up to \$75 per week), travel allowances, and allotments for as many as four dependents. Information and application forms must be obtained from the directors of the individual institutes—not from the Foundation. However, a list of the 1961 summer institutes and their directors can be requested from the National Science Foundation, Washington 25, D. C.

The six institutes offering training in physics for both college and high-school teachers are at Colorado College, Colorado Springs (Dr. R. G. Beidleman, director); Michigan State University, East Lansing (Dr. Wayne Taylor); University of Mississippi, University (Dr. Noel A. Childress); Mississippi State University, State College (Dr. Clyde Q. Sheely); Nebraska Wesleyan University, Lincoln (Dr. W. R. French, Jr.); and Eastern Tennessee State College, Johnson City (Dr. Lester C. Hartsell).

For college teachers only are the physics institute at Western Michigan University, Kalamazoo (Dr. Haym Kruglak); the institute specializing in reactor physics at Rensselaer Polytechnic Institute, Troy, N. Y. (Prof. A. A. K. Booth); and the institutes on the history and philosophy of science at American University, Washington, D. C. (Dr. Leo Schubert), and at the University of Oklahoma, Norman (Dr. Horace E. Hoffman).

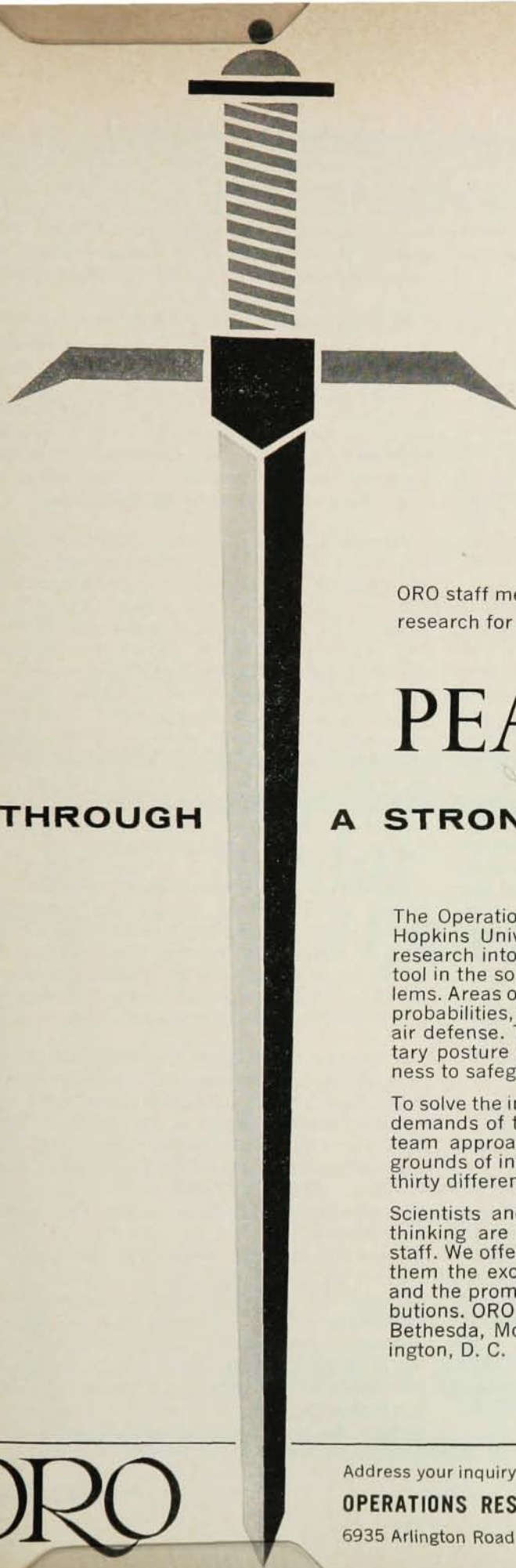
Graduate Study

Princeton University has inaugurated a program of graduate study in the solid-state and materials sciences leading to the PhD for graduate students in physics, chemistry, and engineering. The interdepartmental program has been organized in Princeton's School of Engineering and is under the leadership of a specialist in solid-state physics, Roman Smoluchowski, who left the faculty of Carnegie Institute of Technology last year to accept a professorship at Princeton. Facilities are available for studies at low and at high temperatures and for research involving x-ray diffraction, paramagnetic and nuclear resonance, color centers, conductivity and other phenomena in dielectric materials, surface properties and reactions, etc. Those taking part in the program also have access to accelerators and nuclear reactors for irradiation studies and to electronic computers for numerical calculations. The University has indicated that a number of fellowships and assistantships are available. Solid-state research activities carried out at Princeton are supported by the University and by government agencies.

Northeastern University, Boston, Mass., will initiate PhD programs in physics, chemistry, and electrical engineering in September. Additions have been made to the staff, and physical facilities have been increased in order to provide for this program. Research funds have been allocated by the University and several research grants have been obtained for the doctoral graduate work.

Aid to Education

The Atomic Energy Commission has approved grants totaling more than \$1.5 million to 113 educational institutions for the purchase of laboratory equipment needed to expand or to initiate nuclear education programs in the physical and life sciences and in engineering. These grants are the latest in a four-year-old program under which the AEC has so far provided



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over \$18.4 million to 330 institutions for equipment. Many of these institutions have also received nuclear materials (valued at about \$10 million) on loan from the Commission. Two thirds of the funds provided under the last group of equipment grants were awarded to 59 institutions for equipment in the physical sciences and engineering.

Engineering educators attending a sectional session of the American Association of Land-Grant Colleges and State Universities last November were told by spokesmen for the AEC that educational institutions can expect to receive increased support for education, research, and facilities related to programs in atomic energy. Walter E. Hughes, chief of program analysis in the AEC's Division of Research, stated that the Commission plans to finance buildings needed for on-campus nuclear projects: "the problems of research buildings and facilities . . . will be resolved. . . . The universities have a need for about \$5 billion for facilities. The facilities will be provided one way or another."

Speaking at the same meeting, John C. Cera, in charge of education and training in the Commission's Division of Reactor Development, said that while most nuclear equipment grants have in the past been awarded to engineering schools, the AEC will in the future make such grants available to colleges of arts and sciences as well. Cera called for strengthening higher education in nuclear science and engineering and indicated that the AEC plans to assist in reaching that goal by providing colleges with equipment and material that will stimulate nuclear studies in chemistry, physics, metallurgy, and engineering. A third Commission spokesman, A. Tammaro, assistant general manager for research and industrial development, reported that an increased percentage of AEC support for basic physical research will be shifted to educational institutions and away from the AEC's own national laboratories.

Surplus electronic components valued at \$15 000 were recently contributed by Baird-Atomic, Inc., to the New England School Science Advisory Council for distribution to high schools throughout the New England states. The Council was formed a year ago by a group of professional and scientific organizations to encourage training in science and mathematics at the secondary-school level.

The establishment of a reservoir of surplus and replaced industrial equipment for use in the science classroom is only one aspect of the Council's program. NESSAC also provides speakers for science classes, arranges demonstrations to supplement lectures, offers career guidance and scholarship information, arranges tours to industrial plants, and provides consulting services to teachers and students.

For additional information concerning the NESSAC program, write to C. W. Grinnell, Public Relations Director of the New England Council, Statler Building, Boston 16, Mass.

School Facilities and Programs

Yale University has received a gift of approximately \$10 million from C. Mahlon Kline of Philadelphia for the construction of a new science center in New Haven. To be known as the "Kline Science Center", it will consist of a chemistry laboratory, a library and laboratories for the biological sciences, a geology building, and an auditorium.

Although the center will not include facilities for physics, it will permit a reallocation of space now used for biological study in the Gibbs Laboratories and will thus provide Yale's Physics Department with considerably more working space. The new chemistry building, to be devoted exclusively to research, will extend from the Sterling Chemistry Laboratory to the atomic accelerator buildings, forming one end of an open court of science buildings on the Yale campus.

Pensacola Junior College in Florida has installed a Lockheed 501 subcritical training reactor as part of its newly established program in nuclear education. The curriculum, which now consists primarily of a survey of nuclear science and technology, will eventually include the study of radioisotopes in physics, chemistry, and biology, as well as instruction in nuclear instrumentation and reactor design. The school decided to acquire the instrument as a result of a community workshop on nuclear technical education which was held a year ago in Pensacola, and the training program will be developed with the help of a local advisory committee consisting of representatives of industry and the Navy. Support for the project was supplied by Lockheed Nuclear Products.

Equipment for Carleton College's new Olin Hall of Science will include an electron microscope costing \$34 750, a gift from the Olin Foundation of New York City. An earlier award from the Foundation for \$1.51 million has made possible the College's science hall for biology and physics, now under construction and scheduled for completion in August of this year.

A program of affiliation, beginning with the 1961-62 academic year, has been announced by Rensselaer Polytechnic Institute and Russell Sage College, located on nearly adjoining properties in Troy, N. Y. The two schools have decided that women science and engineering students living at Sage will in the future study at Rensselaer. Although coeducational by charter, Rensselaer has had no dormitory facilities for women and has therefore been able to accept only those female students who have been residents of the local area.

Under the new program, prospective women students will apply directly to Rensselaer for admission and will be admitted in open competition with male applicants. Successful candidates will take all academic work at RPI and their academic status will be entirely under the control of that institution's faculty. The program is intended "to have the twofold benefit of helping to increase the nation's professional engineering and sci-