

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