

SCIENCE EDUCATION

Graduate program

A PhD program in physics will start at the City University of New York in September 1964. Graduate courses for the first two years of the program will be offered at all four colleges of the University: Brooklyn, City, Hunter, and Queens. The advanced third-year courses will be offered only at The City College, where the program is based. Research opportunities are offered in particle physics (in conjunction with Brookhaven National Laboratory), low-temperature physics, solid-state physics, nuclear physics, biophysics, acoustics, atomic and molecular physics, relativity, and field theory. A significant expansion in the size of the graduate staff is planned for the coming years.

A number of teaching and research assistantships are available to qualified students. Those interested are invited to apply to the chairman of the Graduate Physics Committee, Mark Zemansky, City College, Convent Avenue and 139th Street, N.Y. 31, N.Y.

NSF fellowship programs

The National Science Foundation has announced schedules for five fellowship programs.

October 12th is the application deadline for both senior postdoctoral and science faculty fellowships. Some 100 senior postdoctoral fellowships will be open to individuals who have held the doctoral degree for at least five years or have equivalent education and experience. Approximately 350 science faculty fellowships are being offered to holders of a baccalaureate degree or its equivalent who have taught full time at the college level for not less than three years and intend to continue teaching.

November 2nd is the deadline for the NSF cooperative graduate fellowships. Applicants must apply through one or another of the institutions participating in the program. Annual stipends for cooperative graduate fellows will be \$2400 for first-year graduate students, \$2600 for those in their intermediate years, and \$2800 for

those in their terminal year. The institutions may increase these amounts by as much as \$1000. All payments will be reduced proportionately for tenures of an academic year.

Application forms and additional information concerning the above three NSF programs can be obtained from the Fellowships Section, Division of Scientific Personnel and Education, National Science Foundation, Washington, D. C. 20550.

Applications for NSF postdoctoral fellowships in the sciences and in the history and philosophy of science must be received by September 8. About 75 fellowships are to be awarded for advanced study or research at nonprofit institutions in the US or abroad by American citizens or nationals who have the doctoral degree or its equivalent in research and training experience.

Applications for NSF graduate fellowships in the sciences and history and philosophy of science must be filed by December 11. Awards will be made to individuals studying for either master's or doctoral degrees who are at the first-year, intermediate, or terminal-year level. Applications and further information regarding both the NSF postdoctoral fellowships and the NSF graduate fellowships can be obtained from the Fellowship Office, National Academy of Sciences—National Research Council, 2101 Constitution Ave., NW, Washington, D. C. 20418.

NATO fellowships

On behalf of the Department of State, the National Science Foundation will again administer United States participation in North Atlantic Treaty Organization postdoctoral fellowships in the sciences. Applicants are required to have earned, by the beginning of their fellowship tenure, a doctoral degree in the sciences, or to have had research training and experience equivalent to that represented by a doctoral degree. NATO fellows will receive \$5500 for tenures

of a full year and \$4125, for nine months. Limited round-trip travel and dependency allowances will also be provided. The evaluation of each applicant's qualifications will be made by panels of scientists appointed by the National Academy of Sciences—National Research Council and final selection will be made by NSF.

In view of the sponsorship and objectives of the program, it is expected that in most cases US recipients will study in a country that is a member of NATO. However, consideration will be given to those planning to study elsewhere. Application materials and detailed information about the program can be obtained from the Fellowship Office, NAS-NRC, 2101 Constitution Ave., NW, Washington, D. C. 20418. Fellowship applications must be received by the NAS-NRC by October 5. The awards will be announced by the Foundation on December 7.

Teaching methods and equipment

Five visiting physicists are spending the summer at Rensselaer Polytechnic Institute on a project designed to help develop new methods and equipment for teaching college physics. The RPI program, sponsored by a \$72,110 grant from the National Science Foundation, is directed by Robert Resnick and Walter Eppenstein of Rensselaer's Physics Department. The visiting scientists, who will also return to RPI to attend conferences on the program during the coming academic year, include Hans Bichsel of the University of Southern California in Los Angeles, Alfred Leitner of Michigan State University, Ralph Llewellyn of Rose Polytechnic Institute in Terre Haute, Ind., Leonard Muldrew of Temple University, and Berol L. Robinson of Western Reserve University.

The purpose of the program is to develop new laboratory experiments, lecture demonstration equipment, and films and audio-visual aids for teaching atomic, nuclear, and solid-state physics. Materials designed under the program will be tested in classrooms at RPI and at home institutions of the visiting physicists before being made generally available.