ments should include college-level studies in ac circuits and elementary electron tube circuits, as well as mathematics through differential equations. Designed to cover fundamentals of generation and transmission at high frequency, the course will also be concerned with some of the new industrial applications of microwave radiation. Requests for additional information should be addressed to The Director of Special Programs, Case Institute of Technology, 10900 Euclid Avenue, Cleveland 6, Ohio.

Polytechnic Institute of Brooklyn is offering a summer laboratory program for industry consisting of the following intensive courses in the use of specialized tools in physics and chemistry: Industrial Application of X-Ray Diffraction (June 2–13), Applied Infrared Spectroscopy (June 2–6), Polarography and Related Techniques (June 2–6), Synthesis of Polymers with Controlled Propagation (June 16–27), Ion Exchange Resins and Membranes (July 7–11), and High-Temperature Solution Techniques (July 7–11). Further information may be obtained from Mrs. Doris Cattell, Polytechnic Institute of Brooklyn, 333 Jay Street, Brooklyn 1, N. Y.

A three-day seminar on electrical contacts, intended for engineers and physicists working in the areas of heavy current and sliding electrical contacts, is to be held June 16–18 at The Pennsylvania State University. The annual seminar will be conducted mainly on a lecture-demonstration basis, with two sessions each day. Afternoons of the second and third day will be set aside for small group discussions on topics to be selected by those enrolled in the seminar. Further information may be obtained from Prof. Ralph E. Armington, 104 Electrical Engineering Building, The Pennsylvania State University, University Park, Pa.

An advanced short course in quality control by statistical methods will be held June 10–20 at Purdue University, Lafayette, Ind. The course, under the direction of Irving W. Burr, will cover significance tests and estimation, linear and multiple correlation and regression, single and sequential sampling for measurements, and analysis of variance. Further information may be obtained from Prof. Burr at the Statistical Laboratory, Purdue University, Lafayette, Ind.

Programs and Facilities

Georgia Institute of Technology broke ground on March 27 for a new $600 000 Radioisotopes and Bioengineering Laboratory building. About 60 percent of the building will be devoted directly to radioisotopes and nuclear physics applications in educational research, with the other 40 percent being used for biological research. Special laboratory facilities will include Georgia Tech's subcritical assembly and a 1-Mev Van de Graaff accelerator as well as specific areas devoted to such subjects as the biological effects of radiation and airborne bacteria. Completion of the laboratory is expected in the spring of 1959.

An advanced home-study course in nuclear engineering will be offered this fall by CREI Atomics, Inc., a newly formed subsidiary of the Capitol Radio Engineering Institute of Washington, D. C. The Institute offers college-level electronics courses (accredited by the Engineers' Council for Professional Development) and awards the degree of Associate in Applied Science to resident graduates as well as conducting extension courses for industrial and governmental groups in the Washington, D. C., area. The nuclear engineering course is intended specifically for engineering and technical personnel in industry, government, and the military services who plan to enter the atomic energy field.

A program leading to the PhD degree in physics is to be established at St. John's University of Brooklyn, N. Y., starting with the fall semester. The beginning of the expanded graduate program will coincide with the opening of St. John's $4.25 million Science-Pharmacy Hall now under construction at the University's Long Island Division in Jamaica, N. Y. The school has also announced that all graduate physics courses will be given in the new science building in the evening to meet the needs of those holding full-time positions. S. Nevil Milford is chairman of St. John's Graduate School Department of Physics.

Robert L. Boyer, formerly a physicist with the US Bureau of Mines in Pittsburgh, Pa., died on January 22 after an extended illness. His age was 47. Mr. Boyer, who was born in Elizabethville, Pa., graduated from Ursinus College in 1930 and received his master's degree in 1932 from Lafayette College, where he was an instructor in physics. He joined the physics staff of the US Bureau of Mines in Pittsburgh in 1937 and remained there until 1945 when he became a research physicist with the Gulf Research and Development Co. In 1947 he rejoined the Bureau of Mines. Mr. Boyer was a member of the American Physical Society.

D. L. Chapman, the Chapman of the "Chapman-Jouguet conditions" familiar to those working in gas dynamics, died on January 17th at the age of 88. Prior to his retirement 14 years ago he had been in charge of a laboratory for the teaching of chemistry at Jesus College, Oxford, where he had mainly been occupied in photochemical studies extending over a period of four decades. Still earlier, he had served as a lecturer in chemistry under H. B. Dixon at the University of Manchester, and in 1899 he submitted to the *Philosophical Magazine* a mathematical interpretation of detonation velocities in gases as measured by Dixon. Subsequently Jouguet provided reinforcing maximum explosion-rate results that led historically to his name being linked with Chapman's in their theoretical elaboration of the Hugoniot description of detonation-wave characteristics. Chapman was involved during World War II in the British atomic energy program, and following his retirement lived in East Oxford. He was a Fellow of the Royal Society.