

teachers into such physics classes it is recommended that the courses be organized at the level of the teacher's preparation and with his needs in mind; that arrangements be made with the Graduate Schools and Departments of Education which will permit the use of credit in these courses toward the master's degree in Education. The courses should be taught by members of the departments of physics and should receive the active sponsorship of those departments."

Duke's Engineering Program

Duke University will inaugurate new programs of graduate study in civil and mechanical engineering next fall. The additional courses will augment graduate study courses in electrical engineering that were added last September. The new graduate engineering programs in the College of Engineering will each lead to the master of science degree.

Scientists in the News

EDGAR ANDERSON, Engelmann professor of botany at Washington University (St. Louis) and director of the Missouri Botanical Garden, has become curator of useful plants at the garden. A grant of \$14,000 from the Guggenheim Foundation will allow him to explore the possibilities of extending his techniques for the measurement of variation to various kinds of organisms and various kinds of problems. Until April, he is the guest of the mathematics department at Princeton University, where he is working with John Tukey.

CLAUDIO ALVAREZ-TOSTADO, professor of physical sciences at Stanford University, is spending the current academic year on the faculty of the University of San Andres in La Paz, Bolivia, as a visiting professor of chemistry. His stay with the South American institution is being financed by the Department of State's International Educational Exchange Program.

HANS KRAESSIG, a German cellulose chemist who was associated for several years with Nobel laureate Herman Staudinger at the University of Freiburg, will head the new department of cellulose research at Industrial Cellulose Research Limited, Montreal, Canada, a subsidiary of the Canadian International Paper Company.

JOHN H. GAETH, former director of the Hearing Clinic at Northwestern University, has been named professor of speech and director of the Hearing Clinic at Wayne State University.

SAUL WINSTEIN, professor of chemistry at the University of California, is the Baker lecturer in chemistry at Cornell University for the spring term. He is lecturing twice weekly on "Neighboring groups, solvolysis, and rearrangement."

ROBERT C. JAMES, associate professor of mathematics at Haverford College, has been named professor and chairman of the mathematics department of Harvey Mudd College, Claremont, Calif. Coauthor with his father, Glenn James, of *A Mathematics Dictionary*, James has participated in studies administered by the Ford Foundation to discover ways of teaching college mathematics to selected high-school students. His research has included investigation of the implications of the existence of bases for Banach spaces.

IRVIN W. SIZER has been appointed head of the department of biology at the Massachusetts Institute of Technology. Sizer, who has taught physiology and biochemistry at M.I.T. since 1935, had been serving as executive officer and acting head of the department. He is well known for his studies of the fundamental properties and medical applications of enzymes.

F. W. SCHUELER has been appointed professor and chairman of the department of pharmacology at the Tulane University School of Medicine.

LLOYD J. ROTH has been named chairman of the department of pharmacology at the University of Chicago. He succeeds EUGENE M. K. GEILING, Frank P. Hixon distinguished service professor, who is retiring after 20 years as head of the department.

ARTHUR E. RUARK, Temerson distinguished service professor of physics at the University of Alabama, has been named chief of the controlled thermonuclear branch in the Division of Research, U.S. Atomic Energy Commission. He will administer the research program that is known as "Project Sherwood." He succeeds AMASA S. BISHOP, who recently became the commission's technical representative of the American Embassy in Paris.

Another AEC appointment is that of PAUL C. FINE as director of the Office of Operations Analysis and Planning. This office, which is a division of the general manager's office, is responsible for engineering and economic analysis of major technical programs and for coordinating long-range plans. Last year Fine, who joined the AEC staff in 1947, served as assistant to the late John von Neumann.

THOMAS H. PIGFORD, associate professor of nuclear and chemical engineering at Massachusetts Institute of Technology, has joined the General Dynamics Corporation's General Atomic Division. He will be chairman of the department of reactor engineering of General Atomic's John Jay Hopkins Laboratory for Pure and Applied Science. Though he has specialized in the nuclear, mechanical, and chemical design of power reactors, Pigford also has worked in the fields of isotope separation, purification of special reactor materials, and reprocessing of irradiated nuclear fuels.

The Kresge-Hooker Science Library Associates and the department of chemistry at Wayne State University have announced the spring schedule for the Frontiers in Chemistry lecture series. The following guests will lecture at 7:15 P.M. in the Kresge Science Library Building (Detroit).

25 Feb., T. S. WHEELER, University College, Dublin, Ireland, "Unsolved problems in flavonoid chemistry"; 11 Mar., THOMAS SINGER, Edsel B. Ford Institute for Medical Research, Detroit, Mich., "Metal-flavoprotein catalysis"; 18 Mar., STANLEY BRUCKENSTEIN, University of Minnesota, Minneapolis, Minn., "Acid-base reactions in glacial acetic acid"; 22 Mar., E. R. H. JONES, Oxford University, Oxford, England, "Some aspects of allene chemistry"; 1 Apr., D. H. R. BARTON, University of Glasgow, Glasgow, Scotland, "Some recent advances in the chemistry of sesquiterpene lactones"; 15 Apr., MILTON BURTON, University of Notre Dame, Notre Dame, Ind., "Radiation Chemistry"; 29 Apr., MICHAEL J. S. DEWAR, Queen Mary College, University of London, London, England, "Aromatic substitution"; 6 May, RONALD S. NYHOLM, University College, London, England, subject to be announced.

HANS H. WEBER, director of the Institute of Physiology in the Max Planck Institute for Medical Research, Heidelberg, Germany, will deliver three lectures on "The motility of muscle and cells" in New York next month under the sponsorship of the Muscular Dystrophy Associations of America, Inc. The lectures have been scheduled as follows: 4 Mar., 5 P.M., Columbia Medical Center, "The phenomena and conditions in the interior of the muscle fiber during contraction and relaxation"; 6 Mar., 4 P.M., Rockefeller Institute for Medical Research, "Facts and theories concerning the mechanism of the contraction phase of the muscle"; 8 Mar., 5 P.M., New York University Washington Square Center, "The four mechanisms involved in the movement of cells."

The following men have joined the staff of the year-old department of scientific research at Convair Division of General Dynamics Corporation, San Diego, Calif.:

JOHN E. NAUGLE, formerly of the University of Minnesota, senior staff scientist in physics; ORLO MYERS, formerly of the Stanford Research Institute, senior staff scientist in chemistry; HAROLD A. PAPAZIAN, formerly of the Raytheon Manufacturing Company, staff scientist in physical chemistry; EUGENE J. PUTZER, formerly of Macalester College, staff scientist in mathematics; and ROBERT J. GOOD, formerly of the University of Cincinnati, staff scientist in chemistry.

MINOR I. HUGHES, formerly senior staff engineer and project leader in the Franklin Institute Laboratories, Philadelphia, Pa., has been named chief of the laboratories' machine development section. He succeeds WILLIAM W. DICKHART, III, who resigned to work with another organization. In his new position, Hughes will plan, direct, and coordinate projects requiring research, design, and development of machines and machine components.

B. D. THOMAS has succeeded CLYDE WILLIAMS, president of Battelle Memorial Institute, Columbus, Ohio, as director of Battelle's extensive research operations in the United States and Europe. Thomas, who is vice president of Battelle, has been a member of the institute's executive and technical staff since 1934.

JOHN H. EISEMAN of the gas chemistry section of the National Bureau of Standards has been given the Award of Merit of the operating section of the American Gas Association. Eiseman's work at NBS centers around research on the physical and chemical properties of fuel gases. Much of this work has been in association with the American Gas Association, with whom the bureau has cooperated for more than 30 years.

PAUL A. LEMBCKE, associate professor at the Johns Hopkins University School of Hygiene and Public Health, recently returned from Manila, where he was visiting professor of both epidemiology and hospital administration at the Institute of Hygiene, University of the Philippines. During his visit, which was supported by the World Health Organization and the Rockefeller Foundation, Lembcke surveyed the government hospital system and the teaching of public health, investigated an apparently new disease, Philippine hemorrhagic fever, and examined health conditions in the remote Sulu Archipelago.

FRANÇOIS N. FRENKIEL, member of the principal staff of the Johns Hopkins University Applied Physics Laboratory, Silver Spring, Md., has been appointed consultant to the Applied Mathematics Laboratory of the David Taylor Model Basin, Washington, D.C. He will continue a part-time association with the Applied Physics Laboratory, which is sponsoring a new series of monographs on applied mathematics and mechanics under his editorship.

HOWARD A. ROBINSON has been named chairman of the physics department at Adelphi College. He replaces ALBERT C. KRUEGER, chairman since 1949, who is leaving to enter industry. The new department head joins Adelphi after having served since 1952 as first secretary of the United States Embassy in France and as special assistant on scientific matters to the U.S. Ambassador.

HERBERT J. DUTTON, head of the Forage and Agricultural Residues Section of the Northern Utilization Research Branch, Agricultural Research Service, U.S. Department of Agriculture, Peoria, Ill., has won first award of \$1000 and an honor plaque in the 1956 glycerine research award contest of the Glycerine Producers' Association. The association makes these awards annually in recognition of new and independent research contributing to knowledge and use of glycerine. Dutton's award-winning accomplishment was the application of a recently developed extraction technique to investigate complex natural glycerides such as linseed oil.

DONALD B. ZILVERSMIT, professor of physiology at the University of Tennessee Medical Units in Memphis, won the second award (\$300 and an honor plaque) for his use of glycerine as a suspension medium in preparing high-caloric fat emulsions for intravenous injection.

STANLEY G. KNIGHT, professor of bacteriology at the University of Wisconsin, received the third award (\$200 and an honor plaque) for his research establishing a glycerine derivative, triacetin, as a new fungicide.

J. H. McLEOD, dean of the University of Tennessee College of Agriculture, retired from the university on 29 Jan. He was succeeded by WEBSTER PENDERGRASS, agronomy specialist at Tennessee.

D. A. WORCESTER retired from the department of educational psychology and measurements at the University of Nebraska on 1 Feb. He has accepted an appointment as visiting professor at the University of Wisconsin.

F. J. REITHEL has been appointed professor and head of the department of chemistry at the University of Oregon, Eugene. In the same department, TERRELL HILL has been appointed professor of chemistry. He will transfer from the Naval Medical Research Institute on about 1 July.

CHARLES N. MOORE, professor emeritus of mathematics and fellow in the University of Cincinnati's Graduate School of Arts and Sciences, has been appointed visiting professor of mathematics at the University of South Carolina, Columbia.

J. ROBERT OPPENHEIMER, director of the Institute for Advanced Study at Princeton, N.J., has received the Drexel Institute's annual science and engineering award. He was cited for his "major contributions in the field of theoretical physics and in the organization and administration of scientific research . . . and in appreciation of the challenge given the world to use science in a spirit of benevolence for the betterment—not the destruction—of mankind."

VICTOR H. HAAS, microbiologist and director of the National Institute of Allergy and Infectious Diseases, Bethesda, Md., since 1948, will return to laboratory research at that institute. He will be succeeded by JUSTIN M. ANDREWS, now associate chief of programs in the Public Health Service's Bureau of State Services. The changes will become effective in April.

Recent Deaths

FRED R. BEAUDETTE, New Brunswick, N.J.; 59; professor of animal pathology at the College of Agriculture, Rutgers University; 16 Jan.

DION K. DEAN, Rahway, N.J.; 72; former head of the industrial division of the Foster Wheeler Corporation; 7 Feb.

RAYMOND E. KIRK, Brooklyn, N.Y.; 66; dean of the graduate school of the Polytechnic Institute of Brooklyn; 6 Feb.

DOUGLAS D. R. MacCALMAN, London, England; 53; professor of psychiatry at Leeds University; 31 Jan.

ISADOR RIPPS, Plainfield, N.J.; 54; assistant professor of clinical medicine at New York University-Bellevue Medical Center; 17 Jan.

W. HENRY RIVARD, Providence, R.I.; 73; dean of the Rhode Island College of Pharmacy; 5 Feb.

ALBERT C. SCHAEFFER, Madison, Wis.; 49; professor of mathematics and chairman of the department at the University of Wisconsin; 2 Feb.