



Carl Covalt Chambers

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1907–1987

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Submitted by the Nae Home Secretary

Carl Covalt Chambers died suddenly on November 25, 1987, in Palm Harbor, Florida, where he had lived with his wife, Margaret Morrison Chambers, since his retirement from the University of Pennsylvania in 1975.

Dr. Chambers' wide-ranging career included contributions to the fields of teaching, research, consulting, and administration—in his university and in several national and international professional societies.

Dr. Chambers received his B.S. from Dickinson College in 1929; he majored in mathematics. He worked in research and development for RCA in Camden, New Jersey, (three years) and in research at the Bartol Research Foundation of The Franklin Institute (one year), before his appointment as an instructor of electrical engineering in the Moore School of Electrical Engineering, University of Pennsylvania, in 1933. At that time he had already completed most of the course work for the D.Sc. (electrical engineering) at the university; the degree was awarded in 1934.

Dr. Chambers designed and presented both undergraduate and graduate courses and courses organized for special purposes during World War II. He was known and respected for his unconventional but effective methods of stimulating his students to learn for themselves rather than to be instructed by

lecture and examination. He was one of the first to present courses in physical electronics.

In research he was particularly versatile. His work at RCA and Bartol was essentially scientific research in the field of cold emission from metal surfaces at high field gradients. In contrast, during World War II he participated in and directed classified projects in short-range communication and radio interference under grants from the Office of Scientific Research and Development and the Office of Naval Research. At the same time, he supervised a program of courses offered at the university under the Engineering, Science, and Management War Training Program.

Dr. Chambers was supervisor of research in the Moore School from 1947 to 1949. He had been promoted through the several ranks to become professor of electrical engineering in 1947. He became dean of the Moore School in 1949. He served as vice-president for engineering affairs from 1953 to 1972, when he fostered a reorganization of the engineering departments into a more unified structure.

Carl Chambers served as consultant to many companies, including Brooke Engineering Company (1934–1954), automatic industrial controls; Edward Stern & Company (1936–1954), research into improved methods of photoengraving and lithography; International Resistance Company (1944–1954), design of an automatic bridge to sort resistors to preselected tolerances; and Hazeltine Corporation (1939–1940), extensive consultations during an extended research planning conference on FM and TV system designs. As a result of this work, he was awarded eight patents.

In spite of the demands of his academic position, Dr. Chambers welcomed opportunities to contribute to the activities of professional societies including the American Institute of Electrical Engineers (fellow 1932); Institute of Radio Engineers (fellow 1929); Institute of Electrical and Electronic Engineers (life fellow 1963); National Society of Professional Engineers; Engineers Joint Council; American Society for Engineering Education (fellow 1946, president 1968–69). He was particularly interested in the International Electrotechnical Commission

(IEC) (1946–70). He served as member and chairman of two technical committees of IEC, helped to organize the 1954 and 1970 IEC meetings in the United States, and was a delegate to many IEC meetings throughout the world.

Carl Chambers was honored by election to membership in several engineering honor societies; by his selection as Engineer of the Year in the Delaware Valley in 1966; and in particular, by his election into membership in the National Academy of Engineering in 1970.

Carl Chambers was a careful, even-handed, unbiased administrator. He would discuss problems with his colleagues, state what he thought should be done, and listen to responses. After a decision had been reached, he expected the responsible colleagues to implement it. Thus, as indicated above, his innate ability to manage led to his selection for positions of high responsibility.