EARNEST F. GLOYNA
1921–2019

Elected in 1970

“Leadership in engineering education, water resources management, and environmental engineering.”

BY DESMOND F. LAWLER, DAVIS L. FORD, GARY A. POPE, AND C. MICHAEL WALTON

EARNEST FREDERICK GLOYNA, who served as dean of the College of Engineering (now the Cockrell School of Engineering) at the University of Texas, Austin, from 1970 to 1987, passed away January 9, 2019, at the age of 97.

Dean Gloyna transformed the College of Engineering from a good engineering school to one of national and international prominence for both its education and research. His vision was to build excellent facilities and hire superb faculty, knowing that these two ingredients would attract the necessary third: top-notch students. That vision became reality thanks to his shrewd leadership and excellent management skills.

Earnest was born June 30, 1921, to Herman Ernest and Johanna Bertha (née Riethmayer) Gloyna, in the small town of Vernon, Texas. He grew up on the family farm and enrolled at Texas Tech University, where he earned a BS in civil engineering in 1942, just as the country was entering the Second World War. Having been in the Reserve Officers’ Training Corps, he was commissioned as a second lieutenant in the US Army upon graduation. He participated in the D-Day invasion at Omaha Beach, where he helped build airfields for allied troops and,

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through this and other campaigns in the 820th Engineering Battalion, rose to the rank of major. He remained proud of his military accomplishments, but always wary of the devastating effects of war.

In February 1946 he married Agnes Mary Lehman, whom he had known since childhood. They were married 65 years, until Agnes’ death in June 2011, and had two children.

Earnest worked in industry briefly, at the Magnolia Petroleum Company in Dallas, and then, after a summer appointment with the Atomic Energy Commission (in Oak Ridge, Tennessee), enrolled in the master’s degree program in civil engineering at the University of Texas at Austin. He completed his degree in 1949 and accepted an appointment to the UT faculty in civil engineering, but took a leave of absence to obtain a doctorate in sanitary engineering (now environmental engineering) and water resources at the Johns Hopkins University (1953). He then returned to UT, as an assistant professor, and spent the rest of his career there until his retirement in 2001, when he was recognized as the Bettie Margaret Smith Chair Emeritus in Environmental Health Engineering.

Focusing on the evaluation and improvement of water quality, his early work was on technology for treating municipal and industrial wastewaters (oxidation ponds). His book *Waste Stabilization Ponds* (World Health Organization, 1971) was translated into many languages and used all over the world for several decades. His 1991 paper “Generalized Kinetic Model for Wet Oxidation of Organic Compounds,” coauthored with Lixiong Li and Peishi Chen, was his most highly cited work.\(^1\)

Over the decades he both taught graduate classes on and consulted widely on the treatment of industrial waste, working on international projects with the World Health Organization and the World Bank. As an example, he was one of two foreign consultants invited to provide environmental oversight for China and the World Bank on the Yangtze River Three Gorges Dam project.

\(^1\) Published in *AIChE Journal* 37(11):1687–97.
His external consulting projects supported his academic work with students, as he believed that an engineering professor teaches best when exposed to real-world problems and solutions. His involvement in such projects also effectively represented his interest in engineering to provide accessible approaches to health problems in developing countries and his belief, more broadly, that development should be associated with promoting, not impairing, the health and well-being of people and other living things.

He stepped down as dean at the age of 70 and had a highly productive research career for the next 10 years, primarily investigating the possible use of supercritical water oxidation as a treatment process for highly recalcitrant organic compounds present in industrial wastes.

In addition to his considerable academic and research contributions, he served on the Council of the National Academy of Engineering (1981–86) and the NAE’s Academic Advisory Board (1995–98), whose purpose was to “serve the goals of the NAE as they relate to strengthening and maintaining currency in engineering education.”

Earnest’s professional accomplishments led to awards and achievements too numerous to list. Among the most important were his NAE election (1970), chairmanship of the US Environmental Protection Agency’s Science Advisory Board (1981–83), and presidency of the (national) Water Pollution Control Federation (now the Water Environment Federation) (1983–84). He was a founding member of what is now known as the Association of Environmental Engineering and Science Professors, a distinguished member of the American Association of Civil Engineers (ASCE), and a member of the American Academy of Environmental Engineers (president, 1983) and the Academy of Medicine, Engineering and Science of Texas (TAMEST). In 2003 he received ASCE’s OPAL Award in Education. Honored by professional organizations throughout the world, in both developed and developing countries, he was particularly pleased to be designated a distinguished alumnus of his three alma maters—Texas Tech (1973), UT Austin (1992), and Johns Hopkins (1993).
In his later years he enjoyed spending time at the Little G Ranch, near Burnet, Texas, where he and Agnes hosted friends and colleagues.

In all his endeavors, Earnest was a strong leader with exemplary ethics and professionalism. As dean he led initiation of UT’s Equal Opportunity in Engineering program, and under his leadership the school saw a significant increase in the number of minorities and women who enrolled in engineering programs.

He demanded a lot from all who worked in the College of Engineering, but no more than he demanded of himself. His relentless pursuit of greatness for professional engineering (he was a registered PE in the state of Texas), the College of Engineering, and the entire University of Texas allowed that vision to be realized during and following his tenure as dean. Few faculty members have impacted UT Austin like Earnest F. Gloyna.

He is survived by son David Gloyna (Sue), daughter Lisa Gloyna, three grandchildren, and three great-grandchildren.