



The University of Texas at Tyler  
College of Engineering and Computer Science  
Faculty Biographical Sketches

**THOMAS E. CRIPPEN, PH.D., P.E.**

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***CURRENT POSITION:***

Professor, Mechanical Engineering

***BIOGRAPHICAL SKETCH***

Dr. Thomas E. Crippen received a Bachelor of Science in Mechanical Engineering degree from the A&M College of Texas in 1961. He received a Master of Science in Mathematics and a Doctor of Philosophy from Texas A&M University, completing his graduate work in 1969. He specialized in applied mathematics for his Master's degree and in structural mechanics, in particular thin shell theory, within Mechanical Engineering for his Ph.D. He is a registered professional engineer in the State of Texas, a Life Member of the American Society of Mechanical Engineers, was elected to membership in the Orthopedic Research Society, and is a member of the American Society for Engineering Education.

Prior to receiving his Ph.D., he was a teaching assistant and part-time instructor in mathematics, and a research associate with the Texas Petroleum Research Committee at Texas A&M University. He joined the engineering faculty at the University of North Carolina at Charlotte in 1969 as an assistant professor of engineering mechanics. He became a tenured associate professor in 1975 and remained on the faculty there until 1984. While on leave of absence during 1980 – 1981 he was a Research Fellow in Orthopedic Biomechanics at the Mayo Clinic in Rochester, MN.

In 1984 he was employed by Howmedica, Inc., a Pfizer Hospital Products Group orthopedic company, as Manager of Biomechanics to create a Biomechanics Laboratory and later became Assistant Director of Research and Development. He left that position in 1990 to become Assistant Director of Development in the Surgical IOL R&D division of Alcon Laboratories in Fort Worth, TX. He was a member of the team that developed the highly successful Acrysof intraocular lens, the first soft acrylic, foldable lens.

He left Alcon in 1997 to join the newly created College of Engineering at The University of Texas at Tyler as professor and founding Chair of the Department of Mechanical Engineering. He stepped down from that position in 2000 after serving a brief stint as Interim Dean of Engineering in 1999. He served as Interim Chair of Mechanical Engineering from 2006 to 2008 to lead the program's successful reaccreditation activity.

During his career, Dr. Crippen has been actively involved in a number of technical areas involving theoretical and experimental mechanics, orthopedic biomechanics, development of both orthopedic and ophthalmologic implants, and the product development process. In association with a local product development company, he has developed products for the Office of Naval Research and for national and international companies. He is a co-inventor on two patents.

He has authored many corporate technical reports and technical papers, the latter having been presented in national and international forums. He was a member of the Region X Executive Committee, chaired the Region's awards committee, and served as vice chair of the national General Awards Committee of the American Society of Mechanical Engineers. He is currently a member of the Executive Committee of the Professional Engineers in Education Practice Division of the Texas Society of Professional Engineers.

***RESEARCH INTERESTS***

Dr. Crippen has research interests in the following areas:



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- Finite element modeling of medical implants and their environment
- Orthopedic biomechanics
- The product development process

***CONTACT INFORMATION***

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