

Charles McMahon, Materials Science & Engineering

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Charles McMahon

Charles Joseph McMahon Jr., MtE'55, a professor emeritus of materials science and engineering in Penn's School of Engineering and Applied Science, died on December 10. He was 89.

Dr. McMahon graduated from Penn's School of Engineering with a degree in metallurgical engineering in 1955, then earned a graduate degree from MIT. In 1964, he joined Penn's faculty as an assistant professor of metallurgy and materials science; he was promoted to associate professor in 1968 and to full professor in 1974. While at Penn, he was active in his field of study. In 1975, he earned the American Society for Metals' Marion Howe Medal for the best paper; the following year, he won the American Institute of Mining, Metallurgical and Petroleum Engineers' Mathewson Gold Medal Award. In 1980, he was inducted into the

National Academy of Engineering; the NAE cited his "contributions to the understanding and mitigation of grain boundary embrittlement of alloy steels." He was an early member of Penn's Laboratory for Research on the Structure of Matter, and as computers became popular in the 1990s, he developed a CD-ROM that displayed information about 3D materials science. This "smart textbook," which accompanied Dr. McMahon's nationally renowned course *The Bicycle and the Walkman*, was one of the first online learning initiatives, and Dr. McMahon earned an NSF grant to expand on this innovation.

Dr. McMahon served on Penn's University Council, chairing its Committee on Recreation and Intercollegiate Athletics during the 1980s. He also served in the Faculty Senate (where he chaired the Committee on the Faculty from 2001-2002) and on several ad-hoc university-wide committees (including as chair of the President's Committee on University Life in 1989-1990). Dr. McMahon made his voice heard on athletic issues around campus, penning several op-eds in Almanac's pages on the subject (e.g., *Almanac* October 27, 1987 (<https://almanac.upenn.edu/archive/v34pdf/n10/102787.pdf>) and February 27, 2001 (<https://almanac.upenn.edu/archive/v47/n24/spout.html>)). In 1992, he won Penn Engineering's S. Reid Warren Award for Distinguished Teaching, and nine years later, he won a Lindback Award (*Almanac* April 17, 2001 (<https://almanac.upenn.edu/archive/v47/n30/Lindbacks2001.html>)). "Students commented on how creative Dr. McMahon is in the classroom and colleagues noted his inventive teaching methods through the use of electronic media," said his Lindback citation. "Students mentioned his unique role as an advisor and mentor and many wrote about the impact his classes have had on their lives and careers." In 2002, Dr. McMahon retired from Penn and took emeritus status.

He is survived by his wife of 63 years, Helen (nee O'Brien); four children, Charles Jr. (Stacy Dutton), Elise McMahon, Robert, David (Rebecca Berman); two grandchildren, Veronica and Madeline; his siblings, Anthony, Kevin (Ellen), Mary Ellen (James Smallwood) and John (JoAnn); and many nieces and nephews. He was preceded in death by his daughter, Christine. A memorial mass is planned for the near future.