



### *Resolution of the Faculty of Worcester Polytechnic Institute*

*We, the Faculty of Worcester Polytechnic Institute, note with profound sorrow and a great sense of loss the passing of our friend and colleague Carlton W. Staples, professor emeritus of mechanical engineering, who died September 12, 2015, at the age of 91. A master teacher and an early advocate for project-based education, Spike Staples made a profound impact on the lives and career success of hundreds of WPI undergraduates during his 38 years on the WPI faculty.*

*Professor Staples earned a BS in mechanical engineering at Tufts University, where he was a member of the Naval ROTC program. Graduating near the end of World War II, he was promptly commissioned an officer in the Naval Reserve and sent to sea as a navigation, operations, and sonar officer and acting executive officer on destroyers and destroyer escorts in the European and Pacific Theaters.*

*After being released from active service, he worked briefly for Western Electric Company before joining the WPI faculty in 1948. He would continue his naval service for nearly three decades, returning to active service during the Korean War and earning many awards and decorations for his service. During his early years at the Institute, he received a master's in education from Bridgewater State College and an MS in mechanical engineering from WPI.*

*A registered professional engineer, he maintained close ties to industry throughout his career and kept his own skills and knowledge current through consulting, believing that he could be a more effective teacher if he kept one foot in the classroom and the other in the real world. He worked on many problems for local manufacturing companies in such areas as machine dynamics, stress analysis, and cam and gear design. He was often sought out for his original cam and non-circular gear designs, which could produce greater machine speeds without added vibration.*

*Through his teaching and advising of industrially sponsored MQPs, he sought to introduce students to what he considered the exhilarating freedom of mechanical design, while also acquainting them with the challenges and rewards of real-world engineering. He was among the first WPI faculty members to adopt a project-based approach to teaching and to bring actual industrial problems to his classes for students to solve.*

*A profile in the *WPI Journal* late in his career described his class in mechanical design applications, in which the students worked for "The Company" and had to tackle a series of difficult and time-sensitive problems. "I know it's a frustrating course for them," he said. "It's the first time they've had to deal with practical problems after all the theory. They've gotten so used to plugging in*

formulas and getting exact solutions that they've forgotten how to use common sense."

"I prefer teaching to working in industry," he added. "It's always different. Students change, they never approach things the same way as the last bunch, and they make me change strategies and assignments. I like to say that this has been an experimental course for the last 36 years." His innovating work as an educator and his impact on students, who frequently returned to campus over the years to thank him for helping shape their careers, earned him the WPI Board of Trustees' Award for Outstanding Teaching in 1979.

Although he once confided that he did not agree with every element of the WPI Plan, he worked enthusiastically on its implementation, serving as a member of the General Implementation Committee and the Project Planning Committee. He considered his work at the Washington, D.C., Project Center, where he was among the inaugural group of resident advisors when the center opened in 1974, to be among the highlights of his time at the Institute.

He had the opportunity to share his experience with project-based education with other universities out West when he took a sabbatical leave in the early 1980s at the Colorado School of Mines. He lectured and taught project-based courses while there, though his primary objective was to steep himself in the emerging field of computer-aided design. He brought what he learned back to WPI, which was just then building up its own CAD lab and courses.

A longtime member of the American Society for Engineering Education, the American Society of Mechanical Engineers, and Sigma Xi, Staples was active in the community throughout his life, serving on committees for the Boy Scouts, for church education and administration, for community charities, and for finance and administration in his hometown of Shrewsbury, Massachusetts.

Therefore, let it be resolved that we, the members of the faculty of Worcester Polytechnic Institute, recognize and express our admiration of and eternal gratitude to Carlton Staples, a renowned educator and project advisor, an early and tireless advocate for project-based learning, and a generous and valued colleague and friend. Let it also be resolved that this resolution be inscribed in the permanent records of this faculty as a memorial to our beloved colleague, and that a copy of this resolution be delivered to his family.



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Jamal Yagoobi  
Department Head, Mechanical Engineering



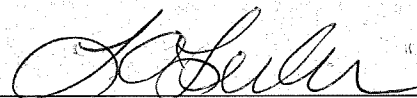
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