

# **An Innovative Approach to Professional Practice Using a Culminating Undergraduate Experience**

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## **Abstract**

Kettering University, an institution specializing in STEM and management, integrates corporate co-op experience for all students from freshman to senior levels. This work component concludes with an undergraduate thesis in collaboration with each student's corporate sponsor, providing an unparalleled experience managing a multi-semester technical project. However, economic instabilities often drive companies to terminate student positions, which requires a student to pursue a new corporate sponsor, start another thesis, and postpone graduation. To address this issue, Kettering University has developed a suite of four options, termed the Culminating Undergraduate Experience, which not only showcases a significant project within their technological field, but also ensures multiple paths to graduation, increases faculty research, fosters community outreach, develops corporate connections, and provides significant support for accreditation.

## **Biographies**

David L. Foster received his B.S. in Electrical Engineering from Kettering University in Flint, MI in 1999, his M.S.E. in Computer Engineering from the University of Michigan in Ann Arbor, MI in 2003, and his Ph.D. in Systems Engineering from Oakland University in Rochester Hills, MI in 2008. He has been a faculty member of the Electrical and Computer Engineering Department of Kettering University since 2001. He is currently an Associate Professor of Computer Engineering and the Director of the M.S. in Engineering - Computer Engineering concentration. His research interests include partial fault tolerance in reconfigurable logic, real-time embedded systems, and GPU computing. Dr. Foster may be reached at [dfoster@kettering.edu](mailto:dfoster@kettering.edu).