

IOWA STATE UNIVERSITY

Agricultural and Biosystems Engineering

Steven K. Mickelson

Charles R. and Jane F. Olsen Professor of Engineering and Department Chair

1340B Elings Hall
515-294-1434
estaben@iastate.edu
www.abe.iastate.edu

Education

Ph.D. Agricultural Engineering, 1991
Iowa State University

M.S. Agricultural Engineering, 1984
Iowa State University

B.S. Agricultural Engineering, 1982
Iowa State University

Honors and Awards

ISU Corly Brooke Learning Community Advocate Award (2014)

ISU ABE Chair's Faculty Citation Award (2009)

ISU Learning community Scholarship Award (2008)

Sesquicentennial Hubbard Award Finalist for Teaching Excellence (2007)

ISU Membership to the 25 Year Club (2007)

ISU Scholarship Award for Exemplary Contributions to ISU Learning Communities (2007)

Recent Publications

Baughman, J.A. T.J. Brumm and **S.K. Mickelson**. 2014. Holistic Student Professional Development and Assessment: A Backward Design Approach. *Journal of Technology, Management, and Applied Engineering*. Accepted 3-20-14

Laugerman, M., M. Shelley, **S.K. Mickelson**, and D. Rover. 2013. The Engineering Admissions Partnership Program: A Navigation Strategy for Community College Students Seeking a Pathway into Engineering. *International Journal of Engineering Education* 29(5):1260-1269.

Ahmed, S.I., **S.K. Mickelson**, C.H. Pederson, J.L. Baker, R.S. Kanwar, J.C. Lorimor, and D. Webber. 2013. Swine manure rate, timing, and application method effects on post-harvest soil nutrients, crop yield, and potential water quality implications in a corn-soybean rotation. *Transactions of the American Society of Agricultural and Biological Engineers* 56(2):395-408

Webber, D.F., **S.K. Mickelson**, B.D. Whitman, T.L. Richard, and H.K. Ahn. 2011. Livestock manure windrow composting runoff and infiltration characteristics from laboratory rainfall simulations. *Compost Science and Utilization* (Accepted for publication on 3-8-2010)

Administration

Dr. Steven K. Mickelson is the current chair for the Department of Agricultural and Biosystems Engineering (ABE). He became the chair for the department on August 1, 2011. Prior to this, he was the Director of the Center for Excellence in Learning and Teaching and the Co-Director of Learning Communities at Iowa State University. He holds the Chuck R. and Jane F. Olsen Professor of Engineering title. His vision for the department includes that:

- ABE will become the #1 Agricultural and Biosystems department in the nation.
- ABE will strengthen our partnerships with our constituents by effectively communicating the value and impact of our educational, research and extension/outreach programs.
- ABE will be recognized by our national and international peers as experts in our themes of excellence (focus areas).



Teaching

Dr. Mickelson teaches classes in engineering design, engineering computer graphics, soil and water conservation, and engineering workplace competency development. He is also an author of the Engineering Fundamentals and Problem Solving textbook published by McGraw-Hill.

Research

Dr. Mickelson's research focuses on the evaluation of agricultural best management practices for determining their effectiveness in reducing chemical and soil losses to surface water bodies. More recent projects have focused on the effectiveness of vegetative buffer strips in improving the water quality in surface runoff from row-crop fields, cattle grazed paddocks, and composting pads. He also conducts research related to the scholarship of teaching and learning, focusing on effective classroom techniques for engaging students in learning. He is also leading an ISU—Georgian Technical University program that has established five new agricultural curriculum programs in the country of Georgia.

Professional Engagement

- Member of the American Society for Agricultural and Biological Engineers
- Member of the American Society of Engineering Educators
- Member of Alpha Epsilon Honor Society
- Member of Tau Beta PI
- Leopold Center for Sustainable Agriculture Advisory Board Member