Brian A. Danielak

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Education

Ph.D. in Curriculum and Instruction, University of Maryland, 2008 – Present

Concentration: Science, Mathematics, and Engineering Education Research
Advisor: Dr. Andrew Elby
Expected Graduation: Summer 2013

Doctoral Coursework in the History of Science, Johns Hopkins University, 2007–2008

Courses: The Postwar Reconstruction of Science; Historical Methods; The Scientific Revolution; The Rise of Modern Science; Spaces: The Lab, the Clinic and the Studio; Problems in the Historiography of Science and Medicine

B.A. *Summa Cum Laude* in Chemistry and English, University at Buffalo, 2007

Minor: Mathematics
Honors: Phi Beta Kappa, Chemistry (Highest Distinction) and English (Highest Honors)
Thesis: "Once Upon a Natural Law: Using Narrative to Connect to a Scientific World," Advised by Dr. Robert Daly

Research

Conference Papers (Peer-Reviewed)

Danielak, B. A., & Svihla, V. (2011). Why Early Courses Matter for Design-Focused Engineering Capstones. Presented at the 41st Annual Meeting of the Jean Piaget Society, Berkeley, CA.

Danielak, B. A., Gupta, A., & Elby, A. (2010). The Marginalized Identities of Sense-makers: Reframing Engineering Student Retention. In *Proceedings of the 40th Annual Frontiers in Education (FIE) Conference*. Presented at the Frontiers in Education 2010, Washington, D.C. Retrieved from http://dx.doi.org/10.1109/FIE.2010.5673158

Gupta, A., Danielak, B. A., & Elby, A. (2010). Understanding students' difficulties in terms of coupled epistemological and affective dynamics. In *Proceedings of the 40th Annual Frontiers in Education (FIE) Conference*. Presented at the Frontiers in Education (FIE) 2010 Conference. Retrieved from http://dx.doi.org/10.1109/FIE.2010.5673256

Danielak, B. A., Gupta, A., & Elby, A. (2010). Incorporating Affect in an Engineering Student's Epistemological Dynamics. In *Proceedings of the 9th International Conference of the Learning Sciences - Volume 2* (pp. 411-412). Chicago, Illinois: International Society of the Learning Sciences. Retrieved from http://portal.acm.org/citation.cfm?id=1854509.1854722

Presentations

Danielak, B. A. (2010). Do We Value Sense-Makers in Science Education? Presented at Bennington College, Bennington, VT. *Invited Talk*

Danielak, B. A. (2010). Using R to Assess Mathematical Sense-Making in Introductory Physics Courses. Presented at the 2010 UseR! Statistics Conference, Gaithersburg, MD

Danielak, B. A. (2010). Identity, Culture, and Sense-Making. Presented at the 2010 American Association of Physics Teachers Winter Meeting, Washington, D.C.

Teaching

Instructor, University of Maryland, 2010

Course: EDCI 605 - Learning and Teaching in the Physical Sciences II

Teaching Assistant, University of Maryland, 2009

Course: EDCI 605 - Learning and Teaching in the Physical Sciences II
Instructor: Andrew Elby, Ph.D.

Teaching Asssistant, Johns Hopkins Center for Talented Youth 2006–2009

Courses: Fast-Paced High School Chemistry, Advanced Chemistry

Awards and Fellowships

Fellow in the National Science Foundation Disciplinary Experts in Science Education Program, (Grant # NSF DRL 0733613), 2008–2013

Owen Fellow in the History of Science, Johns Hopkins University, 2007

College of Arts and Sciences Outstanding Senior Award – Department of Chemistry, 2007

College of Arts and Sciences Outstanding Senior Award – Department of English, 2007

University at Buffalo Renaissance Scholar, 2007

Samuel P. Capen Award for Interdisciplinary Excellence, 2007

Tufariello Award for Outstanding Excellence in Chemistry, 2007

Elected to Phi Lambda Upsilon Chemistry Honor Society, 2006

Elected to Phi Beta Kappa, 2006

The George and Sheila Nancollas Physical Chemistry Scholarship, 2006

First Prize Debate Speaker: "This House Would Go Nuclear", The Oxford Union Debating Society, 2006

First Prize Debate Speaker: "This House Would Design a Baby," The Oxford Union Debating Society, 2005

The American Chemical Society Award for Excellence in Analytical Chemistry, 2005

The Grace Capen Award for Academic Excellence, 2005

The CRC Handbook Award for Excellence in General Chemistry, 2004

Professional Memberships

Association for Computing Machinery Special Interest Group in Computer Science Education (SIGCSE)

American Society for Engineering Education