Biographical Sketch: Scott E. Lewis

(i) Professional Preparation

University of South Florida	Tampa, FL	Chemical Engineering	B.S. 2001
University of South Florida	Tampa, FL	Chemistry	M.A. 2003
University of South Florida	Tampa, FL	Chemistry Education	Ph.D. 2006

(ii) Appointments

2016 – Present	Associate Professor, University of South Florida
2013 – 2016	Assistant Professor, University of South Florida
2012 – 2013	Associate Professor, Kennesaw State University
2006 – 2012	Assistant Professor, Kennesaw State University

(iii) Products

Products most closely related to the proposed project:

(1) Ye, L., Shuniak, C., Oueini, R., Robert, J., & Lewis, S. *Can they succeed? Exploring at-risk students' study habits in college general chemistry*. Chemistry Education Research and Practice, 2016, **17**, 878-892.

(2) Ye, L., Oueini, R., Dickerson, A.P., & Lewis, S.E. *Learning beyond the classroom: Using text messages to measure general chemistry students' study habits*. Chemistry Education Research and Practice, 2015, **16**, 869-878.

(3) Lewis, S. E. *Investigating the Longitudinal Impact of a Successful Reform in General Chemistry on Student Enrollment and Academic Performance*. Journal of Chemical Education, 2014, **91**, 2037-2044.

(4) Lewis, S. E. *Examining Evidence for External and Consequential Validity of the First Term General Chemistry Exam from the ACS Examinations Institute*. Journal of Chemical Education, 2014, **91**, 793-799.

(5) Ye, L. & Lewis, S. E. *Looking for Links: Examining Student Responses in Creative Exercises for Evidence of Linking Concepts*. Chemistry Education Research and Practice, 2014, **15**, 576-586.

Other significant products:

(6) Lewis, S.E., & Lewis, J.E. *Departing from Lectures: An Evaluation of a Peer-Led Guided Inquiry Alternative*. Journal of Chemical Education 2005, **82**, 135-139.

(7) Ye, L., Oueini, R., & Lewis, S.E. *Developing and Implementing an Assessment Technique to Measure Linked Concepts*. Journal of Chemical Education, 2015, **92**, 1807-1812.

(8) Mitchell, Y.D., Ippolito, J. & Lewis, S.E. *Evaluating Peer-Led Team Learning across the two semester General Chemistry sequence*. Chemistry Education Research and Practice, 2012, **13**, 378-383.

(9) Lewis, S.E. *Retention and Reform: An Evaluation of Peer-Led Team Learning*. Journal of Chemical Education 2011, **88**, 703-707.

(10) Lewis, S.E. & Lewis, J.E. *Seeking Effectiveness and Equity in a Large College Chemistry Course: An HLM Investigation of Peer-Led Guided Inquiry*. Journal of Research in Science Teaching 2008, **45**, 794-811.

(iv) Synergistic Activities

(1) General Chemistry coordinator at the University of South Florida responsible for administering common course components (syllabus, exams, online homework) and facilitating meetings of General Chemistry instructors. Also designed and implemented a combination of flipped classes with peer-led team learning to promote active learning with class sizes of greater than 200 students.

(2) Received the 2015 university-level and department-level Outstanding Undergraduate Teaching Award at the University of South Florida. Also received the 2008 Distinguished Teaching Award, College of Math and Science at Kennesaw State University.

(3) Serving on the American Chemical Society Exams Institute 2017 Paired Question Exam committee and previously served on the General Chemistry Conceptual Exam committee for the 2008 and 2015 exam.

(4) Currently serve on the Board of Publications for the *Journal of Chemical Education* on behalf of the American Chemistry Society Division of Chemistry Education.

(5) Developed and disseminated a series of open-ended chemistry assessments for General Chemistry. Dissemination included organizing and leading a series of workshops across the state of Georgia to train faculty in alternative assessment practices in undergraduate STEM education.

Biographical Sketch: Theresa Evans-Nguyen, Ph.D.

(i) Professional Preparation

College of William & Mary	Williamsburg, VA	Chemistry	B.S. 2000
University of North Carolina	Chapel Hill, NC	Analytical Chemistry	Ph.D. 2005
Johns Hopkins School of Medicine	Baltimore, MD	Pharmacology	2005-2009

(ii) Appointments

2015-present	Assistant Professor of Chemistry, University of South Florida
2009-2015	Senior Staff Scientist, Draper Laboratory

(iii) Products

Products most closely related to the proposed project:

1. Manolakos, S.; Sinatra, F. L.; Albers, L.; Hufford, K.; Alberti, J.; Nazarov, E; Evans-Nguyen, T. *Differential Mobility for Inorganic Filtration in Nuclear Forensics.* Analytical Chemistry (2016) DOI: 10.102/acs.analchem.6b01441

2. Sinatra, F. L.; Wu, T.; Manolakos, S.; Wang, J.; Evans-Nguyen, T. G. *Differential Mobility Spectrometry–Mass Spectrometry for Atomic Analysis.* Analytical Chemistry (2015), 87, 1685–1693.

3. Wang, Di, Friso HW van Amerom, and Theresa Evans-Nguyen. *High-Speed Digital Frequency Scanning Ion Trap Mass Spectrometry*. Analytical Chemistry (2013), 85(22): 10935-10940.

4. Evans-Nguyen, Theresa, et al. *Carbon Nanotube Electron Ionization Source for Portable Mass Spectrometry*. Analytical Chemistry (83)17 (2011): 6527-6531.

5. Cotter, Robert J.; McGrath, Sara, Jelinek, C.; Evans-Nguyen,T. *Development of Miniaturized MALDI Time-of-Flight Mass Spectrometers for Homeland Security and Clinical Diagnostics*, In: Miniaturization and Mass Spectrometry, Severine Le Gac and Albert van den Berg ed., RSC Publishing, 291-310, 2009.

Other significant products:

6. Evans-Nguyen, Theresa; Becker, Luann; Doroshenko, Vladimir; Cotter, Robert, *Development of a low power, high mass range mass spectrometer for Mars surface analysis.* International Journal of Mass Spectrometry (2008), 278(2-3), 170-177.

7. Evans-Nguyen, T. (2005) *Development of a Field Portable Aerosol Time-of-Flight Mass Spectrometer.* (Doctoral dissertation).

8. Dessiaterik, Yury; Nguyen, Theresa; Baer, Tomas; Miller, Roger. *IR Vaporization Mass Spectrometry of Aerosol Particles with Ionic Solutions: The Problem of Ion-Ion Recombination.* Journal of Physical Chemistry A (2003), 107(50), 11245-11252.