Patricia A. Terry
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Education

May 1989	B.S. Chemical Engineering, University of Texas (Austin)
August 1991	M.S. Chemical Engineering, University of Texas (Austin) Thesis: Data Rectification and Gross Error Detection Using an Artificial Neural Network (advisor: Dr. David Himmelblau)
August 1995	Ph.D. Chemical Engineering, University of Colorado (Boulder) Dissertation: Electrochemically Modulated Complexation Processes For Gas Separation and Concentration (advisor: Dr. Rich Noble)

Professional Experience

2011-present	Professor, Natural and Applied Sciences Director of Engineering Technology (2012-present) University of Wisconsin-Green Bay
2001-2011	Associate Professor, Natural and Applied Sciences Chair, MS Program in Environmental Science and Policy (2004-2010) Coordinator, Engineering Program University of Wisconsin – Green Bay
1995 – 2001	Assistant Professor, Natural and Applied Sciences Coordinator, Engineering Program University of Wisconsin – Green Bay
1992 – 1992	Research Assistant, Department of Chemical Engineering University of Colorado
1989 – 1991	Research Assistant, Department of Chemical Engineering University of Texas

Research and Scholarly Activity

Peer reviewed Papers

Terry, P. A., Himmelblau, D. M., “Data rectification and gross error detection in a steady-state process via artificial neural networks,” Industrial and Chemical Engineering Research, 1993.

Terry, P. A., Noble, R. D., Koval, C. A., Walls, H. J., “Electrochemically modulated complexation process for gas removal and concentration,” American Institute of Chemical Engineering Journal, Volume 41(12), 1995.

Terry, P. A., Noble, R. D., Koval, C. A., “Electrochemically modulated complexation process for ethylene/ethane separation,” American Institute of Chemical Engineering Journal, Volume 43(7), 1997.

Terry, P. A., Anderson, M., Tejedor, I., “Catalytic dehydrogenation of cyclohexane using a silica oxide coated ceramic membrane, Journal of Porous Materials, Volume 6, 1999.

Terry, P. A., Stone, W., "Biosorption of cadmium and copper contaminated water by *Scenedesmus abundans*," Chemosphere, Volume 47, 2002.

Terry, P. A., “Characterization of Cr ion exchange with hydrotalcite,” Chemosphere, Volume 57, 2004.

Terry, P. A., “The cost of doing nothing,” Water Resources Impact, Volume 7(5), 2005.

Terry, P. A.,“Removal of nitrates and phosphates by ion exchange with hydrotalcite,” Engineering Science Volume 26(3), 2008.

Terry, P. A., “Application of ozone and oxygen to reduce COD and H_2S from a recovered paper processing plant,” International Journal of Chemical Engineering, Volume 2010, 2010.

Terry, P.A., Dolan, D., Axness, K., “Effect of zinc and cadmium on the removal of chromium via ion exchange,” Ion Exchange Technology: Theory, Materials and Applications, Springer, 2012.

Terry, P.A., Dolan, D., Maccoux, M., Meyer, M. “Removal of phosphates and chromates in a multi-ion solution, Global Journal of Research in Engineering, Volume 14(2), 2014.

Terry, P.A., Olson Hunt, M., Henning, R., “Removal of phosphate and sulfates in a multi-ion system with nitrates,” Applications of Adsorption and Ion Exchange Chromatography in Chemical, Pharmaceutical, and Food Industries, Springer. Accepted August 2016.

Terry, P. A., “Germany and the United States: a comparison of support for wind energy,” World Journal of Research and Review, Volume 3(2), 2016.

Book

Principles of Chemical Separations with Environmental Applications
Patricia A. Terry and Richard D. Noble (University of Colorado, Chem. Eng. Dept.), Cambridge University Press, Spring 2004

Non Peer reviewed reports to granting agencies

"Ozonation Study of the Green Bay Metropolitan Sewerage District: Report to Adaptive Ozone Solutions, LLC," Patricia A. Terry. Submitted October 2009 to Adaptive Ozone Solutions LLC, Olathe, Kansas.

"Germany and the United States: A Comparison of Support for Wind Energy," Report submitted to the American Council on Germany, March 2013.

Grants

"Removal by ultrafiltration of organic solids toxic to yellow perch from recirculating aquaculture systems," UW-Green Bay Research Council, Nov., 2001, Funded at $400.

"Membrane filtration pilot plant testing," Carollo Engineering, May 2001 through May 2002, Funded at $20,000. Supported one student assistant.

"Addressing and assessing general education outcomes," UW-Green Bay Teaching Scholars II Program, Fall 2005-Spring 2006, $1500 awarded.

Research and pedagogical presentations at the American Institute of Chemical Engineers Fall 2005 annual conference, UW-Green Bay Grants in Aid of Research, $300 awarded.

"Storm water discharge assessment," Wisconsin Department of Transportation, Summer 2008-Fall 2008, $18,245 awarded.

"Environmental assistant internship," Wisconsin Department of Transportation, Summer 2008-Fall 2008, $18,728 awarded.

"Validation study for treating wastewater in force mains with ozone to reduce hydrogen sulfide," Adaptive Ozone Solutions, Ltd., Summer 2008-Fall 2008, $22,730 awarded.

"UW-Green Bay campus biodiesel project," UWGB Chancellor's Office, Summer 2008-October 2008, $3000 awarded.

"Validation study for treating wastewater in force mains with ozone to reduce hydrogen sulfide," Adaptive Ozone Solutions, Ltd., Spring 2009-Fall 2009, $13,000 awarded.

"Germany and the US: A comparison of support for wind energy," American Council on Germany: McCloy Fellowship in Environmental Policy, May 2012, $6000 awarded.

"Sustainable agriculture: comparing Native American 3 Sisters Garden to conventional mono-cropping," UW-Green Bay Grants in Aid of Research. Awarded $900.

"Digital camera for high impact student learning," UW-Green Bay One Time Funds, November 2017, $8850 awarded.

Presentations

"Characterization of Cr(VI) ion exchange with hydrotalcite," American Institute of Chemical Engineers annual meeting, Characterizing Novel ion Exchange Media session, Nov. 2005, Cincinnati, Ohio

"Teaching novel environmental separations," American Institute of Chemical Engineers annual meeting, Environmental Education session, Nov., 2005, Cincinnati, Ohio.

"Removal of nitrates and phosphates from eutrophic waters via ion exchange," Angelo State University, San Angelo, Texas, April 2008.

"Removal of nitrates and phosphates from eutrophic water via ion exchange," UW-Green Bay Department of Natural and Applied Sciences seminar series, February 2008.

"Remediation of eutrophic waters via ion exchange," Center for Environmental Systems Research, University of Kassel, Kassel, Germany, October, 2011.

"Remediation of eutrophic waters via ion exchange," Department of Civil and Environmental Engineering, University of Luxembourg, Luxembourg City, Luxembourg, November 2011.

"The cost of doing nothing," UW-Green Bay Environmental Management and Business Institute Green Innovations Conference 2012: Water-Yesterday, Today, and Tomorrow, April 2012

"Sustainable Europe: lessons and observations from Germany, Luxembourg, and France," UW-Green Bay Department of Natural and Applied Sciences seminar series: February 2012.

Additional Conferences and Meetings

Everything a Physicist Needs to Know About Energy Sustainability, American Physics Society, Berkeley, California, March 2008.

Webcast: "Where is Your Campus on the Continuum of Integrated Sustainability Planning?" The Society for College and University Planning, October 2006.

Renewable Energy 101, by the Midwest Renewable Energy Association, UW-Green Bay campus, Fall 2006 (I organized through the Department of Natural and Applied Sciences and the Sustainability committee to bring the one day program to campus)

Management of Water in a Changing World: Lessons Learnt and Innovative Perspectives, International Conference on Integrated Water Resource Management, Dresden, Germany, October 2011.

Nutrients in Limbo: How Low Will You Have to Go: Regulations, Case Studies, and the Latest Technology 17th Annual Central States Water Environmental Association Education Seminar, Madison, WI, April 2012.

German-American water technology initiative: water and the city, Midwest German American Chamber of Commerce International Meeting, Chicago, IL, November 2012

Wind Energy Business Conference: Focus on Supply Chain and Service Industry, Midwest German American Chamber of Commerce International Meeting, Chicago, IL, December 2012

Water Technology Roundtable: Emerging Trends in Water Treatment, Midwest German American Chamber of Commerce International Meeting, University of St. Thomas, Minneapolis, MN, February 2013.

Building a Better Future – Responsible Innovation and Environmental Protection, Society of Environmental Toxicology and Chemistry (SETAC), Europe Annual Meeting, Glasgow, Scotland, May 2013

German-American Water Technology Roundtable, Midwest German-American Chamber of Commerce, University of Wisconsin-Milwaukee, October 2013.

2014 ABET Symposium, attended conference and workshops on ABET accreditation and assessment, Pittsburgh, PA, April 2014.

2015 ABET Symposium,. attended conference and workshops on ABET accreditation and assessment, Atlanta, GA, April 2015.

UW-Green Bay Community Partnership workshop, UW-Green Bay, May 2016.

Administrative/Leadership Experience and Institutional Development

Co-ordinator of pre-engineering 1995-present

UW-Green Bay has a pre-engineering program in which students complete the first two years of fundamental mathematics, chemistry, physics, and engineering classes before transferring to a university with a B.S. Engineering program to complete the degree. It is primarily oriented towards Mechanical Engineering students. A stream-lined transfer process exists with UW-Milwaukee, but students may transfer to any other 4 year Engineering program.

As coordinator, I appoint faculty to teach engineering courses, establish transfer agreements with other universities and technical colleges, recruit and advise students, and oversee curriculum changes.

Dual Degree program Fall 1999-present

I established the Dual Degree Program as a collaborative partnership between the Department of Natural and Applied Sciences at UW-Green Bay and the Department of Civil and Environmental

Engineering at UW-Milwaukee. In this program, a student begins their academic career at UW-Green Bay studying Environmental Science, while also taking calculus, physics, engineering mechanics and other supporting courses required for a B.S. in Engineering. After three years of study, the student then transfers to UW-Milwaukee and completes the degree requirement for a B.S. degree in Civil and Environmental Engineering. Reciprocity agreements between the two institutions allow many upper level classes to count towards both degrees, so that a successful student earns a B.S. in Environmental Science from UW-Green Bay and a B.S. in Civil and Environmental Engineering from UW-Milwaukee after a total of five years of study.

As the Coordinator of Engineering, I worked with UW-Milwaukee's Department of Civil and Environmental program to evaluate courses and write reciprocity agreements. I continue to update the agreement when curricular changes are made at either institution, and recruit and advise all students.

Chair, M.S. Program in Environmental Science and Policy 2004-2010

UW-Green Bay has a thesis based M.S. program in Environmental Science and Policy that provides students the foundations of both Environmental Science and Environmental Policy based on interdisciplinary approaches.

The chair of the M.S. program is elected for a 3 year term by the program faculty, so I was elected in 2004 and re-elected in 2007 to a second term. Responsibilities of the position include academic and administrative oversight including curriculum development and new program initiation; admissions decisions for all applicants and awarding teaching and research assistantships; marketing and recruitment; staffing of classes; advising students and junior faculty; and program representation to university administration. During the first three years of my term, the university made substantial budget cuts to the program, reducing the number of teaching assistant positions supporting graduate students by over fifty percent. Despite this, I launched a regional marketing campaign and created the Integrated Program, described below, such that graduate student enrollment grew during this period.

Integrated Program Started Fall 2006

As Chair of Environmental Science and Policy, I initiated a program in which high achieving undergraduate students in the physical and biological sciences may begin graduate level coursework and M.S. thesis research during their senior undergraduate year. A student working on a well-defined project with a faculty member may be able to complete both the B.S. and the M.S. degrees in five years. This initiative was created to foster publication quality, financially supported undergraduate research and encourage UW-Green Bay's best students to pursue graduate degrees. As program chair, I was responsible for creating this program and managing its approval through shared governance processes; working with the registrar's office to ensure that students would be properly credited for graduate and undergraduate work and the financial aid office to make certain that students received appropriate financial aid; marketing the program and recruiting students; advising students; and matching qualified students to faculty with specific research projects.

Campus green roof manager 2009 to present

In 2009, a graduate student and I installed a natural prairie green roof on the UW-Green Bay Instructional Services building using twenty-four native plant varieties selected for drought resistance, ability to grow in shallow soils, and deer resistance. (The roof is at ground level above an underground building.) The green roof continues to thrive as an example of sustainable building design and habitat creation through a campus green roof fund, supported solely by me, to hire students to maintain the roof and purchase new plants and mulch. Over the past seven years, I have gifted the fund approximately $12,000.

Director of Engineering Technology 2012-present

In 2014, UW-Green Bay launched 3 new B.S. programs in Electrical, Environmental, and Mechanical Engineering Technology. I became director of the programs in 2012 to develop curriculum, oversee an industry advisory board, and hire new faculty. To best provide access and leverage existing resources, I created transfer agreements with regional technical colleges. These allowed students to transfer in technical associate degrees and begin the program at the junior level. The first students were admitted in Fall 2015, some at the freshman level and others with associate degrees, and the first graduates are expected in May 2017.

As director, I have been the chief administrative and academic officer for the program with responsibilities including:

- Development of the curricula and attaining approval through shared governance
- Administering tenure track faculty searches and hiring ad-hoc instructors
- Maintaining a 50 company strong advisory board with annual meetings and site visits
- Responsible for ABET accreditation of all three degrees
- Development of articulated transfer agreements with 7 regional technical colleges
- Development of college credit in high school agreements with regional technology focused high schools
- Training personnel in the registrar's and admissions offices on transfer agreements
- Recruiting students at both high school and technical college levels
- Mentoring new faculty
- Advising students
- Developing advertising and recruitment materials for both print media and the university webpage
- Coordination of internship experiences for all majors
- Supervising purchase of equipment and software packages to support curriculum and space renovation for new lab classes and
- Identifying funding sources for new lab equipment and student scholarships.

International Environmental Studies Minor In progress

Working with colleagues in the modern languages, a new minor is currently being created that will blend interdisciplinary courses in environmental studies from environmental science, geography, political science, and philosophy with upper level language courses in German,

French, and Spanish. Students pursuing this minor will also have an international internship or study abroad experience in either Germany, Chile, or Panama. I participated in developing this minor with faculty from the modern languages and the Chair of the Environmental Science major because of my commitment to interdisciplinary education and international diversity. While I am far from proficient, I have attended five semesters of German language courses at UW-Green Bay.