

JOSEPH J. JACOBSEN

Phone – 414-418-6642

sustainable.economyllc@yahoo.com

joseph.jacobsen@cuw.edu

Work Experience

2015 – Current

Concordia University Wisconsin

Professor of Economics, Statistics and Sustainability

Class instruction, new course creation and program development in economics and sustainability, serves on curriculum committee and assessment committee. **Graduate Courses taught:** Applied Statistical Methods and Managerial Economics, Lean Systems Analysis, Six Sigma, *NEW course: Sustainable Business Practices. Development of a new MBA in Sustainable Business* **Undergraduate Courses taught:** Mathematics (with introductions to Six Sigma, quality management, decision science and mathematical modeling), Statistical Methods (SPSS, Minitab, MegaStat et.al.), Lean, Six Sigma, Criminal Justice Statistics (specialized statistical software), Macroeconomics, Microeconomics, Intermediate Microeconomics, Econometrics & General Economics. **Curriculum Development:** Special Topics in Research, Sustainable Business, Econometrics, Decision Sciences, Big Data Analytics, Behavioral Economics, Ecological Economics, Industrial Ecology, LEED Rating System, Six Sigma and Lean Systems Analysis.

2018 – Current - Business, Economics, Sustainability, Leadership and Innovation (BESLI)

Editor and Chief of BESLI and publishes academic, peer reviewed papers that augment the fundamental ways we understand, describe, model and integrate new knowledge in an interdisciplinary fashion. The journal topics are an explicit part of the journal's purpose and the contents are multidisciplinary theoretical and empirical investigations.

2013 – 2015 Pittsburgh Gateway's Energy Innovation Center

Executive Director of Academic Programs – 2-year consultation Develop and lead all academic progress: 30 new STEM based courses, 6 certifications, ongoing program development and related partnerships with special emphasis on environmental and economic sustainability content development that leads to sustainable occupations. Conduct research in new and emerging occupations and the new markets through literature, benchmarking, the DACUM process and industry advisory committees. Direct management surrounding sustainable social and economic progress in workforce development, policy, training, education and research. Initial hiring of faculty, funding and system design for the Energy Innovation Center, a 43-million-dollar design-build LEED platinum core and shell facility with new laboratories, high tech classrooms and digital web-based learning management system.

2014 Duquesne University

Adjunct Professor

Class instruction, program development:

Graduate MBA Courses: Applied Managerial Economics

2009 – 2013

Milwaukee Area Technical College

Associate Dean – Environmental Studies/Director of the Energy Conservation & Advanced Manufacturing Center (2010-11)

Develop and lead all academic sustainability initiatives at MATC, responsible for tracking and benchmarking all related STEM based environmental programs, policy formation, climate action planning, and coordination of programs between and among departments and divisions and the development of an applied environmental studies cluster. Specifically, develop the first 1) *quality engineering technology* and 2) *sustainable facilities* programs in the region (supported by the DOE), an *energy engineering technology* certificate, a *renewable energy* concentration, and modification of the *environmental health and water quality technology* program and an advanced *power engineering* diploma. Co-chair the Green Energy Summit, perform a variety of college wide economic statistical analytics relating to FTE and bring in grant

funds to support 100 % all new academic programming. Represent the college at all economic or academic institutions like the Energy Research Consortium, Water Council, City of Milwaukee and other entities throughout the region and nation.

2007 – 2008 Milwaukee Area Technical College

Associate Dean – Business & Information Technology/Technology & Applied Science Development of faculty, courses, programs and budgets, areas of responsibility include marketing, business management, web site development, e-commerce, logistics, environmental and pollution control, energy, facilities operations and sustainability.

2005 – Current Consultant Services

President of Sustainable Economy, LLC

Curriculum development in the content areas of sustainability economics, big data analytics, developmental mathematics, statistics, industrial ecology, ecological economics, behavioral economics, econometric modeling, carbon management, accounting and auditing, six-sigma, lean, power engineering, energy engineering, energy technology and renewable energy. Lead or assist in quantitative analysis, scientific methods and operations research. Custom design and development of the display of quantitative information for academic programming. Energy performance contracting, facilities energy modeling, sustainability and social responsibility program development, reporting and presenting quantitative information, business performance modeling, statistical analysis and decision making.

2001 – 2007 City of Milwaukee

O&M Manager – Buildings and Fleet

Development of staffs, grants, programs, training and budgets (capital and O&M), USGBC liaison, resource management, government sustainable development, project management, technology implementation and integration of digital systems, site development for public demonstration and academic advantage, intergovernmental and private/public partnering, funding and economic outcome analysis, staff and public presentations, and management of operations research and responsibility for 220 facilities. Some of my projects include new construction, geothermal, photovoltaic and microturbine technologies.

2001 – 2013 Concordia University Wisconsin

Adjunct Professor

Class instruction, program development:

Graduate MBA Courses: Applied Statistical Methods and Managerial Economics, *NEW course: Sustainable Business Practices. Development of a new MBA Sustainable Business concentration*

Undergraduate Courses: Mathematics, Statistical Methods, Criminal Justice Statistics, Macroeconomics, Microeconomics & General Economics

1997 – 2001 City of Milwaukee

Management Facilities Engineer – Buildings and Fleet

Optimizing operating staff development, operations research projects, project management, engineering management, energy management, technology upgrades & contracting projects, products and services & general operations research and management of all O&M staff.

1997 – 2001 Milwaukee Area Technical College

Adjunct Instructor

Power Engineering I, Power Engineering II, Energy Technology Nature and Society

Lecturer to public high school teachers on green careers and various state-wide presentations.

Education

Marquette University

Ph.D. interdisciplinary applications of nonlinear dynamics in business, engineering and psychology

Dissertation: linear and nonlinear comparative analyses of energy innovation diffusion.

Concordia University Wisconsin

Master of Business Administration

Concordia University Wisconsin

Undergraduate Degree: Management

Milwaukee School of Engineering

HVAC Controls & Design

HVAC engineering, systems and design

Milwaukee Area Technical College

Course work – 4 - year college transfer

Milwaukee Area Technical College

Power Engineering I & II

Licenses & Certificates

University Undergraduate Teaching Approvals: (current)

1) Statistical Methods 2) Mathematics 3) Economics 4) Microeconomics, 5) Macroeconomics, 6) Econometrics, 7) Ecological Economics, 8) Developmental Mathematics 9) Criminal Justice Statistics 10) Lean 11) Six Sigma and 12) Organizational Behavior

University Graduate Teaching Approvals: (current)

1) Applied Statistics 2) Managerial Economics 3) Sustainable Business Practices 4) Ecological Economics, 5) Lean Systems Analysis

Teaching Certifications, State of Wisconsin. Wisconsin Technical College System (renewable)

1) Business 2) Workforce Development 3) Math for HVAC/R & Power Engineering

Educational Supervision Certification (current) State of Wisconsin. Wisconsin Technical College System.

1) Educational Supervisor

State of Wisconsin: Equal Opportunity Intake Advisor (current)

City of Milwaukee: Stationary Engineer's License (renewable)

Johnson Controls: METASYS for Facilities' Managers

Eagle Technology: Computerized CMMS

Eagle Technologies: METASYS Interface Training

Milwaukee Area Technical College: Chemical Control

University of Wisconsin: Code Compliance for Facilities

University of Wisconsin: Preventative Maintenance and Repair of Facilities

Grants – awarded

Name of grantor, fiscal agent, grant period & PIs	Title	Purpose	Outcome	Amount
Heinz Foundation – Joseph Jacobsen, PI 2014-2015	EIC Operational	Staffing for the Energy Innovation Center	Hiring three administrator positions, three full time faculty, part time faculty, and learning management and student records system integration.	\$1,000,000
National Science Foundation – 2012 – 2016 Peter Crabtree and Joseph Jacobsen	BEST ATE CENTER	National clearing house for energy technology, HVAC and energy management curriculum	Faculty from across the country will attend three week-long events every year for four years.	300,000
Wisconsin Energy Research Consortium (WERC) 2012-2013 Jeong-Han Woo, Carol Menassa & Joseph Jacobsen	Retrofit Aging Buildings	Awarded – working on feasibility of study – left for new position before end	Energy tool for aging buildings and interconnection to smart grid systems	100,000
Wisconsin Energy Research Consortium (WERC) 2012-2013 David Yu & Joseph Jacobsen	Microgrid	Awarded – working on feasibility of study – left for new position before end	Microgrid design	100,000
US Department of Labor WISTEC – 2009-2010 Joseph Jacobsen	Sustainable Facilities Operations (SFO) and Energy Engineering Technology (EET)	Develop 7 core courses in sustainable facilities operations.	New degree in SFO, certificate in SFO and EET, 7 new courses titled: 1) SFO, 2) LEED, 3) Measurement and Verification, 4) Energy Auditing, 5) Commissioning, 6) Energy Technician, 7) Sustainable Systems Performance	21,000
US Department of Energy 2009-2012 David Yu & Joseph Jacobsen	Wind 2020	Develop a certificate in Wind Energy	2 wind courses: introduction and advanced and a general energy course	310,000
US Department of Energy 2010-2012 Joseph Jacobsen & David Yu	Advanced Energy Technology	Develop a certificate in advanced energy technical studies	10 courses in advanced energy engineering technology, intelligent lab, marketing, materials, 3 work task analysis events, 3 new advisory committees	740,000
Wisconsin Technical College System - NEO 2010-2011 Joseph Jacobsen	Quality Engineering Technology	Major modification of the Industrial Engineering degree	New degree in Quality Engineering Technology, 2 certificates in Six Sigma and a new certificate in Lean.	143,000
Wisconsin Technical College System – RISE 2011 Joseph Jacobsen & Gloria Pitchford-Nicolous	Green Technologies	Develop a pathway from pre-college to Environmental Health and Water Quality or Sustainable Facilities Operations.	Two new courses that ladder to the two degrees and a certificate in environmental studies.	20,000
Milwaukee Workforce Investment Board 2011	Photovoltaic	Develop three sections of a photovoltaic installation helper certificate for neighborhood youth.	Modification of existing courses to	10,000

Milwaukee Community Service Corp 2011-2012	Develop a solar certificate	Develop a solar certificate with an emphasis on general energy systems and power engineering.	Under development	100,000
Milwaukee Community Service Corp 2011 Chris Lipsau	Geothermal	Develop a course and deliver a course in general geothermal technology	Developed a course and delivered geothermal course at ECAM	10,000
Focus on Energy and We Energies – 2006 Joseph Jacobsen	Install Photovoltaic and geothermal systems	Install Photovoltaic and geothermal systems at the KGMB facility	Installed photovoltaic and geothermal systems at the KGMB facility	\$100,000
We Energies, Focus on Energy & Milwaukee School of Engineering – 2004 Joseph Jacobsen	Microturbine	Install a 60kW microturbine, DG-CHP optimization	Installed a 60kW microturbine, DG-CHP optimized the most instrumentated microturbine in the world.	\$150,000

Content Delivery Method Experience

Traditional face-to-face full semester

Online – electronic media

Accelerated

International classes

Multiple way video

Multiple language and translations

Graduate Seminar

Video recorded

Webinar

Professional Memberships – past and present

Association of Integrity and Responsible Leadership in Economics and Associated Professions (AIRLEAP)

Milwaukee Water Council

Union of Concerned Scientists

United States Green Buildings Council

Society for Chaos Theory in Psychology and Life Sciences

Wisconsin Association of Equal Opportunity

American Management Association

American Society of Quality

Association of Energy Managers

Environmental Engineers & Managers Institute

Facility Managers Institute

Building Owners and Managers Association

International Facility Managers Association

Cogeneration & Competitive Power Institute

Energy Service and Marketing Society

Society for the Advancement of Management

International Maintenance Institute

Short Presentations

Depletion, Pollution, Migration and Population: revisiting considerations from the 60s and 70s

Business Performance Modeling: regions of optimal performance

Sustainable Business Practices

Operations Research in Manufacturing

Green Manufacturing

Industrial Ecology

Performance Measures in the Workplace: Energy & Water

Performance Measures in the Workplace: People

An Introduction to Decision Making

Transforming Education: teaching physics, biology, social science and business in one course titled Water

American Public Works Association: Speaker: Business Performance Modeling

Applications of STEM to Sustainability

Academic Web Site Development

Feasibility, Operation and Demonstration of a Combined Heat & Power Microturbine

Promoting Energy Technology to Large Energy Users

Speaker: green technologies in buildings: Arnold and O. Sheridan – Madison Wisconsin

Projects

Managerial & Program

American Colleges & Universities Presidents' Climate Commitment – baseline and climate action plans

American Society for Quality – 4 part series web-seminar: Seeking Sustainable Success 2009/2010 – currently between the second and third session

Develop curriculum/program quality engineering technology

Develop curriculum/program for Environmental Health and Water Quality Technology

Develop curriculum/program for Energy Engineering Technology

Develop curriculum for Sustainable Facilities Operations

Co-chair of the Green Energy Summit - 2010

Chair of the Water Tract for the Green Energy Summit – 2009-2010

Executive Committee of the Green Energy Summit – 2010

Executive Committee of the Renewable Energy Summit - 2009

Internal and External Steering Committees: Energy Efficiency and Advanced Manufacturing Center

Conduct three-credit graduate credit workshop in Managerial Economics (Quito Ecuador September, 2008)

Developed the first Sustainable Facilities Management AAS degree in the Midwest – MATC

Partner with the USGBC on LEED AP technical training program – MATC

Sustainable Operations Training Program – City of Milwaukee

Resolution and first Energy Performance Contract RFP for the City of Milwaukee

Evaluation Team of Energy Performance Contracts – MATC

Evaluation Team of 450 kW Photovoltaic Farm - MATC
Technician Training Program
Organizational Training and Development for Operations Management Personnel
Commissioning Building Systems for Green Buildings
Milwaukee Mayor Tom Barrett's Green Team: Private Sector Group
US Green Building Council – LEED registration
Wisconsin Machine Tool Show – Lean and Green in Manufacturing – 2009
Conduct three-credit graduate credit workshop of Managerial Economics – Shanghai (March, 2017)
Conduct three-credit graduate credit workshop of Statistical Methods – Shanghai (March, 2017)
Conduct three-credit graduate credit workshop of Managerial Economics – Shanghai (March, 2018)
Conduct three-credit graduate credit workshop of Statistical Methods – Shanghai (January, 2018)

Technical / Engineering

Distributed Generation with Combined Heat and Power (installation, operations and maintenance)
KGMB geothermal and photovoltaic installation
ECAM geothermal system installation - 2011
Oak Creek Campus solar thermal system installation - 2011
Active Energy Management Feasibility, Design, Installation and Demonstration
Energy Performance Contract – MATC/City of Milwaukee/Johnson Controls
Multiple Web Site Developments: academic and industrial performance indicators

Publications & Conference Presentations

Jacobsen, Joseph. (2018). Intelligent Growth for a Sustainable Economy. Sustainability Summit. Summit Keynote Speaker. Milwaukee, WI. USA. March 11 & 12.

Jacobsen, Joseph. (2018). Sustainable Business Practices. Multidisciplinary View on Sustainable Living and Built Environment. Conference Keynote Speaker. Bangkok, Thailand. January 11, 12 and 13.

Jacobsen, Joseph. (2017). Sudden Diffusion of Sustainable Technologies. Society for Chaos Theory, Psychology and the Life Sciences. Cincinnati, OH. August 11, 12 and 13.

Jacobsen, Joseph. (2016). Making the Case for and Defining Sustainability, Social Responsibility and Environmental Responsibility. The Journal for Quality and Participation. 38, 4. Pp 10-15.

Book: Jacobsen, Joseph. (2011) Sustainable Business and Industry: designing and operating for social and environmental responsibility. Milwaukee. American Society for Quality Press.

Jacobsen, J., Guastello, S. (2011). Diffusion models for innovation: S-curves, networks, power laws, catastrophes, and entropy. Nonlinear Dynamics in Psychology and Life Sciences. In press

Jacobsen, J., Mason, M., LaFontsee, D. (2009). Green Jobs: what are they, who needs them and who's doing the training. proceedings of the Climate Change and Green Jobs: helping businesses prepare for new expectations and new rules conference. University of Wisconsin Law School, Madison Wisconsin. Sept. 18.

Jacobsen, Joseph. (2009). Innovative Education in the Water Sector: Interdisciplinary Great Lakes Education, From North America to Africa. proceedings of the International Conference of Engineers Without Borders. Milwaukee. March 27.

Jacobsen, Joseph. (2009). Service and trade group performance: linear and nonlinear models and optimal 3D performance surface. proceedings of the Society for Chaos, Psychology Theory and Life Sciences conference, of 2009, Marquette University, Milwaukee, Wisconsin, USA on July 23-25, 2009.

Jacobsen, J., Guastello, S. (2007). Nonlinear models for the adoption and diffusion of innovation for industrial energy conservation. Nonlinear Dynamics in Psychology and Life Sciences. January, 2007.

Koehler, G., Dooley, K., Dozier, K., Jacobsen, J., Waltuck, B. (2006). Complexity tools & public policy analysis: do methods, explanations and results recast policy formation and strategies? proceedings of the Society for Chaos Theory in Psychology & the Life Sciences. Johns Hopkins University, Baltimore MD, August 3-5, 2006.

Jacobsen, Joseph. (2006). Comparing linear to nonlinear models: innovation information and innovation adoption, cusp catastrophe and power laws. proceedings of the International Nonlinear Sciences Conference (INSC) of 2006, University of Crete, Medical School, Heraklion, Crete, Greece on March 10-12, 2006.

Jacobsen, J., Guastello, S., (2005). Comparing linear to nonlinear models: innovation information and innovation adoption, facilities and plant managers' energy outlook. proceedings of the Society for Chaos, Psychology Theory and Life Sciences conference, Denver CO: July, 2005.

Swedish, M., Wrate, G., Betz, F., Blakemore, E., Greguske, L., Jacobsen J., (2004). A 60-kW microturbine demonstration facility phase II: instrumentation, website development, and evaluation. Proceedings of the 2004 American Society of Engineering Education Annual Conference & Exposition Copyright © 2004, American Society for Engineering Education

Standing Committees – past and present

Secretary – Society for Chaos Theory in Psychology and Life Sciences

Public Relations Officer – Society for Chaos Theory in Psychology and Life Sciences

Diversity Committee (City of Milwaukee: Buildings & Fleet)

EEOC Intake Advisor (City of Milwaukee)

Sustainable Facilities Committee (Milwaukee Area Technical College)

Energy Efficiency and Advanced Manufacturing (ECAM) **internal and external** committees (co-chair)

Oak Creek Council Member

Renewable Energy Summit - Executive Committee

Green Energy Summit: all sub committees

Curriculum Development Committee (CUW & MATC)

Enrollment and Retention (MATC)

Assessment (CUW)

Board of Director, past and present

Pennsylvania Cyber Charter School – Philadelphia

Hill House Passport Academy Charter School – Pittsburgh

State of Pennsylvania Sustainable Energy Fund – Harrisburg

Keep Greater Milwaukee Beautiful – past
Engineers and Scientists of Milwaukee – past
Wisconsin Energy Research Consortium – past

Awards

Graduate Faculty of the Year 2010 – Concordia University Graduate School

Project of the Year (2004). Daily Reporter. best of the rest. Anderson Water Tower Microturbine April 22, 2004.

Volunteer

Tutor in mathematics: Milwaukee Public School students: Milwaukee
Tutor: How to fill out a job application, Lapham Park Alternative School, Milwaukee
2010 – Milwaukee Boys Club

LinkedIn Page

<http://www.linkedin.com/pub/dr-joseph-jacobsen/12/a84/67a>