

# Nancy Barr, Ph.D.

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<http://www.mtu.edu/mechanical/communications/>

## **RESEARCH INTERESTS**

Engaged in research in Writing in the Disciplines, qualitative methodology as it applies to graduate teaching assistant training, metacognition through reflective writing, portfolio use in undergraduate engineering education, engineering communication curriculum development, and best practices in teaching communication and inclusive teaming in undergraduate and graduate courses.

## **EDUCATION**

Michigan Technological University, Houghton, MI  
Ph.D. in Rhetoric, Theory, and Culture,  
Dissertation Topic: "Extending WID to train mechanical engineering GTAs to evaluate student writing," advised by Robert Johnson, Ph.D.

Michigan Technological University, Houghton, MI  
M.S. in Rhetoric and Technical Communication  
Project Title: "Revisiting Writing Across the Curriculum: Overcoming Resistance to WAC in the ME-EM Department," advised by Elizabeth Flynn, Ph.D.

Lake Superior State University, Sault Ste. Marie, MI  
B.S. in Business Administration, Cum laude

Bay College, Escanaba, MI  
A.A. in Liberal Arts; Editor, campus newspaper, the *Bay Beacon*

## **RELEVANT EXPERIENCE**

### **Director, Engineering Communications Program, March 2007 to present, Michigan Technological University, Houghton, MI**

Developed technical communications program for the 12th largest undergraduate mechanical engineering program in the US, deliver lectures on communications and teaming, develop technical communications curriculum and assessment tools for four new ME courses as part of revamped undergraduate curriculum, teach graduate-level engineering communication courses. Conduct departmental faculty training sessions in communications and assignment development. Manage all administrative functions of \$450,000 Senior Capstone Design Program involving 180-plus students, eight faculty, and five staff members, develop and coordinate Lab GTA training program, edit proposals, journal articles, and other communications for graduate students and faculty.

### **News Editor, May 2004 to March 2007, *Daily Mining Gazette*, Houghton, MI**

Responsible for design, pagination and editing of award-winning daily newspaper and directing staff of five reporters, one photographer, and city editor. Wrote award-winning editorials and columns. Assisted managing editor with hiring, employee evaluations, and other personnel matters.

### **City Editor, March 1994 to April 2001, *Daily Press*, Escanaba, MI**

Responsibility grew from typing and rewriting news releases to full-time reporting, pagination, writing, editing, assisting with hiring decisions and training new reporters. Worked as part of a dedicated team to redesign nearly 100-year-old award-winning daily newspaper and update content delivery modes such as the Internet.

### **COURSES**

- ◇ Engineering Research Communication (PhD-level course) (Spring semesters 2015-2018)
- ◇ Professional Engineering Communication (master's-level course) (Fall semesters 2016-18, Spring 2019 online only)
- ◇ Mechanical Engineering Practice 1 (Communications Component, Fall 2014-present)
- ◇ Mechanical Engineering Practice 2 (Communications Component, Spring 2015-present)
- ◇ Mechanical Engineering Practice 3 (Communications Component, Fall 2015-present)
- ◇ Engineering Design Processes (Communications Component, Fall 2014)
- ◇ Writing Skills for GRAs (Summer Track A 2013)
- ◇ MEEM Lab GTA Training on Evaluating Student Technical Writing (short course, Fall 2012-present)
- ◇ Senior Capstone Design I and II Topical Expert in Technical Communication (Fall 2009-present)

### **STUDENT GROUP ADVISING**

- ◇ Engineering Ambassadors co-advisor, 2015– present

### **GRADUATE COMMITTEES**

Master's Degree - David Leach, May 2018, "Kinesthetic Learning Experience Simulation Using an Online Intervention To Improve Hands-On Ability"

### **REFEREED CONFERENCE PAPERS**

- "Divergent Courses: Preparing Graduate Students for Diverse Career Paths," 2019 IEEE Professional Communication Society Conference (Accepted), Aachen, Germany, July 2019. **Barr, N.B.**
- "'Helpful,' 'Irritating,' and 'Smart': Student Perspectives on Teams in a Mechanical Engineering Program," 2018 IEEE Professional Communication Society Conference, Toronto, Canada, July 2018. **Barr, N.B.** and De Clerck, J.D.
- "Starting from Scratch: Incorporating communication instruction in revised mechanical engineering curriculum," 2017 IEEE Professional Communication Society Conference, Madison, WI, July 2017. **Barr, N.B.**
- "Extending WID to train mechanical engineering GTAs to evaluate student writing," 2016 ASEE Conference, New Orleans, LA, June 2016. **Barr, N.B.**
- "Successes and Challenges in Implementation and Running of the First ME-Practice Class in the 2nd Undergraduate Year as Part of a Curriculum Revision," 2016 ASEE Conference, New Orleans, LA, June 2016. Van Susante, P.J.; **Barr, N.B.**; Blough, J.R.; De Clerck, J.R.; Miller, M.H.; Miskioglu, I.; Odegard, G.M.

## **REFEREED CONFERENCE PRESENTATIONS**

- “The Performance of Portfolios Across the Curriculum,” 2019 Conference on College Composition and Communication, Pittsburgh, PA. (Accepted)
- “Connecting the Dots: Engineering Students Connect Concepts via Reflective Essays,” 2018 International Writing Across the Curriculum Conference, Auburn, AL.
- “The How and Who of Incorporating Writing Instruction in Large Enrollment Courses,” 2018 U.P. Teaching and Learning Conference, Marquette, MI.
- “Reflective Essays as Assessment Tools for Mechanical Engineering Students and Faculty,” 2017 U.P. Teaching and Learning Conference, Houghton, MI.
- “Reflection/Deflection: Challenges of Incorporating Reflexive Writing into a Mechanical Engineering Program,” 2017 Conference on College Composition and Communication, Portland, OR.
- “Training Mechanical Engineering GTAs to Effectively Evaluate Writing,” 2014 International Writing Across the Curriculum Conference, Minneapolis, Minn.
- “Revisiting Writing Across the Curriculum: Overcoming Faculty Reluctance to Integrating Writing into the Engineering Curriculum,” 2012 International Writing Across the Curriculum Conference, Savannah, GA.
- “Collaborative Efforts Across Academic Boundaries Improve Student and Faculty Communication Skills,” 2012 Writing Across the Peninsula Conference, Sault Ste. Marie, MI

## **PUBLICATIONS (FICTION)**

- ◇ “Peace”, *Write Michigan 2018 Anthology*, (Judge’s Choice Runner Up in Write Michigan Short Story Contest), March 2018, Chapbook Press, ISBN 978-1943359981
- ◇ *Page One: Whiteout*, November 2009, Arbutus Press, ISBN 978-1933926179
- ◇ *Page One: Vanished*, May 2007, Arbutus Press, ISBN 978-1933926162
- ◇ *Page One: Hit and Run*, July 2006, Arbutus Press, ISBN 978-1933926155

## **PUBLICATIONS (MAGAZINES/NEWSLETTERS)**

- “MTU students travel to India to test their designs for low-cost prosthetic devices,” *ASEE ME News*, April 2012
- “Virtual prototyping and collaboration with Michigan Tech helps Mercury Marine refine engines,” *MSC Software Customer Case Studies*, 2008
- “Home Sweet Home” *Mystery Scene Magazine*, Summer 2007
- “Television is King,” *IndyCar Racing Magazine*, February 1996
- “The Ghost of Sand Point Lighthouse,” *Marquette Monthly*, September 1994

## **WORKSHOPS**

- ◇ Consortium to Promote Reflection in Engineering Education Workshop, University of Washington, Seattle, WA, September 2017.

## **SPECIAL PROJECTS**

- ◇ Contributing Author, Core Grammar for Engineers Project, Blue Horizons Partnership, 2016.
- ◇ Member of MTU's team participating in the NSF-funded Transforming Engineering Culture To Advance Inclusion and Diversity (TECAID) in mechanical engineering programs. Other participating universities are Purdue University, University of Oklahoma, Oregon State University, and Texas Tech University.
- ◇ CITI Course Training for the Protection of Human Subjects in Research
- ◇ Staff Search Committee Training through Michigan Technological University on best practices in hiring

## **SPECIALIZED TRAINING**

- ◇ ED 5101 Foundations of Online Teaching, 2018 Summer Track A (Grade A)
- ◇ Mental Health First Aid, National Council for Behavioral Health, offered through Michigan Technological University, June 2017.
- ◇ Cultural Competency Training — Eight-step training through Michigan Technological University's Center for Diversity and Inclusion. Topics covered include self-awareness, communication, cultural literacy, diversity, discrimination, and conflict management., June 2016
- ◇ Basic Safety Training through Michigan Technological University

## **SERVICE TO PROFESSION**

- ◇ Secretary, IEEE Professional Communication Society Board of Governors, term 2019-2021
- ◇ Consortium for Graduate Communication Bibliography Committee, 2018-present
- ◇ Reviewer, *Journal of Response to Writing*, 2018-present
- ◇ IEEE PROCOMM 2018 Conference Committee, co-chair of the Proceedings Committee
- ◇ Nominee for IEEE Professional Communication Society Advisory Board (election November 2018)
- ◇ Reviewer for ASEE Conference (Ethics Division and Liberal Education/Engineering & Society Division)

## **SERVICE TO DEPARTMENT/UNIVERSITY**

- ◇ Member, ME-EM Curriculum Committee, 2017-present
- ◇ ME-EM Department Diversity Liaison to MTU Diversity Council (2016-present)
- ◇ University Senate representative to Campus Climate Study Committee, December 2015-September 2018
- ◇ Unit 1 Alternate to University Senate, Term expires in Spring 2020 (Chair, Professional Staff Policy Committee Fall 2018)
- ◇ PhD student representative to Rhetoric, Theory, and Culture Graduate Program Steering Committee, MTU, Academic Year 2014-15
- ◇ Staff Representative to Provost Search Committee, 2014-2015
- ◇ Member, Senior Media Systems Engineer-IT Search Committee, 2014 and 2015 (first hire was promoted)
- ◇ Staff Representative, ME-EM Chair Evaluation Committee, 2014
- ◇ Engineering Ambassadors, Co-Advisor, 2013-present
- ◇ Member, Senior Design Training Specialist-ME-EM Search Committee, 2012 and 2018
- ◇ Chair, Fringe Benefits Committee, University Senate, 2011-2013 (member, Benefits Liaison Group)

### **SERVICE TO DEPARTMENT/UNIVERSITY (CONTINUED)**

- ◇ Member, Senior Capstone Design Committee, 2007-present
- ◇ Participant, MTU Campus Safe Place Program, 2007-present
- ◇ First-Year Summer Reading Program, 2007-present

### **PROFESSIONAL MEMBERSHIPS**

- ◇ Association for Writing Across the Curriculum
- ◇ IEEE, Education Society and Professional Communication Society
- ◇ American Society for Engineering Education, LEES, DEED, and ERM Divisions
- ◇ National Council of Teachers of English
- ◇ Consortium on Graduate Communication
- ◇ Mystery Writers of America

### **HONORS**

- ◇ Recognition from Provost for being in the top 10% of faculty on campus receiving an exceptional "Average of 7 Dimensions" student evaluation score for MEEM 5010 (Fall 2016, Fall 2018) and MEEM 6010 (Spring 2017, Spring 2019)
- ◇ 2016 President's Award from Women in Engineering Pro-Active Network (WEPAN) for TECAID team's efforts in creating an inclusive and diverse culture in mechanical engineering (shared with the four other participating universities)
- ◇ 2014 Order of the Engineer Outstanding Link Coordinator Award
- ◇ 2008 Making the Difference Rookie Award, Michigan Technological University Staff Council
- ◇ 2008 and 2007 Good News Award for Editorial
- ◇ 2006 Good News Award for Editorial and Certificate of Merit for Editorial
- ◇ 2005 Michigan Associated Press 2nd Place for News Columns, Division 1
- ◇ 2005 Michigan Press Association 3rd Place for Local Columnist, Daily Class D
- ◇ 1999 Michigan Associated Press 1st Place for Enterprise Reporting, Division 1
- ◇ 1999 and 1998 Good News Award for Straight News Story