Elizabeth Miller

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http://u.osu.edu/miller.4962/

Objective: To obtain a position where I can leverage my skills and background to provide excellent educational experiences for students and to assist instructors in taking advantage of technology and other resources to improve student learning experiences.

Education: **Ph.D. Coursework – Mathematics Education**
The Ohio State University, 2007-2008 – GPA: 4.00

Masters (MS) – Mathematics
The Ohio State University, 2007 – GPA: 3.775, 139 credit hours
Thesis: *Learning in neural networks: a comparison of networks of Hodgkin-Huxley neurons and networks of map model neurons each endowed with spike-time-dependent plasticity*

Graduate Specialization in College Teaching
The Ohio State University, 2007

Bachelors (BS) – Mathematics*, Valedictorian*
Denison University, 2004 – GPA: 4.000
Thesis: *A New Axiomatic Geometry: Cylindrical (or Periodic) Geometries*

Expertise: Mathematics Education, Learning Technology, First-Year Collegiate Math Courses, Learning Center Administration, Large Enrollment Course Administration, Online Teaching, Course Redesign, Project Management

Honors: The Ohio State University College of Arts and Sciences Outstanding Staff Award
OSU Office of Distance Education and eLearning Departmental Impact Grant *(only 2x recipient)*
VIGRE Fellow (Graduate Student Fellowship)
Pi Mu Epsilon President (Mathematics Honorary)
Kappa Delta Pi Member (Education Honorary)
High School Valedictorian and National Merit Scholar

Employment: **Calculus Learning Specialist and Learning Technology Specialist**
Mathematics and Statistics Learning Center (MSLC), The Ohio State University, 2007-present

As an administrative staff member in the MSLC, I create online materials for the OSU Calculus courses. I assist with the administration of student tutoring and other outreach and support services for students from developmental math through calculus. I work closely with other administrators and coordinators in the department to provide calculus instruction for 4000-6000 students each semester. I design, pilot, and evaluate new instructional methods for blended, hybrid, and online courses, and mentor teaching assistants and post-docs who are teaching the pilot courses. I administer the department's online, for-credit math courses.

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Mathematics Lecturer

Mathematics Department, The Ohio State University, 2008-present

I have lectured Calculus 1 and Calculus 2 for classes of size 120-250 in a variety of formats including in person, flipped, hybrid, and online.

Service: Pearson MyMathLab Advisory Board
Pearson Calculus Advisory Board
OSU Math Dept eLearning Committee
OSU Math Dept Educational Forum
OSU Math Dept Calculus Textbook Committee
OSU Mathematics and Statistics Learning Center Staff Hiring Committee
OSU Math Dept MyMathLab/MyLabsPlus Administrator
OSU Math Dept Learning Management System Administrator

Project Experience:

- Led the development of the Technology-Enhanced Calculus Program (funded by an OCIO Impact Grant)
- Piloting an integration between MyLabsPlus and OSU's Learning Management System
- Leader of the Flipped and Flexible Calculus Program for Calculus I and II (funded by an ODEE Impact Grant)
- Envisioned online learning modules, assembled and oversaw a creative team, and developed and editted these lessons for Calculus I, Calculus II, and Excursions in Mathematics (http://mslc.osu.edu/online/lessons)
- Mathematics Department Lead for the OSU Online General Education Initiative
- Designed, developed, and taught first hybrid and first online courses in the Math Department
- Piloted a new technology-based online Calculus textbook and online homework system, which led to the adoption of a new textbook for all calculus courses
- Initiated, created, and now maintain online exam reviews with video solutions for large courses
- Initiated and created online workshops for calculus students
- Piloted online tutoring

Publications: *Flipped and Flexible Calculus* (in progress)
Technology-Enhanced Calculus Lectures, Academic Exchange Quarterly, Winter 2011 (Vol 15, Issue 4)

Conference Presentations:

Flipped and Flexible Calculus: A Different Calculus Experience, Joint Mathematics Meetings – San Antonio, TX, January 2015

Online Workshops for Calculus Students using Articulate Mobile Player App, Joint Mathematics Meetings – San Antonio, TX, January 2015

Interactive Online Lessons using Articulate Storyline, Joint Mathematics Meetings – San Antonio, TX, January 2015

Orient Students to your Course with a Treasure Hunt, Joint Mathematics Meetings – San Antonio, TX, January 2015

Using Flipping Pedagogy in an Online Course, Joint Mathematics Meetings – San Antonio, TX, January 2015

Using MyMathLab for Calculus, Speaking About Math & Stats – Pearson Professional Development Online, November 2013

Teaching Online and In-Person Students in the Same Classroom, Mathfest – Hartford, CT, August 2013

Technology Enhanced Calculus Lectures, Mathfest – Hartford, CT, August 2013

Supporting First Year Students with a Mathematics and Statistics Learning Center, Mathfest – Hartford, CT, August 2013

Swimming Upstream: Overcoming Barriers to Technology Adoption – Changing the Culture in a Department, Innovate - Columbus, OH, March 26, 2013

Capitalize on Your Time Together: HyFlex and Flipped Models (Panelist) – OSU University Center for the Advancement of Teaching Seminar, February 20, 2013

Technology-Enhanced Calculus Lectures, International Conference on Technology in Collegiate Mathematics – Orlando, FL, March 22-24, 2012

Development of Technology-Enhanced Lectures for Calculus, Innovate - Columbus, OH, April 27, 2011

A New Axiomatic Geometry: Cylindrical (or Periodic) Geometries, Joint Mathematics Meetings - Phoenix, AZ, January, 2004

Technology/Software Experience:
- Microsoft Office Suite (Word, Excel, PowerPoint, OneNote, Access)
- Learning Management System (Desire2Learn, Moodle)
- Digital Inking (OneNote, Smart Notebook)
- Online interactive learning (Articulate Storyline)
- Lecture Capture (Camtasia, Livescribe)
- Video Editing (Camtasia)
- Mathematics Typesetting (MathType and LaTeX)
- Website Administration (Druple and Wordpress)
- Web-Conferencing and live online teaching (Adobe Connect)
- Mathematics Software (Geogebra, Mathematica, TI)
- Online Homework System Administration (MyMathLab/MyLabsPlus)

Additional Teaching Experiences:

Mathematics Teaching Assistant – Denison University, 2001-2004

Mathematics Tutor - Student Athlete Support Services Office, The Ohio State University, 2005-2006

Private Mathematics Tutor – 2001-2007

Summer Institute for the Gifted – Mathematics Instructor, Counselor, Secretary; Summer of 2003, 2004

Coordinator and Instructor of HS Proficiency Test Institute, Newark City Schools – Jan-Mar, 2003

Teaching Internship – Massillon-Perry Local Schools, May 2002

HS Teaching Assistant – Heath High School, Spring 2002

Mad Science Summer Day Camp Counselor – Summer 2001, 2002

Volunteer Teacher's Assistant – Indianola Middle School, Columbus Public Schools

Volunteer Childcare and Tutoring - New Beginnings Domestic Violence Shelter, Newark, OH

Newark Education and Literacy Center Volunteer – Founding, Tutoring, and Administering the Center

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Conferences Attended:

Joint Mathematics Meetings, San Antonio, TX – January 10-13, 2015

Pearson Calculus Summit, Boston, MA – May 30–June 1, 2014

Joint Mathematics Meetings, Baltimore, MA – January 15-18, 2014

Mathfest, Hartford, CT – July 31-August 4, 2013

Innovate Conference, Columbus, OH – April 12, 2013

eTech Ohio Conference, Columbus, OH – February 31, 2013

Pearson MyMathLab Summit, San Diego, CA – February 7-9, 2013

Joint Mathematics Meetings, San Diego, CA – January 9-12, 2013

The Future of Math Education in Ohio Mini-Conference, Columbus, OH – February, 2012

International Conference on Technology in Collegiate Mathematics, Denver, CO – March 17-19, 2011

MyMathLab Online Conference, April 2011

Focusing on the First Year Conference, The Ohio State University, Columbus, OH – April 2011

Mathfest, Pittsburgh, PA – August 2010

Quality Matters (all-day) Workshop, The Ohio State University, Columbus, OH – 2010

National Center for Academic Transformation (NCAT) Conference, Phoenix, AZ – Spring, 2008

Mathfest, Madison, WI – August 2008

Mathfest, Providence, RI – August 2004

Citizenship: United States of America