Michael Dymek

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Education

M.S. **Mathematics**   Sep 2021 – Jun 2023
Western Washington University, *Bellingham WA*
B.S. **Applied Mathematics and** ***B.S.*** **Physics with Minor in Astronomy**   Sep 2017 – Jun 2021
Western Washington University, *Bellingham WA*

  Relevant Courses:
- **Calculus and Linear Algebra** – Analytic tools for calculating derivatives and integrals in arbitrary dimensions. Formal definition of limits and continuity. Applications of infinite series through convergence. Algebraic and geometric view of matrices and their application to linear equations. Orthogonality and bases, with applications to the least squares problem. Abstract vector spaces and linear transformations.
- **Probability and Statistics** – Discrete and continuous random variables, including the normal, chi-squared, gamma, t, and F distributions. Development of statistical tests including the chi-square test, simple and multiple linear regressions, and one-way ANOVA. Extensive use of computation, including Python, R, and SQL.
- **Numerical Methods** – Methods for solving matrix equations through factorization and iterative techniques. Algorithms for nonlinear optimization, including Lagrange multipliers and the KKT theorem. Calculus of variations and optimal control theory. Polynomial interpolation using splines. Numerical differentiation and integration. Heavy use of python and MATLAB for applying theory.
- **Laboratory Physics** – Error analysis, data handling, and numerical solution methods in physics using computer programs such as Python and MATLAB. Computational modeling methods applied to a variety of physical situations.

Experience

Graduate Teaching Assistant – *WWU Math Department*   Sep 2021 – Jun 2023
- Taught 30-student introductory math classes under the advice of a lead instructor. Created and delivered lesson plans that aligned with the course objectives.
- Met with students one-on-one and in small groups to provide individualized help with course material.
- Graded student's work while providing specific, constructive, and actionable feedback.
- Met weekly with the lead instructor and TAs to discuss the progress of the class. Worked to develop a consistent grading rubric and grading policy.

Lead Tutor – *WWU Tutoring Center*   Sep 2018 – June 2021
- Connected with instructors to stay current on course content and establish a role as liaison between the physics department and the tutoring center.
- Synthesized content being taught into weekly review sessions and prepare 15-25 tutors for what they can expect questions on.
- Tutored hundreds of students during drop-in time, covering a wide variety of topics, including algebra, pre-calculus, calculus, kinematics, dynamics, electromagnetism, optics, fluids, and thermodynamics.
- Prepared for and led weekly study groups for students to attend and access personalized assistance.

Skills

Technical Proficiencies

• Python – 4 Years	• SQL – 1 Year	• C++ – 1 Year
○ Pandas, NumPy, SciPy, MatPlotLib, Jupyter	• R – 1 Year	• LaTeX – 4 Years
	• MATLAB – 1 Year	• HTML and CSS – 1 Year
• Microsoft Excel – 4 Years	• Mathematica – 2 Year	

Personal Proficiencies

• Analytical Thinking	• Customer Service	• Time Management
• Research	• Collaboration	• Attention to Detail