

Sabrina Hetzel

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EDUCATION

Pursuing PhD in Applied and Computational Mathematics, Anticipated May 2024

Southern Methodist University, Dallas, TX

Bachelor of Science in Mathematics, May 2019

Tarleton State University, Stephenville, TX

Bachelor of Science in Economics, May 2019

Tarleton State University, Stephenville, TX

WORK EXPERIENCE

Graduate Teaching Assistant, Southern Methodist University, Dallas, TX, August 2019 – Present

- Assist students in their understanding of mathematical concepts by explaining theoretical ideas behind the concepts and then applying them to problems related to business and economics
- Monitored assessments for students taking Business Calculus
- Responsible for grading quizzes and managing quiz grades online via Canvas

Math Tutor and Grader, Tarleton State University, Stephenville, TX, September 2016 – May 2019

- Tutor students weekly in mathematical concepts which include; Plane Trigonometry, Pre-Calculus, Business Calculus, Calculus 1, 2, and 3, and Statistics
- Provide guidance with instructional material to aid students in their studies and provide a better foundation for note taking and learning
- Accountable for grading homework in a range of classes including Calculus and Applied Matrix Algebra

Private Math Tutor, November 2016 – May 2019

- Tutor homeschool students by working through math curriculum provided by Math-U-See
- Teach students new concepts to be able to work through exercises and apply to real world scenarios
- Test student's knowledge with weekly tests over past material

RESEARCH EXPERIENCE

Undergraduate Research Assistantship, Tarleton State University, Stephenville, TX, August 2018–May 2019

- Implemented formulas for the continuous random walk case and apply to a behavioral standpoint
- Create mathematical models based on a binary numerical decision task
- Apply these models to related areas in the behavioral sciences to predict how people make decisions regarding numbers for a binary task

Study Abroad Research, Tarleton State University, Stephenville, TX, May 2018–October 2018

- Encryption during World War II – Recreated the Enigma machine the Germans used to send messages during the war using Python and modern computers
- Mathematical educational learning board game – Created a board game that walks through each year of the war and developed math and science-based problems centered on battles from each year

First Year Research Experience Intern, Tarleton State University, Stephenville, TX, May 2017–August 2017

- Computed formulas for marginal choice probabilities and distributions of decision times for discrete random walks using elementary matrix algebra and complex variables
- Created a mathematical model for decision times that can be applied to two-choice decision tasks
- Designed and applied programs, using Python, to implement the model with a basic number comparison experiment

CONFERENCES PRESENTED

Texas Undergraduate Mathematics Conference (TUMC) – 2017, 2018

Texas/Oklahoma Regional Undergraduate Symposium – 2018, 2019

Tarleton's Math Day – March 2018

Mathematical Association of America Annual Meeting Texas Section – 2018, 2019

Tarleton State University Student Research Symposium – October 2018

ACTIVITIES AND HONORS

First place in graduate poster presentation, Tarleton Student Research Symposium, Fall 2018

Alpha Chi, National Honor Society, Spring 2018 - Present

Delta Mu Delta, Business Honor Society, Summer 2018 – Present

National Society of Collegiate Scholars, National Honor Society, August 2017 – Present

Member, Math Club, Tarleton State University, August 2017 – Present

Member, Computer Science Club, Tarleton State University, August 2017 – May 2018

Dean's List, Tarleton State University, August 2016 – December 2018

Certified Tutor Level 1, Tarleton State University, May 2017