

# Amy Main

Texas A&M University – San Antonio  
One University Way  
San Antonio, TX 78224  
Office phone: 210-784-2821  
amain@tamusa.edu

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## Education

- Masters of Science in Mathematics, Texas A&M University, 1995
- Bachelor of Science in Applied Mathematics, Texas A&M University, 1992
- Associate of Science in Mathematics, Northeast Texas Community College, 1990

## Academic Experience

- 2019 – present: Lecturer of Mathematics; Department of Mathematics, Texas A&M University-San Antonio
- 2017 – 2019: Adjunct Instructor; Department of Mathematics, Texas A&M University-San Antonio
- 2007 – 2019: Adjunct Instructor; Department of Mathematics, Northeast Lakeview College
- 2005 – 2010: Instructor of Mathematics; Concordia University, San Antonio Campus
- 1995 – 2005: Instructor of Mathematics; Blinn College, Bryan Campus
- 1995 – 1999: Lecturer, Department of Mathematics, Texas A&M University
- 1993 – 1995: Graduate Teaching Assistant, Department of Mathematics, Texas A&M University

## Courses Taught

At Texas A&M University-San Antonio

- Math1314-College Algebra F17, Sp18, F18, Sp20, F20,
- Math1314-College Algebra Coreq. Sp21, F21, Sp22, Sum22
- Math1324-Business Mathematics I F22
- Math 1324-Business Mathematics I Coreq F21, F22
- Math 1325-Business Mathematics II Sp20, Sp21
- Math1342-Introduction to Statistics, Sp19, Sp20, Sp21, Sum21
- Math1342-Introduction to Statistics Coreq F22
- Math1351-Fundamental of Math II Sp18, F18, Sp19
- Math2312-Pre-Calculus F19
- Recitation for various courses F17, Sp18, F19, F20, Sp21, F21
- Stem4101 Jaguar Tracks IV F20, Sp21

#### At Northeast Lakeview College

- Math 0300-Basic Mathematics
- Math 0301-Introduction to Algebra
- Math 0302-Elementary Algebra
- Math 0303-Intermediate Algebra
- Math 0310-Elementary Algebra
- Math 0320-Intermediate Algebra
- Math 1314-College Algebra
- Math 1324-Math for Business & Social Science
- Math 1325-Calculus for Business & Social Science
- Math 1350-Fundamentals of Math I
- Math 1351-Fundamentals of Math II
- Math1414-College Algebra

#### At Concordia University

- Math 1330-Applied Finite Mathematics
- Math 2301-Introduction to Statistics

#### At Blinn College

- Math 0312-Intermediate Algebra
- Math 1314-College Algebra
- Math 1324-Analysis I
- Math 1325-Analysis II
- Math 2313-Calculus for Life Science

#### At Texas A&M University

- Math 102-Algebra
- Math 131-Mathematical Concepts-Calculus
- Math 141-Finite Mathematics
- Math 142-Business Calculus
- Math 150-Pre-Calculus
- Math 151 Engineering Mathematics I
- Math 166-Topics in Contemporary Mathematics II

### **Departmental Activities**

- Helped with NSO to get students registered in the correct math course, Summer 2022
- Instructor of Math Jaguar Bootcamp, a self-pace student refresher course, Summer 2022
- Developed support material including the solutions & video for the College Algebra Common Final Practice Final, Dec 2021.
- Became the Mathematics Auxiliary Support Coordinator, Fall 2021

- Helped with development of the college algebra curriculum, common final exam & support materials, May 2021
- Participated, collected & delivered gifts from the mathematics department for the Christmas Adopt-a-Family, Dec. 2020
- Event Supervisor for Science Olympiad, Texas A&M-San Antonio University, March 2020
- GEC committee, Texas A&M-San Antonio University, Fall 2019
- Textbook Committee for the Department of Mathematics, Texas A&M-San Antonio University, Fall 2019
- CAT Team member, Concordia University, 2006
- Blinn Professional Association, Member 1999-2005, Secretary 2001-2002
- Blinn College Honors Program, Mentor Fall 2004
- Developed new course at Blinn specifically to transfer as Texas A&M's Math 131 Fall 2004
- Wrote pre and post-test for various courses at Blinn College
- Developed calculator worksheets to cover Learning Outcomes for College Algebra, Finite Math & Business Calculus at Blinn College.
- On multiple textbook committees to select textbook for courses at Blinn College.
- Helped coordinate pop-luck social each year at Blinn College.

## **Presentations**

- “Math & Art, Is there a connection?”, 5<sup>th</sup> Coast Bend Mathematics & Statistics Conference, April 2020 cancelled due to COVID
- “Math & Reading: How you can improve both at the elementary level”, Faculty Meeting at Regency Place Elementary, Jan 2013

## **Honors and Awards**

- Texas A&M-San Antonio College of Arts & Sciences 2020 Excellence in Teaching Award in the Adjunct Faculty category, June 2021
- Who's Who Among American Teacher's, 1997 & 2002
- Outstanding Teaching Assistant Award, May 1995
- Distinguish Student List, 1992
- Academic Honors List, 1989
- Music Scholarship, NTCC 1988-1989
- UIL Scholar Award, 1988
- Presidential Academic Fitness Award, 1988
- 2<sup>nd</sup> Place, District UIL Calculator, 1987 & 1988
- 4<sup>th</sup> Place, Emblem Building, OEA Regional Conference, 1987
- Who's Who Among American High School Students, 1987

## **Community Services**

- Sunday School Teacher for middle school, St. Sophia Greek Orthodox Church, San Antonio, TX, 2014-present
- Free Math Tutor, multi-grade level, answer questions as needed, friends & family, 2010-present
- PTA member 2009 – 2019,
  - Art Smart Volunteer, 2017-2019
  - Treasure, 2015-16
  - Lifetime Award Coordinator, 2012-2017
  - Box Top Coordinator, 2010-2015
  - Auditor, 2013 & 2014
  - Fiesta volunteer, 2010-2014
- Vacation Bible School
  - Acting Director, St. Sophia's Greek Orthodox Church, 2014
  - Director, St. Ephraim Orthodox Church, 2009 & 2010
  - Director, All Saints Anglican Church, 2007 & 2008
  - Volunteer, Northridge Park Baptist Church 2006-08
  - Volunteer, St. David's Episcopal Church 2006
- Directory Photographer, St. Sophia's Greek Orthodox Church, 2013
- SEWS, St. Ephraim's Women's Committee, member 2008-2011
- Bishop's Dinner Coordinator, St. Ephraim Orthodox Church, 2009
- Greeter, All Saints Anglican Church, 2007-08
- Women of Faith coordinator, All Saints Anglican Church, 2007
- Fall Fair, All Saints Anglican Church, 2007
- Sunday School Teacher, All Saints Anglican Church, 2007-08
- Piano Accompaniment, Our Saviour's Lutheran Church, 2002-2005
- Piano Accompaniment, Lone Star Baptist Church, 1985-1990

### **Additional Skills**

- Excellent with LaTeX, Word, & Excel.

### **School Activities**

- TAMU Math Club, 1991-1992
- TAMU Russian Clue, 1991-1992
- Lone Star Baptist Youth Choir, 1986-90
  - Associate Director, 1988-90
  - Vice-President, 1987-88
- NTCC Baptist Student Union, 1988-90
- NTCC Student Coordinating Board, 1988-90
- Phi Theta Kappa, Treasure, 1989-90

- National Honor Society, 1986-88
- Office Education Association, Chapter Chaplain, 1986-87
- Math Club, 1985-88
  - Vice-President, 1987-88
- Drama Club, 1986-87
- Reach Out Club, President, 1984

## **Teaching Philosophy**

As long as I can remember, I have had a passion for mathematics. In high school, I took five years of math in just four years while also servicing as an officer in the math club and participating in number sense and the calculator team. I remember explaining how to work problems to my friends. Mathematics just made sense to me even when I had not been explained how to work the problem myself. As my studies advanced and math became more difficult, this challenge only made it more enjoyable even when I was frustrated--I had to figure the problem out. Math was no longer a trivial calculation but rather an in-depth study requiring dedication and ingenuity. This passion and enthusiasm, and my desire to share it, have guided my admiration of the subject and fueled my desire to become a college math instructor.

Throughout my teaching career, I have had the opportunity to interact with students at all stages of life beginning with individual instruction through tutoring one-on-one and evolving into a classroom setting teaching classes ranging in size from 3 to 150 students. The insights I gained into how different students learn have helped make me the teacher that I am today. And with the Covid-19 pandemic, I was able to adjust my teaching delivery through Blackboard Collaborate & WebEx, however, I am still able to interact with my students and encourage them to ask questions and help them to see the insight to the wonderful world of mathematics.

In my experience, the three biggest obstacles to learning are a student's belief that math is boring, math is impossible, and math is irrelevant. Therefore, my teaching philosophy is threefold.

*Make math interesting.* In order for a student to succeed in any subject, that subject must engage that individual. Mathematics is too often taught as a list of formulas with a seemingly lack of connection between topics. I bring excitement to my lectures, using energy and enthusiasm to teach ideas while guiding students along a path where each new concept is a natural consequence of the previous topic and a natural precursor to the following.

*Make math possible.* I must admit that math is not always easy. But when presented in the right manner, even the most difficult of subjects can be understood. By learning theorems well, sharing examples that illustrate concepts, and supervising in-class activities that support the topics, students can tackle any problem. I remind my students that while a problem may be long, they have all the tools needed to solve it even if they have to revert to rules that are simpler.

*Make math relevant.* Perhaps the most difficult challenge to overcome is that of student apathy toward the subject of math. With each student coming from different backgrounds, abilities and majors, it is sometimes difficult to cover a problem that would seem relevant to that person individually especially beyond the course final. To respond, I stress that problem-solving extends to all aspects of life. The subject of mathematics gives that person the ability to think

rationally, to clearly organize ideas, to see the big picture and to accurately apply concepts. These are traits that will always have a practical application.

But perhaps more importantly, mathematics is beautiful. A well-constructed proof, a simple trick to solve a problem, this is the beauty of mathematics. While there is no practical application of the Mona Lisa or other great artworks, no one would detract from the worth of these masterpieces. In the same way, mathematics can be viewed as an art form, a majestic work worthy of admiration. If the student sees math as not only a means to an end but an end in itself, they develop respect and admiration for the subject.