Kathryn L. Bollinger

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EDUCATION
- **M. S. in Mathematics**, Texas A&M University, College Station, Texas, 1998
- **B. S. in Applied Mathematics**, Texas A&M University, College Station, Texas, 1996

ACADEMIC EXPERIENCE
- **Instructional Assistant Professor**, Fall 2014 – Present
  Department of Mathematics, Texas A&M University, College Station, Texas
  Courses Taught: Finite Mathematics, Explorations in Mathematics,
  　　　　　　　Mathematics for Business and Social Sciences

- **Senior Lecturer**, Fall 2005 – Summer 2014
  Department of Mathematics, Texas A&M University, College Station, Texas
  Courses Taught: Finite Mathematics, Business Calculus (Honors and Non-Honors)
  　　　　　　　Mathematical Concepts – Calculus

- **Lecturer**, Fall 1998 – Summer 2005
  Department of Mathematics, Texas A&M University, College Station, Texas
  Courses Taught: Finite Mathematics, Business Calculus,
  　　　　　　　Topics in Contemporary Math II

- **Graduate Teaching Assistant**, Fall 1996 – Spring 1998
  Department of Mathematics, Texas A&M University, College Station, Texas
  Course Taught: College Algebra
  Recitations: Engineering Calculus I, Pre-Calculus
  Peer Review Instructor: Plane Trigonometry, Mathematical Concepts – Calculus,
  　　　　　　　Business Calculus, Pre-Calculus

- **Supplemental Instruction Leader**, Fall 1994 – Spring 1996
  Center for Academic Enhancement, Texas A&M University, College Station, Texas
  - Audited math classes and facilitated at least three review sessions for enrolled students weekly.

COURSES TAUGHT
- **MATH 131 (Mathematical Concepts – Calculus):** Limits and continuity; rates of change, slope; differentiation: the derivative, maxima and minima; integration: the definite and indefinite integral techniques; curve fitting.
- **MATH 140 (Mathematics for Business and Social Sciences):** Application of common algebraic functions, including polynomial, exponential, logarithmic and rational, to problems in business, economics and the social sciences; includes mathematics of finance, including simple and compound interest and annuities; systems of linear equations; matrices; linear programming; and probability, including expected value.

- **MATH 141 [now MATH 168] (Finite Mathematics):** Linear equations and applications, systems of linear equations, matrix algebra and applications, linear programming (graphical method), probability and applications, statistics.
- **Honors MATH 141 (Finite Mathematics)**
- **MATH 142 (Business Calculus):** Derivatives, curve sketching and optimization, techniques of derivatives, logarithms and exponential functions with applications, integrals, techniques and applications of integrals, multivariate calculus.
- **Honors MATH 142 (Business Calculus)**
- **MATH 166 (Topics in Contemporary Math II):** Finite mathematics, matrix theory, probability theory, game theory.
- **MATH 167 (Explorations in Mathematics):** Application of mathematics to real world situations using quantitative methods; includes urban services and elements of management science (optimal routes, planning and scheduling), elements of statistics (sampling/polling methods, analyzing data to make decisions), codes used by stores, credit cards, internet security, cryptography.
- **MATH 102 (College Algebra):** Sets, structure of number system; absolute values, solution sets of linear and nonlinear equations, of systems of equations, and of inequalities; relations and functions, graphical representations, progressions, mathematical induction, determinants.
- **MATH 289 Retention for MATH 141/142:** Lab designed to help Aggie Access students succeed in MATH 141/142.

CURRICULUM DEVELOPMENT

- **Bollinger, K.**, & Coffelt, V. (2020) *A Companion to Mathematics for Business and Social Sciences*. Texas A&M University.

- **Bollinger, K.**, & Coffelt, V. (2021) *Math 140 Course Binder*. Texas A&M University.

- Co-authored additional problem sets with full solutions for MATH 140 / Math Placement Exam 2 (MPE2) Review, Summer 2017 – Summer 2018.

- Co-authored Power Point slides for MATH 142 Personalized Pre-Calculus Program (PPP), Summer 2018.

- Assisted with MATH 142 Technology Project, Summer 2012 – Spring 2013.

- Developed strategies for managing large (250+ students/class) classes, Fall 2011.

- Assisted with MATH 141 Redesign, Fall 2007 – Fall 2009.

- Developed Honors Labs for MATH 141 and MATH 142, Fall 2005, Spring 2007, and Fall 2009.

- Assisted in the development of online algorithmic questions for MATH 141, Summer 2003.

- Assisted in the development of MATH 141 online Question and Answer (QNA) site, Summer 2000.

FUNDING

- Whitfield, J. (PI), Texas A&M University, Enhancing the Design of Gateway Experiences (EDGE) Grant, Increasing Student Success in Gateway Courses for the Applied Calculus Course Sequence, $255,500, January 2019 – August 2021. **Senior Personnel**: Allen, A., **Bollinger, K.**, Coffelt, V., Orchard, P., Shields, S.; Graduate Assistant: Chuu, Eric.

- Whitfield, J. (PI), Texas A&M University, Open Education Resource Grant, Widening Access for all Students in MATH 140 and MATH 142 with Low- or No-cost Open Education Resources, $112,000, June 2019 – August 2020. **Senior Personnel**: Allen, A., **Bollinger, K.**, Coffelt, V., Lynch, R., Orchard, P., & Shields, S.; Contributors: Deaton, A., Kilmer, K., & Tripode, J.

- Allen, G.D. (PI) & Epstein, J. (Co-PI), THECB (Texas Higher Education Coordinating Board): Course Redesign for Math 1324, $349,827, July 20, 2007 – August 31, 2009, TAMRF #0701594. **Role: Authoring and video developer.**

- Allen, G.D. (PI) & Pilant, M. (PI), Austin, A., Axelson, H., **Bollinger, K.**, & Whitfield, J., THECB: Pre-Calculus Practices Good Teaching through Content, Technology, and Interaction, Teacher Quality Type A Grant, $295,391, January 9, 2004 – January 31, 2005.

- Pilant, M. (PI), **Bollinger, K.**, Epstein, J., & Whitfield, J, Brooks/Cole Publishing, *Applied Calculus on the Web*, $130,000, September 1, 2002 – August 31, 2003.

PUBLICATIONS

- **Bollinger, K.** and Coffelt, V. (2020) *Mathematics for Business and Social Sciences*. Texas A&M University Libraries OAKTrust. Available electronically from https://hdl.handle.net/1969.1/188687.

- Allen, A. and Orchard, P. (2021). *Calculus for Business and Social Sciences*. Texas A&M University Libraries OAKTrust. Available electronically from https://oaktrust.library.tamu.edu/handle/1969.1/194503. **Contributing Authors: Bollinger, K.**, Coffelt, V., Kilmer, K., & Whitfield, J.

- Epstein, J., Whitfield, J., **Bollinger, K.**, Pilant, M., Chen, L. and Kiffe, T. (2004) *Applied Calculus on the Web*. Thomson Higher Education, 1st edition.

- Pilant, M., Epstein, J., **Bollinger, K.**, Hall, R., Hester, Y. and Strader, A. (2004) *Finite Math on the Web*, 3rd Edition, 250 pp with Student CDROM. Brooks Cole/Thomson Learning.

- **Bollinger, K.** and Whitfield, J. (2003) Applied Calculus on the Web – An Interactive Approach to Freshman Calculus, *16th Annual International Conference on Technology in Collegiate Mathematics Proceedings*, (4 pages).

CONFERENCE PRESENTATIONS

- Shields, S., Allen, A., **Bollinger, K**., Coffelt, V., Herbert, B., Orchard, P., & Whitfield, J. (2020, November). *Customizing Textbooks without Publishers: Empowering MATH Faculty to Create an Open Educational Resource (OER)*. Presented as a 10-minute asynchronous Lightning Talk (YouTube citation below) at the 2020 Open Education Conference.

- Shields, S., Allen, A., **Bollinger, K**., Coffelt, V., Orchard, P., Whitfield, J., Scott, T., & Oswald, E. [TAMU Math Department]. (2020, October 30). *OpenSource TAMU Final* [Video]. YouTube. https://www.youtube.com/watch?v=qRgh9l1qtPs&t=27s

- Whitfield, J., Shields, S.M., & Herbert, B. (2020, September). *Customizing textbooks without publishers: Empowering MATH faculty to create an open educational resource (OER)*. Presented via Zoom at the 2020 Texas A&M Chancellor's Summit on Academic Technology. Contributing Presenters: Allen, A., **Bollinger, K**., Coffelt, V., Orchard, P.

- Allen, A., **Bollinger, K**., Coffelt, V., Herbert, B., Orchard, P., Shields, S., & Whitfield, J. (2020, April). *Opening the Door to Math: Making Math Accessible Through Open Education Resources*, TAMU Transformation Teaching & Learning Conference (TTLC), College Station, TX. (Conference cancelled because of COVID)

- "Enrichment Activities for Middle School Students" (with David Manuel). Presented at the Conference for the Advancement of Mathematics Teaching, Houston, TX, 2009.

- "Using Technology to Teach Applied Calculus" (with Li Chen). Presented at the 17th Annual International Conference on Technology in Collegiate Mathematics, New Orleans, LA, 2004.

- "Applied Calculus on the Web – An Interactive Approach to Freshman Calculus" (with Jennifer Whitfield). Presented at the 16th Annual International Conference on Technology in Collegiate Mathematics, Rosemont, IL, 2003.

INSTITUTIONAL PRESENTATIONS

- Whitfield, J., Allen, A., **Bollinger, K.**, Coffelt, V., Orchard, P., & Shields, S. (2021, March). *TAMU MATH Department - Open education resource (OER) and enhancing the design of gateway experiences (EDGE) project update*, Texas A&M University, College Station, TX.

- "How to be Successful in Math at TAMU" (with Amy Austin / Ben Aurispa). Presented at the Geosciences Academic Preparation (GAP) Program each summer, 2017 – present.

- "Using OneNote for Classroom Instruction," an informal one-hour seminar for APT mathematics faculty and mathematics graduate student instructors of record where I shared my knowledge of switching from the use of SmartNotebook technology to OneNote/Wacom technology, Fall 2019.

TEXTBOOK REVIEWS
- Accuracy reviewed Chapter 1 of Tomastik/Epstein's *Business Mathematics* (including exercises and corresponding Solutions Manual), Brooks/Cole, Cengage Learning, 2019.

- Reviewed three chapters of Ted Giebutowski's *Finite Mathematics* manuscript for Addison-Wesley Publishing, 2003.

- *Finite Mathematics, 7th Edition*, Lial, Greenwell, and Ritchey, Addison-Wesley, 2000.

AWARDS / HONORS / RECOGNITIONS
- Outstanding Teaching Award, Department of Mathematics, Texas A&M University, 2021, 2017, 2011, and 2000.
- Recognition by the Veteran Resource and Support Center as a faculty member who has done an outstanding job supporting student veterans, Texas A&M University, Summer 2017.
- One of the Outstanding Corps of Cadets Academic Mentors of the Year, Texas A&M University, Spring 2015.

- Honorary Guest Coach for Texas A&M Athletics, Spring 2012 and Spring 2010.

- Guest for Century Scholar's Dinner, Texas A&M University, Fall 2010.

- Departmental Helping Hand Award Recipient, Texas A&M University, May 2009.
- Texas A&M Aggie Access 2003-2004 Namesake.
- Texas A&M Fish Camp 2002 Namesake (Camp Bollinger: Session A, Green Camp).
- Recognition by the Texas A&M Corps of Cadets, Spring 2002.

SERVICE
Recent Significant University Activities
- Appointed Member, Honor Council Separation Appeals Panel, Spring 2012 – present.

- Corps Academic Mentor (CAM), Squadron 23, Fall 2013 – Spring 2015.
    When the CAM program was discontinued officially by the University Corps of Cadets, the student members of Squadron 23 asked that I (along with the other two mentors) continue to unofficially mentor them in the same capacity, but as Motivating Outfit Mentors, Fall 2015 – Spring 2018.

Recent Significant Departmental Activities
- Academic Advisor for Undergraduate Mathematics Majors, Fall 2020 – present.
    Before doing so as part of my advisor duties, I reviewed transfer credit requests for core, non-engineering TAMU math classes as a separate service to the department, Spring 2008 – Summer 2019.

- Appointed Member to the APT Teaching Committee, Fall 2020 – present.
  - Before this committee was in existence, I observed and evaluated APT teaching in Spring 2015, Spring 2012, Spring 2009, Spring 2006, and Spring 2005.

- Help Session Coordinator, Spring 2017 – Fall 2018.

- Make-Up Exam / Retest Coordinator, Fall 2016 and Fall 2015.

- Course Coordinator – Duties include, but are not limited to, organizing a meeting at the beginning of the semester to discuss the course syllabus, calculator use and computer use with all instructors, reviewing individual instructor's exams for content, rigor, and grammar, collecting exam statistics from all instructors of record (IOR), and mentoring new instructors and graduate students (GS).

  - MATH 131: Fall 2013, Fall 2010 [2 (IOR)].
  - MATH 140: Spring 2020 [5 IOR (2 GS)].
    - Coordination of this course additionally included leading a weekly meeting of all instructors, compilation and organization of common exams, and the coordination of the grading of the common exams as an entire group.
  - MATH 141: Fall 2014 [8 IOR (1 GS)], Spring 2013 [4 IOR],
    Fall 2012 [7 IOR], Spring 2012 [4 IOR],
    Spring 2008 [9 IOR (1 GS)], Fall 2005 [13 IOR (3 GS)],
    Fall 2004 [11 IOR (2 GS)], Fall 2003 [12 IOR (1 GS)],
    Fall 2002 [12 IOR].
  - MATH 142: Fall 2014 [3 IOR], Spring 2013 [4 IOR], Fall 2012 [2 IOR],
    Spring 2012 [4 IOR], Spring 2006 [7 IOR (1 GS)],
    Spring 2003 [6 IOR].
  - MATH 166: Spring 2016 [5 IOR (1 GS)], Fall 2015 [5 IOR (3 GS)].
  - MATH 167: Fall 2018 [2 IOR (1 GS)].

- Week-in-Review (WIR) / Night Before Drill Instructor – Duties include providing problem sets and solutions on the web covering material taught in class during the previous week and then presenting them in an evening review, open to all students enrolled in the course. The Night Before Drill is a comprehensive exam review given the week of testing, open to all students enrolled in the course.
  - MATH 131: Fall 2010 (398 students enrolled).
  - MATH 140: Fall 2019 (3305 students), Spring 2019 (1097 students).
  - MATH 141: Fall 2011 (2284 students), Fall 2009 (2448 students), Spring 2009, Fall 2005, Fall 2004, Fall 2003, Fall 2002, Fall 2001, Spring 2001, Fall 2000, Spring 2000.
  - MATH 142: Spring 2014 (1066 students), Spring 2006, Spring 2003.

Additional University Activities
- Member, Math Foundational Component Area (FCA) Faculty Committee, Spring 2019.

- Maroon and White Leadership Coach, Fall 2018 – Summer 2019.

- Aggie Ring Day Volunteer, Spring 2015, Fall 2013, and Fall 2012.

- Math Department co-representative to Core Curriculum Assessment Focus Group to discuss how to implement state learning objectives in mathematics courses, Summer 2014.

- Authored Core Curriculum Learning Outcomes and Core Objectives, as well as a sample general syllabus for MATH 141, for approval by the Core Curriculum Committee and the Texas Higher Education Coordinating Board, Spring 2013.

- Appointed Member, Aggie Honor System Separation Appeals Panel, December 2008.

- Elected Member, Aggie Honor Council, Fall 2004 – Spring 2008.

Additional Departmental Activities
- Member of the Math Department Undergraduate Studies Committee, Fall 2020 – present.

- Appointed Member, Non-STEM Curriculum Committee (NSCC), Fall 2016 – present.

- Chair, Committee to review new textbook options for MATH 140 and MATH 142, Spring/Summer 2019.

- Co-author of Non-Engineering Math Placement Exam (MPE2) Questions, Summer 2016, Summer 2015, and Summer 2014.

- Elected Member to the Academic Professional Track Committee (APTC, formerly LC), Spring 2013 – Spring 2016.

- Mentor to Instructors Teaching Large Core Math Classes (250+ students/class), Spring 2012 – Spring 2013 and Fall 2014.

- Member, MATH 167 Textbook Review Committee, Spring 2015.

- Volunteer, Derivative Bee, Fall 2019, Fall 2015, Fall 2013 and Fall 2012.

- Volunteer, Integral Bee, Spring 2014, Spring 2013, Spring 2012, Spring 2011, and Spring 2009.

- Chair, Committee to Review Math 141 Course Syllabus/Textbook, Spring 2013.

- Member, Online Homework Policy Committee, Fall 2008 – Summer 2012.

- Chair, Subcommittee L (Lecturer Promotion Committee), Summer 2010 – Spring 2011. (Elected member since Spring 2009).

- Member, Committee to Review MATH 141 Course Syllabus, Spring 2011.

- Member, Help Session Selection Committee for MATH 141 and MATH 166, Spring 2008, Fall 2005, Fall 2004, and Fall 2003.

- Member, Help Session Selection Committee for MATH 142, Spring 2006.

- Supervision of MATH 141 & MATH 166 Help Session Personnel, Spring 2008, Fall 2005, Fall 2004, and Fall 2003.

- Member, Committee to Revise Help Sessions, Fall 2002.

- Member, MATH 131 & MATH 142 Textbook Review Committee, Summer 2004 and May 2002.

- Member, MATH 141 Textbook Review Committee, Fall 2005 – Spring 2006.

- Hiring of Aggie Access Assistant, Fall 2002 – Spring 2007.

- Overseeing of Aggie Access Assistant, Spring 1999 – Fall 2006.

Outreach Activities
- Volunteer, Summer Educational Enrichment (SEE) Math Camp, Summer 2004 – Summer 2017.
    - Instructor: Presentations given on the game SET, Toothpick Puzzles, Triangle Fun, Map Coloring, and Sets and Venn Diagrams.
    - Proctor and one of the graders of the SEE Math Contest many summers.

- Participant (as part of a larger group of Squadron 23 cadets), Big Event
    - Spring 2015: Helped clear overgrown landscaping for a Bryan/College Station area church.
    - Spring 2014: Helped clean up land for a local retired Aggie veterinarian.
    - Spring 2013: Helped with yardwork for a local College Station resident.

- Volunteer, Math Mini Fair, Spring 2013.

- Volunteer, Girl Scout's "Science Matters at Howdy" Week, Summer 2008.