

RONALD V. PRESTON

Current Position

Director of Students and Associate Professor of Mathematics Education

Joint Appointment:

Department of Mathematics, Science, and Instructional Technology Education

Department of Mathematics

Contact Information:

East Carolina University

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Faculty Fellow for Student Development, Graduate School

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Professional Preparation

- Ph.D., Curriculum and Instruction (Mathematics Education, with a Cognate in Mathematics) Indiana University, June 1997
- MS, Education (Major: Secondary Mathematics, Concentration in Mathematics) University of Southern Indiana, July 1991
- Master's Coursework (Mathematics and Education), University of Evansville, 1986-87
- BS, Education (Chemistry and Mathematics) Oakland City University, May 1980

Professional Experience

- East Carolina University, Faculty Fellow for Student Support (2022-Present)
- East Carolina University, Director of Students and Associate Professor (2011-Present)
- East Carolina University, Associate Professor (2009–11)
- East Carolina University, Department Chair and Associate Professor (2004-09)
- East Carolina University, Interim Department Chair and Associate Professor (2003-04)
- East Carolina University, Assistant Professor (1997-2003)
- East Carolina University, Visiting Assistant Professor (1995-97)
- Indiana University, Instructor, External Grant Evaluator, Etc. (1991-95)
- Oakland City University, Mathematics Instructor (1985-91)
- Wood Memorial High School, Mathematics Teacher (1983-91)

Highlights in Leadership

Administrative Experience

- Department Director of Students (2011-Present)
- Department Interim Chair (2003-04; 2013-14)
- Department Chair (2004-09)
- Department Graduate Coordinator (2003-04)

Current Leadership Responsibilities

- Graduate School Faculty Fellow for Student Support (2022-present)
- Department Director of Students (2011-present), Overall Direction of Graduate Programs in the Department as well as Undergraduate Programs
- Chair, Graduate Council at ECU (2017-present)
- Member, Educational Policies and Planning Committee (2021-present)
- Member, ECU Calendar Committee (2022-present)
- Representative, Latham Clinical Schools Network Advisory Board (2007-present)
- Representative, ECU Partnership Teach Leadership Team (2011-present)
- Ex-Officio Member, MSITE Curriculum Committee (2021-present)

Recent Leadership Responsibilities

- Teacher Preparation Assessment and Accreditation Committee (2020-2022)
- Chair, College of Education Curriculum Committee (2016-2020)
- Member, Graduate Council (2012-present)
- President, North Carolina Council of Teachers of Mathematics (2015-17)
- Member, Executive Committee of the North Carolina Council of Teachers of Mathematics Board (2014-2018)
- Member, Graduate Recruitment, Retention, and Matriculation Committee
- Secretary, ECU Calendar Committee
- Member, Teacher Education Enrollment Management Team
- Member, Board of Directors, Bear Grass Charter School (2008-15)
- Senator, ECU Faculty Senate (2010-12, 2003-05, alternate 2001-02)
- Member, Council for Teacher Education (member of the Evaluation and Assessment Committee)
- President, Eastern Region, North Carolina Council of Teachers of Mathematics
- Board Member, North Carolina Council of Teachers of Mathematics
- Member, University Curriculum Committee
- Member, ECU Scholarship Committee
- Member, University Curriculum Committee
- Member, COE Scholarship Award Team
- Member, COE Code Committee
- Member, COE Evaluation Task Force
- Member, COE Advising Center Task Force

Recruitment and Retention

- Assisted in recruitment, program development, advising, and retention of graduate cohorts
 - Onslow County – three MAEd in Instructional Technology Cohorts, two Certificate in Elementary Mathematics Education Cohorts, one Science Education Specialist Certificate Cohort; each cohort received partial or full funding from either Onslow County Schools or a gift from the Smith Family (about 100 students in all)
 - Washington
 - Wilson
 - NC-PIMS Elementary Cohorts 1 and 2 (42 total students)

- NC Middle Math Cohort (25 students earned an MAEd)
- Onslow County Cohort (25 students earned a degree and two earned a certificate)
- Served as principal investigator for NSF-funded ECU Noyce Scholars – 42 students funded; served as Senior Personnel for a second Noyce grant – 33 students
- Developed a program of study in mathematics and science for the Partnership East Virtual Middle Grades Cohort
- Worked to provide coursework for NC Inspire candidates (lateral entry teachers who were provided an opportunity to earn and MAT part-time, online)
- Promoted scholarships (e.g., Abernathy Scholarship)
- Participated in open houses, orientations, on-campus and off-campus recruitment events

Student Advocacy

- Advise students – undergraduate, alternative licensure, and graduate students (have done this every year from 1996 to present)
- Hear student complaints
- Support students – when warranted – making appeals (for example, financial aid)
- Conduct advising training
- Develop materials for advising and recruiting
- Write letters of recommendation
- Provide scholarship awareness
- Coordinate the undergraduate experience by overseeing recruitment, orientation, advising, Upper Division, Degree Works, internship, and graduation
- Represent the department on committees such as CTE, Teacher Education Enrollment Management Team, University Faculty Committee on Retention, Scholarship Committee
- Provide outreach and access; have taught courses in the following manner, as well as provide faculty with the tools to do the same:
 - Off campus – taught graduate classes in Washington, Wilson, Wilmington, Fayetteville, Greensboro, Chicod, Goldsboro, Greenville, Bridgeton
 - Video – taught graduate classes for three to ten sites
 - Saturday classes – taught courses on six Saturdays or four Friday night and all-day Saturday sessions
 - Split-term classes – begin in the summer and conclude in the fall or spring
 - Hybrid classes – mix of face-to-face and online instruction or face-to-face and video instruction
 - Online

Faculty and Administrator Recruitment – Search Committees

- Written criticalities for new or returning positions
- Written and disseminated recruitment materials
- Served on the following non-faculty search committees:
 - ECU Graduate School Dean
 - ECU Graduate School Associate Dean
 - COE Dean
 - COE Associate Dean
 - Director, Center for Science, Mathematics, and Technology Education
 - Advisors for COE Advising Center (multiple searches)

- SPA (multiple searches, both in and out of the department)
- Served on the following faculty search committees outside the department
 - Elementary Education (multiple times)
 - Collaborative Science Education – BIOL, CHEM, GEOL/GEOG, PHYS
- Served on the following faculty search committees in the department
 - Instructional Technology
 - Mathematics Education
 - Mathematics
 - Science Education

Faculty Development and Mentoring

- Mentor assignment
- Clear guidance on evaluation
- Extra travel for tenure-track faculty
- Protection from early committee work
- Opportunities provided (e.g., STaR program recommendations and support)

Efforts in Funding

- Wrote grants
- Sought one-time university funding
- Solicited scholarships or re-designed scholarships (e.g., Abernathy)
- Participated in fund-raising activities
- Worked with donors who provided scholarships
- Worked with school districts to provide funding

Scholarly Productivity

Grant Leadership

Senior Personal (with Tony Thompson, PI), *Investigating Teachers' Use of Tasks, Discourse, and Technology in High-need School Districts* (\$1,192,468). Sponsor: National Science Foundation (2017-2022).

Co-Principal Investigator (with Katie Schwartz, PI), *Lenoir County Schools STEM Learning Community* (\$247,039). Mathematics and Science Partnership – Lenoir County Schools (2014-2017)

Co-Principal Investigator (with Ann Bullock, PI), *Integrating Neuroscience into Mathematics Instruction* (\$402,950), NC QUEST – Edgecombe County Schools and Hertford County Schools (2014-2016)

Principal Investigator, *ECU Mathematics and Science Education Noyce Scholars Program* (\$899,524). Five-year NSF-funded grant, with one-year, no-cost extension (2009-2015).

Principal Investigator, *Lenoir County Mathematics Initiative* (\$27,245). One-year sub-grant from Golden Leaf through Lenoir County Schools (2010-2011).

Co-Principal Investigator (with Michael Swinson, PI), *Beaufort County Mathematics Initiative* (Continuation Funding; \$98,599). QUEST-funded grant (2010-11).

Co-Principal Investigator (with Michael Swinson, PI), *Beaufort County Mathematics Initiative* (\$236,090). QUEST-funded grant (2009-10).

Principal Investigator, *Middle Grades Mathematics Initiative* (“Mathematics Boot Camp”) – Requested and received \$70,000 from ECU to work with middle grades mathematics teachers in low-performing northeastern NC schools. (2007)

Co-Principal Investigator (with Ernie Marshburn, PI), *TechMath: Real World Math, Technology, and Business Connections* (\$1,195,048). Three-year NSF-funded grant, with one-year extension (2006-10).

Project Team Member (with Verna Hollaman, PI), *North Carolina Project in Improving Mathematics* (NSF & DOE grant, \$23,000,000, \$1,363,754 to ECU). Released 25% of time to develop and teach graduate courses for mathematics teachers and work with facilitators. (2003-07)

Project Team Member (with Karen Dawkins, PI), *Rural Initiative in Mathematics and Science* (\$210,827). NC QUEST funded grant (2004-05).

Development Team Member (with Russ Rowlett, PI), *North Carolina Middle Math Project*. NSF-funded grant collaborative with nine UNC universities (2002-05).

Principal Investigator, *Essential Classroom Technology for Standards-Based Math Instruction* (\$119,416). US Department of Education Eisenhower (2001 - 2003).

Principal Investigator, *Integrating Measurement Across the Curriculum* (\$29,928). US Department of Education Eisenhower (2001-03).

Principal Investigator, *ECU Ed Grid Project for Preparation of Middle Grades Mathematics Teachers* (\$24,000). Sub-grant from the Shodor Foundation and funded by the National Ed Grid Project (2001-02).

Co-Principal Investigator (with Sid Rachlin, PI), *MIDDLE MATH: A Project to Improve the Undergraduate Preparation of Middle Grades Teachers* (\$150,000), NSF-funded Grant (1998-2001).

External Evaluator (with Susan Friel, PI), *Mathematics Improvement through Problem Solving*. NSF-funded grant for K-8 mathematics teachers in Gates, Hyde, Pasquotank, Washington, and Camden Counties (1997-2002)

Project Member (with Sid Rachlin, PI), *MIDDLEMATH: A Project to Improve the Undergraduate Preparation of Teachers of Middle Grades Mathematics* (\$139,997). NSF-funded grant (1995-96).

External Evaluation Team Member (with Diana Lamdin, Lead Evaluator and Glenda Lappan, PI), *Connected Mathematics Project* (\$5,000,000). NSF-funded Grant (1992-95).

Project Manager (with Daniel Maki, PI) *Mathematical Modeling Project*. NSF-funded project and summer institute for high school mathematics teachers (1993-95).

Publications

Chandler, K., Adu-Gyamfi, K., & Preston, R. (2023). Making connections explicit. *Mathematics Teacher: Learning and Teaching Pre-K–12*, 116, 572-85.

Adu-Gyamfi, K., Bosse, M., Preston, R., & Williams D. (2020). The problem of simplification in school mathematics. *Mathematics Teacher: Learning and Teaching Pre-K–12*, 113, 160-63.

Grady, M., Cayton, C., Preston, R., & Sinicrope, R. (2019). Co-planning strategies for mentor teachers and interns. *Theory & Practice in Rural Education*, 9, pp. 79-91.

Bossé, M. J., Bayaga, A., Fountain, C., Lynch-Davis, K., Preston, R., & Adu-Gyamfi, K. (2018). Fraction learners: Assessing understanding through language acquisition. *International Electronic Journal of Elementary Education*, 11, 113-124.

Grady, G., Cayton, C., Preston, R. V., & Middleton, C. (2018). Co-planning with interns: Envisioning new ways to support intern development of effective lesson planning. Hodges, T.E., Roy, G. J., & Tyminski, A. M. (Eds.). *Proceedings of the 40th annual meeting of the*

- North American Chapter of the International Group for the Psychology of Mathematics Education*. Greenville, SC: University of South Carolina & Clemson University. pp. 743-746.
- Grady, M., Cayton, C., Sinicrope, R., Preston, R. V., & Funsch, A. (2016). Shifting paradigms for pre-service teachers' internship experiences: Co-teaching as a model for relationships. In M. B. Wood, E. E. Turner, M. Civil, & J. A. Eli (Eds.) *North American Chapter of the International Group for the Psychology of Mathematics Education*.
- Sinicrope, R., Eppler, M., Preston, R., & Ironsmith, E. (2015). Preservice teachers of high school mathematics: Success, failure, and persistence in the face of mathematical challenges, *School Science and Mathematics*, 115, 56-65.
- Thompson, T., & Preston, R (2006). Measurement tasks for the middle grades. *Alabama Journal of Mathematics*, 30, 1 & 2, pp. 59-64.
- Sinicrope, R., Eron, M., Rachlin, S., Preston, R., Johnson, C., Hoekstra, M., & Ajose, S. (2005). Case Study: East Carolina University. In M. B. Eron and S. L. Rachlin (Eds.) *Middle Math: Improving the Undergraduate Preparation of Teachers of Middle Grades Mathematics*. AMTE, Vol 2, pp. 59-72.
- Thompson, T., & Preston, R. V. (2004). Measurement in the middle grades: Insights from NAEP and TIMSS. *Mathematics Teaching in the Middle School*, 10, 514-19.
- Preston, R. V., & Thompson, T. (2004). Integrating measurement across the curriculum. *Mathematics Teaching in the Middle School*, 9, 436-441.
- Preston, R. V., & Garner, A. S. (September 2003). Representation as a vehicle for solving and communicating. *Mathematics Teaching in the Middle School*.
- Pugalee, D. K., Frykholm, J., Johnson, A., Slovin, H., Malloy, C., & Preston, R. (2002). *Navigating through geometry in grades 6-8*. Reston, VA: National Council of Teachers of Mathematics.
- Preston, R. V. (2000). Using a research and development model to create an undergraduate mathematics course. Abstract in the *Proceedings of the Fifth Annual Conference on Research in Undergraduate Mathematics Education*. Chicago, IL.
- Preston R. (2000). The anatomy of a number/algebra course for preservice middle grades teachers of mathematics. *Proceedings of the Fourth Annual Meeting of the Association of Mathematics Teacher Educators*. Charlotte, NC.
- Preston, R. V. (1999). Research and development of a first course in an undergraduate mathematics concentration. *Proceedings of the Fourth Annual Research in Undergraduate Mathematics Education Conference*. Chicago, IL.
- Lester, F. K., Lambdin, D. V., & Preston, R. V. (1997). A new vision of the nature and purposes of assessment in the mathematics classroom. In G. D. Phys (Ed.), *Handbook of classroom assessment: Learning, achievement, and adjustment*. San Diego, CA: Academic Press.
- Preston, R. V. (1996). Possibilities and constraints for secondary teachers using mathematical modeling. In E. Jakubowski, D. Watkins, & H. Biske (Eds.), *Proceedings of the Eighteenth Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*, 2 (pp. 427-432). Columbus, OH: The Eric Clearinghouse.
- Lambdin, D. V., Kehle, P. E., & Preston, R. V., (Eds.) (1996). *Emphasis on assessment: Readings from NCTM's school-based journals*. Reston, VA: National Council of Teachers of Mathematics.
- Preston, R.V., & Lambdin, D.V. (1995). Mathematics for all students! Mathematics for all teachers? In D.T. Owens, M.K. Reed, & G.M. Millsaps (Eds.), *Proceedings of the Seventeenth Annual Meeting of the North American Chapter of the International Group for*

the Psychology of Mathematics Education, 2 (pp. 168-174). Columbus, OH: The Eric Clearinghouse for Science, Mathematics, and Environmental Education.

- Lambdin, D. V. & Preston, R. V. (1995). Caricatures in innovation: Teacher adaptation to an investigation-oriented middle school mathematics curriculum. *Journal of Teacher Education*, 46, 130-140.
- Lambdin, D. V. & Preston, R. V. (1994). How middle school teachers adjust to change: Classroom testing of materials from an innovative curriculum project. In D. Kirshner, (Ed.), *Proceedings of the Sixteenth Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*, 2 (pp. 217-223). Baton Rouge, LA: Louisiana State University.
- Lambdin, D. V. & Preston, R. V. (1993). Caricatures in innovation: Three "middle school teachers" try teaching an innovative mathematics curriculum. In J. R. Becker & B. J. Pence, (Eds.), *Proceedings of the Fifteenth Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*, 2 (pp. 138-144). San Jose: San Jose State University.
- Kloosterman, P., Benjey, T., Emenaker, C., Houston, J., Hurt, R., Preston, R., & Sztajn, P., (1993). Mathematics, tech prep, and Indiana high schools. *Indiana Mathematics Teacher*, 7, 11-15, 18-20.

Scholarly Presentations

- Thompson, T., Cayton, C., Preston, R., Vance-Chalcraft, H., Jolls, C. & Doster, E. (2019). *Teachers' perceptions of their experiences as Noyce Scholars at East Carolina University*. Presentation at the Annual School Science and Mathematics Convention, Salt Lake City, UT, November 2019.
- Preston, R., & Jernigan, A. (2019). I can't do that . . . yet. Presentation at the annual conference of the North Carolina Council of Teachers of Mathematics, Greensboro, NC, 7 November 2019.
- Preston, R., Thompson, T., Cayton, C., Jolls, C., Vance Chalcraft, H. & Doster, E. (2019). *Teachers' perceptions of their experiences as Noyce Scholars at East Carolina University*. Poster Session presented at the Noyce Summit, Washington, DC, July 2019.
- Grady, G., Cayton, C., Preston, R. V., & Middleton, C (2018). Co-planning With Interns: Envisioning New Ways to Support Intern Development of Effective Lesson Planning. 40th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Greenville, SC, 17 November 2018.
- Preston, R. (2018). Cultivating Connections with Mathematical Modeling. Annual Conference of the North Carolina Council of Teachers of Mathematics, Greensboro NC, 1 November 2018. (Presented two times.)
- Ironsmith, M., Eppler, M., Sinicrope, R., & Preston, R. (2018). A Math Mindset: How to Get It. Presentation at the Eastern Region Conference of the North Carolina Council of Teachers of Mathematics, Greenville NC, 14 April 2018.
- Cayton, C. A., & Preston, R. V. (2018). *Cultivating connections between teaching, learning, and assessment*. State Conference of the North Carolina Council Teachers of Mathematics.
- Grady, M. M., Cayton, C. A., Moye, M., & Preston, R. V. (2018). *Finding ways to talk: How interns and mentors are using co-planning strategies*. Seventh Annual Mathematics Teacher Education Partnership Conference.
- Grady, M., Cayton, C., Preston, R. V., & Sinicrope, R. (2017). *Co-Planning Strategies for Mentor Teachers and Interns*. Association of Mathematics Teacher Educators Annual Meeting, Orlando, Florida.

- Grady, M., Cayton, C., Sinicrope, R., Preston, R. V., & Funsch, A. (2016). *Shifting paradigms for pre-service teachers' internship experiences: Co-teaching as a model for relationships*. Psychology of Mathematics Education-North American Chapter (PME-NA), Tucson, Arizona.
- Preston, R. V. & Stephan, M. (2016). *One Plus One = Many*. Association of Mathematics Teacher Educators, Virtual (Webinar).
- Preston, R. V. (2016). *NCCTM Awards Celebration*. North Carolina Council of Teachers of Mathematics, Greensboro, North Carolina.
- Preston, R. & Curtis, J. (2016). State-Level Advocacy: The North Carolina Story. Advocacy Conference for State Affiliates of the National Council of Teachers of Mathematics, Washington DC, 12 February 2016.
- Preston, R., Schwartz, C., & Middleton, K. (2016). Partnering with Local Industries to Design and Implement Authentic Middle School Mathematics Tasks. Meeting of the Association of Mathematics Teachers Educators, Irvine CA, 28-30 January 2016.
- Preston, R. (2015). NCCTM Awards Celebration. Annual Meeting of the North Carolina Council of Teachers of Mathematics, Greensboro NC, 5 November 2015.
- Preston, R. (2015). Presider. IGNITE: Enlighten Us, but Make it Quick. Annual Meeting of the North Carolina Council of Teachers of Mathematics, Greensboro NC, 6 November 2015.
- Preston, R. (2015). Keynote Presentation: "Power for Understanding from Mathematical Practices." North Carolina Council of Teachers of Mathematics Eastern Regional Conference, Kenansville NC, 21 February 2015
- Preston, R. & Thompson, T. (2015). "Teaching Measurement Using the Standards for Mathematical Practice." North Carolina Council of Teachers of Mathematics Eastern Regional Conference, Kenansville NC, 21 February 2015
- Thompson, T. & Preston, R. (2015). "Academic Language in Mathematics." North Carolina Council of Teachers of Mathematics Eastern Regional Conference, Kenansville NC, 21 February 2015
- Preston, R. (2014). *Using Humor to Teach Mathematics*. Annual Conference of the North Carolina Council of Teachers of Mathematics, Greensboro NC, 30 October 2014.
- Cayton, C., and Preston, R. (2014). *Co-Teaching in Mathematics: Middle School Session*. Annual Conference of the North Carolina Council of Teachers of Mathematics, Greensboro NC, 30 October 2014.
- Preston, R., Sinicrope, R., and Keene, K (2014). *Building Communities to Teach Mathematics*. Third Annual Conference of the Mathematics Teacher Education Partnership, Milwaukee WI, 8 June 2014.
- Brown, A., Slagter van Tryon, P., Middleton, C., & Preston, R. (2014) *A Template for Blackboard Courses: The MSITE Model*. Think-In 2014, East Carolina University, Greenville NC, 26 March 2014.
- Thompson, A, and Preston, R. (2014). *Teaching the Language of Mathematics*. Eastern Region Conference of the North Carolina Council of Teachers of Mathematics, Wilmington NC, 15 February 2014.
- Winsor, M., Barker, D., Preston, R., Casey, S., & Enderson, M. (2014). *Research on Secondary Mathematics Teacher Preparation*. Working group conducted at the Annual Meeting of the Association of Mathematics Teacher Educators, Irvine CA, 6 February 2014.
- Winsor, M., Barker, D., Casey, S., Enderson, M., Preston, R., Smith, R., & Wilson, P. (2013). *Research on Secondary Mathematics Teacher Preparation: Understanding how Teachers Learn*. Working group conducted three times at the Annual Meeting of the Psychology of Mathematics Education – North America, Chicago IL, 15-17 November 2013.

- Preston, R. (2013). *Reading & Writing CCSS Mathematics*. Annual Meeting of the North Carolina Council of Teachers of Mathematics, Greensboro NC, 31 October 2013.
- Preston, R. (2013). Modeling Across the Curriculum. Presentation given at the annual meeting of the North Carolina Council of Teachers of Mathematics, Greensboro NC, 31 October 2013.
- Preston, R. Bondurant, D., Kuhel, K., & Mann, M. (2013). *Preparing Pre-Service Teachers for Mathematical Modeling in the CCSS* as part of “*In-Service and Pre-Service Teacher Training and Preparation for Common Core State Standards*”. College Board Southern Regional Forum, Atlanta, GA, 8 March 2013.
- Preston, R. (2013). *CCSSM Assessment: Focus on Grades K-2*. Annual Meeting of the Eastern Region of the North Carolina Council of Teachers of Mathematics, Greenville NC, 23 February 2013.
- Preston, R. (2013). *CCSSM Assessment: Focus on Grades 3-5*. Annual Meeting of the Eastern Region of the North Carolina Council of Teachers of Mathematics, Greenville NC, 23 February 2013.
- Preston, R. (2013). *CCSSM Assessment: Focus on Grades 6-8*. Annual Meeting of the Eastern Region of the North Carolina Council of Teachers of Mathematics, Greenville NC, 23 February 2013.
- Preston, R. (2013). *CCSSM Assessment: Focus on Grades 9-12*. Annual Meeting of the Eastern Region of the North Carolina Council of Teachers of Mathematics, Greenville NC, 23 February 2013.
- Preston, R., & Sinicrope, R. (2013). “*Preservice Teachers of High School Mathematics: Predicting Success and Studying Persistence when Facing Mathematical Adversity*”. Annual Meeting of the Association of Mathematics Teacher Educators, Orlando FL, 24 January 2013.
- Sinicrope, R., & Preston, R. (2012). *Mathematics, the Workplace, and CCSSM*, Annual Meeting of the North Carolina Council of Teachers of Mathematics, Greensboro, NC, 26 October 2012.
- Preston, R. (2012). *Mathematical Modeling and the Common Core*. Annual Meeting of the North Carolina Council of Teachers of Mathematics, Greensboro, NC, 26 October 2012.
- Preston, R., Adu-Gyamfi, K., & Bossé, M. (2012). *Mathematical Modeling and the Common Core*. Annual Meeting of the National Council of Teachers of Mathematics, Philadelphia, PA, 27 April 2012.
- Thompson, A., & Preston, R. (2011). *Teaching Measurement in the New Common Core State Standards*. Annual Meeting of the North Carolina Council of Teachers of Mathematics, Greensboro, NC, 28 October 2011.
- Preston, R., and Knies, A. (2011). *Helping Students Read and Understand Mathematics*. Annual Meeting of the North Carolina Council of Teachers of Mathematics, Greensboro, NC, 27-28 October 2011. (Presented two times)
- Sinicrope, R., & Preston, R. (2011). *Number Sense with Whole Numbers and Fractions*. Annual Meeting of the North Carolina Council of Teachers of Mathematics, Greensboro, NC, 27 October 2011.
- Bossé, M., Adu-Gyamfi, K., & Preston, R. (2011). *Stop Teaching and Let Students Learn*. Annual Meeting of the National Council of Teachers of Mathematics, Indianapolis, IN, 15 April, 2011.
- Preston, R. (2010). *Modeling Problem Solving in the Middle Grades*. Invited presentation at the North Carolina Council of Teachers of Mathematics, Greensboro NC, 28 October 2010.
- Adu-Gyamfi, K. & Preston, R. (2010). *Connecting Mathematical Concepts to Student Interpretations of Mathematical Representations*. Annual Meeting of the National Council of

- Teachers of Mathematics, San Diego CA, 22 April 2010.
- Adu-Gyamfi, K., Bossé, M., & Preston, R. (2010). *Connecting Mathematical Concepts to Student Interpretations of Mathematical Representations*. Presentation given for the Association of Mathematics Teacher Educators, Irvine, CA, 29 January 2010.
- Morge, S., Lynch-Davis, K., & Preston, R. (2010). *Developing a Statewide Program of Study for Elementary Mathematics Specialists: North Carolina's Story*. Presentation given at the Annual Meeting of the Association of Mathematics Teacher Educators, Irvine, CA, 29 January 2010.
- Preston, R., & Adu-Gyamfi, K. (2010). *Innovative and Creative Uses of Geometer's Sketchpad and Graphing Calculators in Middle Grades Mathematics*. Presentation given at the North Carolina Council of Teachers of Mathematics Eastern Regional, Greenville NC, 27 February 2010.
- Preston, R., & Thompson, A. (2009). *Essential Measurement*. Annual Meeting of the North Carolina Council of Teachers of Mathematics, Greensboro NC, 30 October 2009.
- Preston, R., Bossé, M., & Crawley, F. (2009). *Preparing Mathematics and Science Teachers for the Challenges of Tomorrow*. Presentation given at the ECU Clinical Teachers Conference, Greenville NC, 24 March 2009.
- Bossé, M., Adu-Gyamfi, K., & Preston, R. (2009). *Learning Mathematics as a Second Language*. Presentation given for the Association of Mathematics Teacher Educators, Orlando FL, 6 February 2009.
- Preston, R., & Thompson, T. (2008). *Engaging Students in Reasoning via Measurement*. Annual Meeting of the North Carolina Council of Teachers of Mathematics, Greensboro NC, 31 October 2008.
- Preston, R. (2007). *Looking for Algebra: Seeing the Forest and the Trees*. Department of Public Instruction Summer Leadership Institute, Lumberton NC, 17 July 2007.
- Preston, R. (2007). *Using Inexpensive Materials to Teach Important Mathematics*. Annual Meeting of the Eastern Region of the North Carolina Council of Teachers of Mathematics, Raleigh NC, 17 February 2007.
- Preston, R. (2006). *Building Algebraic Power through Rich Problems*. Annual Meeting of the North Carolina Council of Teachers of Mathematics, Greensboro NC, 6 October 2006.
- (With Sid Rachlin, ECU and Eleanor Pusey and Ray Jernigan, NC-PIMS, 2006) *To Know What We Know and Know What We Don't Know Is The First Step in Knowing*. Annual meeting of the National Council of Teachers of Mathematics, St. Louis, MO, 28 April 2006.
- (With Sid Rachlin, ECU and Eleanor Pusey and Ray Jernigan, NC-PIMS, 2006) *To Know What We Know and Know What We Don't Know—Assessing and Developing K-5 Teachers' Content Knowledge*. Annual meeting of the National Supervisors of Teachers of Mathematics, St. Louis, MO, 25 April 2006.
- Preston, R. (2006). *Mathematics as a Powerful Tool*. Mathematics Club at J. H. Rose HS, Greenville NC, 20 March 2006.
- Preston, R. (2006). *Success for all through Algebra*. Keynote address given at the annual meeting of the North Carolina Council of Teachers of Mathematics Central and Eastern Regions, Meredith College, 25 February 2006.
- Preston, R. (2005). *Experiences of Secondary Mathematics Teachers in a Data and Measurement Course*. Annual meeting of the School Science and Mathematics Association, Ft. Worth, TX, 12 November 2005.
- Preston, R. (2005). *Addressing Algebra – Setting Directions for an Algebra Course for Teachers*. Annual meeting of the North Carolina Council of Teachers of Mathematics, Greensboro, NC, 14 October 2005.

- Preston, R. (2005). *Integrating Data and Measurement*. Annual meeting of the North Carolina Council of Teachers of Mathematics, Greensboro, NC, 13 October 2005.
- (With Sid Rachlin, ECU and Ray Jernigan, NC-PIMS, 2005) *Professional Knowledge and Skills for Pre-Service and In-Service Knowledge and Skills*. National Dissemination Conference for Project MERIT, Charleston, WV, 11 May 2005.
- Preston, R. (2005). *Measurement Across the Content Strands*. Meeting of the North Carolina Council of Teachers of Mathematics Central and Eastern Regional Conference, Meredith College, 26 February 2005.
- (With Jenny Bay-Williams, Kansas State University, 2005) *Integrating Methods, Content & Field Experiences in Courses for K-5 Mathematics Teachers*. Annual meeting of the Association of Mathematics Teacher Educators, Dallas, TX, 28 January 2005.
- (With Tony Thompson, University of Alabama, 2004) *Reconciling the Teaching and Learning of Measurement in Mathematics and Science Classrooms*. Annual meeting of the School Science and Mathematics Association, Atlanta, GA, 22 October 2004.
- (With Holly Lynne Stohl, NC State University, 2004) *Preparing Teachers in the North Carolina Middle Math Project*. Middle Mathematics Teacher Preparation Conference, St. Louis, MO. 24-25 September 2004.
- (With Sid Rachlin, East Carolina University and Hollylynne Stohl, North Carolina State University, 2004) *Content Support for In-service Middle Grade Teachers*. Presentation given twice at The Mathematical Preparation of Middle School Mathematics Teachers Conference, St. Louis, MO, 24-25 September 2004.
- (With Tony Thompson, University of Alabama) *Measurement for All: Integrating Measurement in Middle School Mathematics*. Annual conference of the National Council of Teachers of Mathematics, Philadelphia PA, 23 April 2004.
- (With Tony Thompson, University of Alabama, 2004) *Measurement: A Traditional Topic That Should Not Be Forgotten*. Annual conference of the National Council of Supervisors of Mathematics, Philadelphia PA, 20 April 2004.
- (With Rheta Rubenstein, University of Michigan-Dearborn; Charlene Beckman, Grand Valley State University; Denisse Thompson, University of South Florida, and Michael Chappell, Middle Tennessee State University, 2004) *Integrating the Thinking of Middle Grades Students into a Mathematics Methods Course*. Served as discussant at the annual meeting of the Association of Mathematics Teacher Educators, San Diego CA, 24 January 2004.
- (With Tony Thompson, University of Alabama, 2004) *Measuring Measurement: Researching the Teaching and Learning of Measurement in the Middle Grades*. Annual meeting of the Association of Mathematics Teacher Educators, San Diego CA, 23 January 2004.
- (With Tony Thompson, University of Alabama, 2003) *Integrating Measurement through Mathematics and Science*. Annual meeting of the School Science and Mathematics Association, Columbus OH, 24 October 2003.
- (With Tisha Love, AG Cox Middle School and Robert Gildersleeve, Morehead City Middle School, 2003) *Making Mathematics Real through Representations*. Annual meeting of the North Carolina Council of Teachers of Mathematics, Greensboro NC, 10 October 2003.
- (With Jill Hall, Winston Salem Middle School, 2003) *Integrating Measurement Across the Mathematical Strands*. Annual meeting of the North Carolina Council of Teachers of Mathematics, Greensboro NC, 9 October 2003.
- (With David Pugalee, University of North Carolina at Charlotte, 2003) *Navigating through Geometry in Grades 6-8*. 81st Annual Meeting of the National Council of Teachers of Mathematics, San Antonio, TX, 11 April 2003.
- Preston, R. (2003). *Show Me the Textbooks*. Annual Meeting of the Eastern Region of the North

- Carolina Council of Teachers of Mathematics, Greenville, NC, 15 March 2003.
- Preston, R. (2003). *Integrating Mathematics across the Curriculum.* Annual Meeting of the Eastern Region of the North Carolina Council of Teachers of Mathematics, Greenville, NC, 15 March 2003.
- (With Tony Thompson, University of Alabama, 2003) *Integrating Measurement Across the Curriculum: A Professional Development Effort.* Annual meeting of the Association of Mathematics Teacher Educators, Atlanta, GA, 31 January 2003.
- Preston, R. (2002). *Solving Problems with Mathematical Models.* Fifth Carolinas Conference (joint meeting of the North and South Carolina Councils of Teachers of Mathematics), Charlotte, NC, 18 October 2002.
- Preston, R. (2002). *Integrating Measurement Across the Curriculum.* Fifth Carolinas Conference (joint meeting of the North and South Carolina Councils of Teachers of Mathematics), Charlotte, NC, 17 October 2002.
- (With David Pugalee, Pat Shelton, Sid Rachlin, Randy Harter, and Karen Vaughn, NCM, 2002). "Extending Concepts of Number and Algebra." Fifth Carolinas Conference (joint meeting of the North and South Carolina Councils of Teachers of Mathematics), Charlotte, NC, 17 October 2002.
- Preston, R. (2002). *Documenting Achievement: Nationally Recognized Program for the Preparation of Middle School Teachers.* Sixth Annual Conference of the Association for Mathematics Teacher Educators, San Antonio, CA, 25 January 2002.
- (With Kelly Carmel, South Johnston High School, 2001) *Finding Time in EOC Courses to Do Mathematical Modeling.* Annual meeting of the North Carolina Council of Teachers of Mathematics, Greensboro, NC, 11 October 2001.
- (With participants from Fordham University and Samford University, 2001) *Roundtable Discussion on Confirming Evidence.* Roundtable discussion/presentation given at the TQI Technical Assistance Workshop, Vienna, VA, 4 October 2001.
- Preston, R. (2001). *Using a Curriculum Research Model to Develop Mathematics Courses for Pre-Service Teachers.* Fifth Annual Meeting of the Association for Mathematics Teacher Educators, Costa Mesa, CA, 20 January 2001.
- (With Kelly Carmel, South Johnston H.S., 2001) *Motivate Your Students with Mathematical Modeling.* Annual meeting of the North Carolina Council of Teachers of Mathematics, Greensboro, NC, 5 October 2000.
- Preston, R. (2001). *Using a Research and Development Model to Create an Undergraduate Mathematics Course.* Fifth Annual Meeting of the Research in Undergraduate Mathematics Education Conference, Chicago, IL, 22 September 2000.
- Preston, R. (2000). *Improving the Preparation of Teachers of Middle Grades Mathematics: The East Carolina Perspective.* Third Annual Show-Me Conference on Standards-Based Middle School Mathematics Curricula, Branson, MO, 20 May 2000.
- (With Kelly Carmel, ECU, 2000) *Making Mathematical Modeling a Part of Everyone's Future.* Annual meeting of the National Council of Teachers of Mathematics, Chicago, IL, 14 April 2000.
- (With Diana V. Lambdin and Catherine Brown, Indiana University; Beatriz D'Ambrosio, Indiana University-Purdue University at Indianapolis; and Iris Weiss, Horizon Research Inc., 2000) *What Are We Learning from Evaluations of Local Systemic Change Projects?* Research Pre-Session of the 78th Annual Meeting of the National Council of Teachers of Mathematics, Chicago, IL, 11 April 2000.
- (With Sid Rachlin, Zach Robinson, Rose Sinicrope, and Valerie DeBellis, ECU, 2000) *Improving the Preparation of Teachers of Middle Grades Mathematics.* Annual meeting of

- the Association of Mathematics Teacher Educators, Charlotte, NC, 12 February 2000.
- Preston, R. (2000). *The Anatomy of a First Course for Preservice Middle Grades Teachers of Mathematics*. Fourth Annual Conference of the Association of Mathematics Teacher Educators, Charlotte, NC, 11 February 2000.
- Preston, R. (1999). *Description of an Initial Course for Preservice Middle Grades Mathematics Teachers*. Annual meeting of the School Science and Mathematics Association, Greensboro, NC, 2 October 1999.
- (With Kelly Carmel, ECU, 1999) *Mathematical Modeling in the HS Classroom*. Annual meeting of the North Carolina Council of Teachers of Mathematics, Greensboro, NC, 30 September 1999.
- Preston, R. (1999). *Some Intriguing Problems from Middle Grades Materials*. Annual meeting of the North Carolina Council of Teachers of Mathematics, Greensboro, NC, 30 September 1999.
- Preston, R. (1999). *TIMSS: What Have We Learned and What Can We Use?* Inservice Day for Pitt County Schools Mathematics Teachers, Greenville, NC, 15 February 1999.
- Preston, R. (1999). *Integrating Mathematical Modeling Projects into the High School Mathematics Curriculum*. Southern Regional Conference of the National Council of Teachers of Mathematics, Charlotte, NC, 4 February 1999.
- Preston, R. (1998). *Developing a Model for Researching Curriculum Development*. Twentieth Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Raleigh, NC, 31 October & 1 November 1998.
- Preston, R. (1998). *Finding Time for Reform in the Mathematics Classroom*. Twentieth Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Raleigh, NC, 31 October 1998.
- (With Amanda Stanley, Laney High School, Wilmington, NC, 1998) "Categorizing Mathematical Tasks and Creating More Challenging Ones." Annual Meeting of the North Carolina Council of Teachers of Mathematics, Greensboro, NC, 30 October 1998.
- (With Sid Rachlin, East Carolina University, 1998) *Developing Curriculum Research and Researching Curriculum Development*. Third Annual Meeting of the Research in Undergraduate Mathematics Education Conference, South Bend, IN, 18 September 1998.
- (With Charles Emenaker, University of Cincinnati, 1998) *Problem Solving Applied to Real-World Problems*. Annual National Conference of the National Council of Teachers of Mathematics, Washington, D.C., 2 April 1998.
- (With Lynn Hancock, Appalachian State University, 1998) *Mathematics Courses for Middle Grades Preservice Teachers*. Annual meeting of the North Carolina Association of Mathematics Teacher Educators, Greenville, NC, 28 February 1998.
- Preston, R. (1997). *Humor Your Students with Mathematical Humor*. Fourth Carolinas Conference, Combined Annual Meeting of the North Carolina Council of Teachers of Mathematics and the South Carolina Council of Teachers of Mathematics, Charlotte, NC, 24 October 1997.
- (With Diana Lambdin, Indiana University, 1997) *Caricatures Versus Case Studies: A Discussion of Two Methods of Research Reporting*. Nineteenth Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Normal, IL, 19 October 1997.
- Preston, R. (1997). *Modeling Power in Weighted Voting Systems*. Annual Meeting of the North Carolina Council of Teachers of Mathematics Eastern Regional Conference, Greenville, NC, 18 April 1997.
- Preston, R. (1997). *Reading and Writing in Mathematics*. Annual Meeting of the North Carolina

- Council of Teachers of Mathematics Eastern Regional Conference, Greenville, NC, 18 April 1997.
- Preston, R. (1997). *Teachers Changing in Changing Times*. Annual Meeting of the American Educational Research Association, Chicago, March 1997.
- Preston, R. (1996). *Possibilities and Constraints for Secondary Teachers Using Mathematical Modeling*. Eighteenth Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Panama City, FL, October 1996.
- (With Rose Sinicrope, East Carolina University, 1996) *An Approach to Developing a Statistics and Probability Course for Middle Grades Majors*. National Council of Teachers of Mathematics (NCTM), Eastern Regional, Baltimore, October 1996.
- Preston, R. (1996). *Teaching with Mathematical Models*. Annual meeting of the North Carolina Council of Teachers of Mathematics, Greensboro, NC, 4 October 1996.
- (With Anita Bowman, University of North Carolina, Greensboro, 1996) *Math Modeling/Discrete Math/Geometry Talk About Session*. Second Summer Conference of the MIDDLE MATH Project, Chapel Hill, NC, 8 June 1996.
- (With Charles Emenaker, University of Cincinnati, 1996) *Making Mathematical Modeling and Its Assessment Work in the Junior/Senior High School Classroom*. Seventy-fourth annual meeting of the National Council of Teachers of Mathematics, San Diego, CA, 26 April 1996.
- (With Diana Lambdin, Indiana University, 1995) "Mathematics for All Students! Mathematics for All Teachers?" Seventeenth Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Columbus, OH, October 1995.
- (With Diana Lambdin, Indiana University, 1995) "How Teachers Adjust to Change in an Era of Reform." Annual Meeting of the National Council of Teachers of Mathematics, Boston, MA, April, 1995.
- (With Diana Lambdin, Indiana University, 1994) "How Middle School Teachers Adjust to Change: Classroom Testing of Materials from an Innovative Curriculum Project." Sixteenth Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Baton Rouge, LA, November 1994.
- Preston, R. (1994). *Effects of a Mathematical Modeling Institute on High School Mathematics Teachers*. Annual Research Pre-Session of the National Council of Teachers of Mathematics, Indianapolis, IN, April 1994.
- Preston, R. (1994). *Using Mathematical Modeling in the Secondary/MS/JH Classroom*. Annual Meeting of the Indiana Council of Teachers of Mathematics, Indianapolis, IN, October 1994.
- Preston, R. (1993). *Making Connections with Cultural Mathematics*. Annual Meeting of the Indiana Council of Teachers of Mathematics, Indianapolis, IN, October 1993.

Extended Professional Development

- State Department of Public Instruction Workshops on Algebraic Thinking
 - 19 July 2005 – Middle grades teacher leaders
 - 21 & 23 July 2005 – High School teacher leaders
- Praxis II Middle Grades Content Workshops for PIMS Facilitators (13 December 2004 and 18 January 2005)
- Praxis II secondary Pedagogy Workshops for Senior II interns (14-15 April 2005)
- State-wide Algebra Video Seminar Series for Middle Grades Mathematics Teachers
 - Broadcast from ECU to 10+ video sites across NC
 - Sponsored by the Department of Public Instruction

- Consisted of six, two-hour sessions that were presented monthly (September 2005-March 2006)
- Sessions were video-taped and sold to schools and teachers who could not attend
- (With Ray Jernigan, NC-PIMS Facilitator) *Algebraic Thinking*. Series of three half-day workshops piloted for the NC-PIMS grant for Wayne County high school mathematics teachers, Goldsboro NC, 3 February, 16 February, and 2 March 2004.
- (With Sharon Steglein, Show-Me Representative from Minnesota) Full day middle grades curriculum showcase done on behalf of the Show-Me Project for the ACCLAIM Project (university and school teacher leaders), Lexington KY, 8 July 2003.
- (With Heather Ertzberger, Middle School Mathematics Teacher, Pender County) *Implementing the Standards and Standards-Based Mathematics Curricula*. Half-day curriculum showcase given to middle school mathematics teachers in Pender County in advance of selecting textbooks next academic year. Rocky Point, NC, 19 March 2003.
- *Using the TI-83 Plus Graphing Calculator*. Provided a two-day workshop on using graphing calculators for mathematics instruction for all of the mathematics teachers at Wilson Beddingfield H.S. Worked with teachers in numbers of one, two, three, or four (depending on the number of teachers having preparation period) during each period of two school days. Wilson, NC, 15-16 January 2003.
- *Integrating Measurement across the Curriculum*. Presented this half-day workshop for middle grades mathematics teachers in Wayne County, Goldsboro, NC, 22 October 2002.
- *Navigating Through Geometry*. All-day workshop given to Pitt County middle grades teachers of mathematics. Workshop was based on the work done in co-authoring the Navigations book on Geometry for the National Council of Teachers of Mathematics. 23 January 2002.
- *Examining the National Assessment Standards*. Two-day workshop given for Discrete Mathematics Workshop (Val DeBellis). Elmhurst Elementary School, 9 & 11 July 2001.
- (With Robert Hunting, ECU.) *Fostering Preschoolers' Mathematical Thinking*. All-day workshop conducted for Pitt County Schools teachers and assistants who work with Pre-Kindergarten children, Greenville, NC, 16 January 2001.
- *Praxis I Mathematics Workshop*. Presented at Morehead City for a group of off-campus ECU students. Weekend workshop – Friday night and all-day Saturday.

Curriculum Development and Implementation

Program Development and Revision

- Master of Arts in Teaching in Mathematics – program was ultimately rejected by the EPPC
- Concentrations – Mathematics and Science - Designed new mathematics concentrations (18 & 24 hour versions) for mathematics and general science.
- BS Mathematics – Revised multiple times, but extensively in 1996 and 2012-2015
- MAEd in Mathematics – Revised extensively in 1999; divided into three concentrations in 2011
- Undergraduate Elementary Mathematics Preparation
- Certificate in Elementary Mathematics Education

Course and Program Revision and Approval

- MATE undergraduate mathematics courses – eight controversial courses were approved after the move of mathematics education faculty from Mathematics to Education
- MATE graduate classes – eight new courses provide the mathematics sequence for middle level mathematics teachers as well as two courses for all MAEds in mathematics
- ELEM-SPED mathematics preparation – Led a team from elementary education, special education, and mathematics education in developing a new mathematics preparation program for elementary and special education majors. Developed three new courses: MATE 3050, 3051, and 3060.
- Assisted with mathematics education program revisions for NCATE
- Assisted with science education program revisions for NCATE
- Developed new mathematics concentrations (18 & 24 hour versions)
- Developed new general science concentrations (18 & 24 hour versions)

Course Development

- Developed (with Drew Polly, UNC-Charlotte) MATE 6063 – Mathematical Modeling: K-5 Leadership (Graduate course for elementary add-on licensure program)
- Developed MATE 6130: Statistics and Probability for Teachers (Graduate course for MAT program)
- (With Bob Bernhardt, ECU; Leo Edwards, FSU; Ann Crawford, UNCW; and Ray Jernigan, Eleanor Pusey, and Sherman Sumpter, NC-PIMS Facilitators), Developing “Algebraic Thinking” for NC-PIMS. This graduate course will be taught in the summer and fall of 2004 to approximately 200 students. (MATE 6371)
- (With David Pugalee, UNC-Charlotte; Pat Shelton, NCA&T; Randy Harter, Buncombe County Schools; Karen Vaughan, Pitt County Schools; and Grayling Williams, Durham County Schools) Developed “Reasoning with Number and Algebra,” a graduate course (MATE 6331) for the North Carolina Middle Math Project.
- Developed a new graduate course, Mathematical Modeling (MATE 6391). It is an elective mathematics course for the MAEd in mathematics.
- Developed a new graduate course, “Mathematics Assessment for the Classroom Teacher” (MATH 6200). It is one of the core courses for the new MAEd in mathematics education.
- Developed “Research in Mathematics Education,” a core class (MATE 6211) for the MAEd in mathematics education. (2001-2002)
- (With Ellen Hilgoe) Helped redesign “Euclidean Geometry,” a “school-math” course in the mathematics concentration taken by preservice middle grades teachers (MATH 3166; now MATE 3167). Emphasis is on creating more technology and hands-on applications. (2000-2002)
- (With Sid Rachlin, Tim Hudson, Zach Robinson, Janet Prichard, Kathy Stanley, and Teachers-in-Residence) Researched the development of “Algebraic Concepts and Relationships” (MATH 1067; now MATE 3067), the initial course in the mathematics concentration. Found or wrote new items for the materials; interviewed students regarding their mathematical thinking; analyzed student work, and am now writing teacher materials for the course (which we will offer for publication) and working on a Web-based hint system for students. (1997-2001)
- Developed “Applied Mathematics Via Modeling” (MATH 3239; now MATE 3367) — the capstone course for mathematics concentration students. This course is project oriented with real-world problems coming from each of the areas in the concentration.

Creating student handouts, finding and altering projects, and creating problem sets that make up the course materials. (1997-Present)

- (With Sid Rachlin, Tim Hudson, Zach Robinson, Janet Prichard, Kathy Stanley, and Ray Jernigan) Worked with the MIDDLE MATH grant team to develop “Pre-Calculus Concepts and Relationships” (MATH 1077; now MATE 1267) a course in the mathematics concentration (1999).
- Developed and revised a course to prepare students to take the mathematics portion of the Praxis I exam. Exam is needed for admittance to the teacher education program. The course was taken at ECU by students enrolled in READ 4532. Also offered a workshop off campus at the ECU-Carteret County collaborative. (1998-1999)
- (With Mike Hoekstra and Rose Sinicrope) Participated on a three-member team that developed “Data Analysis and Probability” (MATH 2282; now MATE 2067), a course in the mathematics concentration. (1995-1996)

Undergraduate Courses Taught

- COAD 1000, Student Development and Learning in Higher Education (taught for incoming, intended mathematics education and science education majors)
- MATE 2123, Early Experience for Prospective Mathematics Teachers (undergraduate course for high school teachers)
- MATE 2129, Basic Concepts of Mathematics II
- MATE 3005, Geometry Seminar
- MATE 3067, Algebra and Number Foundations
- MATE 3167, Geometry and Measurement
- MATE 3367, Mathematical Modeling (capstone course for mathematics concentration)
- MATE 3523, Teaching Topics in High School Mathematics
- MATE 4319, Methods of Teaching Middle Grades Mathematics
- MATE 4324, Internship in Mathematics
- MATH 1065, College Algebra
- MATH 1067, Algebraic Concepts and Relationships
- MATH 2124, Elementary Mathematical Models
- MATH 2127, Basic Concepts of Mathematics
- MATH 2282, Data Analysis and Probability
- MATH 3166, Euclidean Geometry
- MATH 3223, Teaching Mathematics in the Elementary Grades
- MATH 3228, Elementary Statistical Methods
- MATH 3239, Applied Mathematics Via Modeling (Capstone course for undergraduate middle grades teachers)
- MATH 4319, Teaching Mathematics in the Middle Grades
- MATH 4501, 4503, 4551, Independent Study/Honors Study in Mathematics
- READ 4532, Problems in the Teaching of Reading (Taught a mathematics portion of this course for Praxis I preparation)

Graduate Courses Taught

- MATE 6200, Assessment in Mathematics Education
- MATE 6206, Leadership in Mathematics Education
- MATE 6320, Advanced Elementary Methods

- MATE 6331, Reasoning with Number and Algebra (Course for middle grades teacher leaders)
- MATE 6341, Concepts in Geometry and Measurement (Course for middle grades teacher leaders)
- MATE 6351, Data Analysis and Probability in the Middle Grades
- MATE 6361, Measurement across the Curriculum (Course for middle and high school teachers)
- MATE 6371, Algebraic Thinking
- MATE 6391, Mathematical Modeling
- MATH 5263, Mathematics for Junior High Teachers I (Number/Algebra class' taught 2 times)
- MATH 5521, Readings and Lectures in Mathematics (History of Mathematics)
- MATE 6063, Mathematical Modeling: K-5 Leadership (Graduate course for elementary mathematics add-on licensure)
- MATH 6200, Assessment in Mathematics Education
- MATH 6206, Research in Mathematics Education
- MATH 6223, Current Topics in Mathematics Education (Taught one section for middle grades mathematics teachers and one for MAT elementary teachers)

Collaborations and Partnership Building

- Science Education Collaborative – On the search committee that seeks five science educators, one each in science education, biology, chemistry, geology or geography, and physics. Search committee is made up of faculty from each of the departments (10 total) and the intent of this cluster hire is for the group to work on recruitment, the DFWI problem in foundational science classes, external funding, etc.
- Mathematics Teacher Education Partnership (MTEP). Partnership with North Carolina State University, East Carolina University, the Department of Public Instruction, Wake County Schools, and Pitt County Schools. The NCSU/ECU partnership is one of 35 in the MTEP, which is part of the Association of Public & Land-grant Universities, Science and Mathematics Teacher Imperative, Improving the Preparation of Secondary Mathematics Teachers.
- Massachusetts Tests for Educator Licensure Efforts – Faculty from elementary education, special education, mathematics, and mathematics education, along with administrators have met to devise a series of interventions to assist BS ELEM and SPED students with passing the mathematics portion of this licensure test. Among the possibilities being investigated are cross-listing MATH 2127 with MATE 2127 to provide a foundational course, developing a review course, adding materials to the existing MATE 3060 course, and locating and creating study modules.
- Middle Math – Nine UNC-System Schools (ECU, UNC-W, FSU, NCSU, UNC-CH, NCA&T, UNC-C, WCU, and ASU) worked to develop a series of three graduate mathematics courses, recruit teachers into the project, provide them with the courses, and assist their work toward National Board Certification (NBC). The universities worked with the Mathematics and Science Education Network Centers to facilitate the work. Led one course development team and created workshops for NBC test prep.
- Partnership for Improving Mathematics and Science – This five-year grant involved many LEAs in eastern North Carolina and four primary universities (ECU, UNC-W,

FSU, UNC-P). The first year featured science emphasis, but all five years had mathematics emphasis, K-12, with graduate courses, professional development, leadership development, and materials development. Teams of faculty developed courses and professional development materials and met with deans and chairs in education and arts and sciences to address teacher shortage, preparation, and reward for arts and science faculty.

- Elementary Mathematics Add-on Licensure Program – Seven UNC-system schools (ECU, UNC-W, NCSU, UNC-CH, UNC-G, ASU, UNC-C) worked to develop six graduate mathematics courses that contain high-leverage teaching practices, a program test, and a program portfolio, all under the direction of the UNC General Administration.
- Latham Clinical Schools Network Board – Have served on the board for many years and have been able to develop relationships that have led to cohort formation, hires of graduates, field placement sites, etc.
- Provost Council for Teacher Education – Served on the council for a few years while department chair. Worked collaboratively on science recruitment, in general, and the NSF-funded Noyce Grant, in particular.
- Math/Math Ed Joint Committee – Group of faculty meets as needed to work on problems with courses, scheduling, and setting up innovations, such as the MAEd in Mathematics Education (HS Concentration) Cohort Program that begins summer 2015.
- Army Cohort – Joint master’s level course and degree work between Adult Education and Instructional Technology and taken by Army personnel. This off-line model has been extremely successful in providing training (and some degrees) for Army personnel. ECU provides a unique funding arrangement for this mix of in-state and out-of-state students.
- Feasibility study for regional Science/Math High Schools – Participated on a team consisting of educators, business people, and educational advocates looking to develop science and mathematics magnet schools at ECU and ASU. Study was funded by Golden Leaf and the group made trips to investigate special schools in Texas, Kentucky, and North Carolina.
- Undergraduate Elementary and Special Education Mathematics Teacher Preparation. Headed a team of faculty (ELEM, SPED, and MATE) who developed a new mathematics preparation program (MATE 3050/3051, and 3060). Supported faculty to attend a workshop at Michigan State, met bi-weekly for the better part of two years, and produced an innovative program that integrates mathematics and methods.

Professional Affiliations

- American Educational Research Association: Division A – Administration, Organization & Leadership
- Association of Mathematics Teacher Educators (AMTE)
- National Council of Teachers of Mathematics
- North Carolina Association of Mathematics Teacher Educators (NC Affiliate of ATME)
- North Carolina Council of Teachers of Mathematics
- Psychology of Mathematics Education – North America

Selected Service

National

- Member, Association of Mathematics Teacher Educators Membership Committee

- Review Conference Presentation Proposals
- Review Tenure Papers
- Served as Show-Me Representative. Provided workshops and curriculum showcases for schools and districts interested in using standards-based curriculum materials.

State

- NCCTM – Conference Co-Chair (2008-09), President Eastern Region, President Elect, Board Member, Executive Committee Member
- Department of Public Instruction – Served on committee to select Presidential Award Nominations; developed a video series
- State Math Fair Judge
- Feasibility study for regional Science/Math High Schools. Visited mathematics/science high schools in Texas, Kentucky, and North Carolina, as well as attending planning meetings and contributing to the intermediate and final reports.
- Met with education deans on teacher shortage – 15 February (state) and 15 April 2005 (eastern region)

Region

- MathCounts Lead Scorer and Recruiter of Scorers (2002, 2003, 2004, 2005, 2012)
- Eastern Region (NCCTM) Math Fair Judge (2002, 2003, 2004, 2005, 2013, 2014)
- Talks at Schools – Rose HS Mathematics Club; Career Day; etc.
- Bear Grass Charter School – Board Member (2011-15)
- Trinity Christian School – Board Member (2001-04)
- Christ Covenant – Led a Pi Day Celebration
- Eastern Elementary – Led weekly Math Super Stars (two years)
- Leader, NC-PIMS District Leadership Team for Pitt County Schools. Team includes teachers, district administrators, school administrators, and a STEM professional.
- Needs assessment and technology and manipulative work with teachers at Brogden Middle School (17-18 August; 18-19 October 2004)
- Jones County MS and HS Mathematics Needs Assessment (2003)
- Greene Central HS Mathematics Needs Assessment (2002)

East Carolina University

- Faculty Senate (Agenda Committee, Nominating Committee)
 - Senator – Education (2010-12)
 - Senator – Education (2003-05)
 - Alternate – Mathematics (2001-02)
- Provost's Council on Collaboration for Teacher Education
- Graduate Council (Mentor Award Committee)
- Calendar Committee (Secretary)
- Council for Teacher Education (Policy Committee)
- Scholarship Committee
- Faculty Council on Retention
- Teacher Education Enrollment Management Team
- University Curriculum Committee
- Math Contest

- Member, Ad Hoc Committee on Portfolios from Council for Teacher Education
- Representative – Latham Clinical Schools Network Advisory Board

College of Education

- Code Committee
- Curriculum Committee
- Graduate Enrollment Management Team
- Undergraduate Task Force
- Scholarship Award Committee
- Search Committees – Dean, Advising Center, Elementary faculty, Center
- Leadership Team
- Advisory Council
- Faculty Evaluation Task Force
- Praxis II – Worked with a multi-disciplinary group focused on increasing student scores on the Praxis II exam required for teacher licensure. Took the Praxis II mathematics test for middle grades, developed study materials, and currently conduct workshops for teachers (2000-present).
- Praxis I Materials and Workshops (class, on campus, off campus)
- Member, Advisory Board for Rural Education Initiative
- Member, Advisory Board for Center for Science, Mathematics, and Technology Education
- Served as the Professional Development School Liaison from East Carolina University School of Education to South Central High School (2001-03)

Department of Mathematics, Science, and Instructional Technology Education

- Member, Curriculum Committee
- Member, Several Search Committees
- Head of Ad-Hoc Advising Committee
- Head of Ad-Hoc Recruitment Committee
- Member, Executive Advisory Committee
- Member, Advisory Board, Center for Science, Mathematics, and Technology Education
- Representative, Open House and Extended Open House
- Participant, Graduation (Marshal, On Stage, with Faculty)

Department of Mathematics

- Alternate, Faculty Senate
- Member, Joint MATE/MATH Committee
- Member, Panel for Math Contest
- Represent department at Open House
- Chair, Teaching Committee (2001-02)
- Secretary, Teaching Committee (2000-01)
- Member, Teaching Committee (1999-2000)
- Member, interview teams that examined a B.S. mathematics majors seeking admission to Upper Division.
- Member, Mathematics Education Textbook Committee

- Member, Technology Committee

Honors

- East Carolina University Outstanding Faculty Advising Award (May 2015)
- North Carolina Council of Teachers of Mathematics W. W. Rankin Memorial Award Winner – For excellence in mathematics education (31 October 2014)
- East Carolina University James R. Talton Jr. Leadership Award Nominee (1 May 2013)
- Oakland City University Alumni Award Winner – Special Achievement Award (5 May 2006)
- U.S. Department of Education’s National Awards Program for Effective Teacher Preparation: (With Sid Rachlin and Ann Bullock, ECU) Submitted the Middle Grades Mathematics Teacher Preparation Program from East Carolina University to the U.S. Department of Education’s National Awards Program for Effective Teacher Preparation. ECU was one of four institutions receiving the award and the only one of the four that is a public institution (2000)
- Indiana University Graduate Fellowship Recipient, 1991-1993
- University of Southern Indiana, Academic Achievement Award Recipient - Top graduate student for 1991 (19 March 1991)