Robert A. Powers Summer 2016

POSITION: Professor
School of Mathematical Sciences
College of Natural and Health Sciences
University of Northern Colorado
Greeley, CO 80639-0098S

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EDUCATION:

Year	Degree	Institution	Area of Study
2001	Ed.D.	University of Houston	Curriculum and Instruction, Mathematics Education
1990	M.S.	Colorado State University	Mathematics
1988	B.S.	Colorado State University	Mathematics, Physics minor

WORK EXPERIENCE:

Years	Institution/Organization	Position	Responsibilities
2013 – present	University of Northern Colorado	Professor	Teaching, Research, Service
2008 – 2013	University of Northern Colorado	Associate Professor	Teaching, Research, Service
Fall 2009	University of Delaware	Supplemental Faculty	Teaching
2002 – 2008	University of Northern Colorado	Assistant Professor	Teaching, Research, Service
2001 – 2002	University of Northern Colorado	Lecturer	Teaching, Service
2000 – 2001	University of Houston	Researcher III	Research
1996 – 2000	University of Houston	Graduate Assistant	Various
1990 – 1996	Front Range Community College	Associate Professor	Teaching, Service
1988 – 1990	Colorado State University	Graduate Assistant	Teaching

AREA OF SPECIALIZATION: Mathematics Education, Pre-service and In-service Teacher Education, Quantitative Educational Research Methods

RESEARCH AREAS/INTERESTS: Action Research, Secondary Mathematics Education, Technology in Mathematics Education

PUBLICATIONS: (Author(s), Date, Title, Publisher, Pages)

Juried:

Book Chapters:

Padrón, Y. P., Waxman, H., Powers, R. A., & Brown, A. P. (2002). Evaluating the effects of the Pedagogy for Improving Resiliency Program: The challenges of school reform in a high stakes testing climate. In L. Minaya-Rowe (Ed.), *Research in bilingual education series: Vol. 1. Teacher training and effective pedagogy in the context of student diversity*. Greenwich, CT: Information Age Publishing. (pp. 211–238)

Refereed Articles:

Hauk, S., Powers, R. A., & Segalla, A. (2014). A comparison of web-based and paper-and-pencil homework on student performance in college algebra. *PRIMUS, 24*, 1-19.

Chamberlin, S. A, & Powers, R. A. (2013). Assessing affect after mathematical problem solving tasks: Validating the Chamberlin Affective Instrument for Mathematical Problem Solving. *Gifted Education International, 29*(1), 69–85.

Waxman, H. C., Rivera, H., & Powers, R. (2012). English language learners' educational resilience and classroom learning environment. *Educational Research Quarterly, 35*(4), 53-72.

Chamberlin, M. T., & Powers, R. A. (2010). The promise of differentiated instruction for enhancing the mathematical understandings of college students. *Teaching Mathematics and Its Applications: An International Journal of the Institute of Mathematics and Its Applications, 29*(3), 113–139.

Powers, R. A., Craviotto, C., & Grassl, R. M. (2010). Impact of proof validation on proof writing in abstract algebra. *International Journal of Mathematical Education in Science and Technology, 41*(4), 501–514.

Chamberlin, M. T., Powers, R. A., & Novak, J. D. (2008). Teachers' perceptions of mathematics content knowledge assessments in professional development courses. *International Electronic Journal of Mathematics Education, 3*(3), 155–178.

Chamberlin, M. T., & Powers, R. A. (2007, May). Selecting from three curricula for a preservice elementary teacher geometry course. *Issues in the Undergraduate Mathematics Preparation of School Teachers: The Journal, 4*. Retrieved from http://www.k-12prep.math.ttu.edu

Powers, R. A., Allison, D. E., & Grassl, R. M. (2006). A study of the use of a handheld computer algebra system in discrete mathematics. *The International Journal for Technology in Mathematics Education, 12*(3), 103–114.

Powers, R., & Blubaugh, W. (2005). Technology in mathematics education: Preparing teachers for the future. *Contemporary Issues in Technology and Teacher Education* [Online serial], *5*(3/4). Available: http://www.citejournal.org/vol5/iss3/mathematics/article1.cfm

Farmer, J., & Powers, R. A. (2005). Exploring Mayan numerals. *Teaching Children Mathematics, 12*, 69–79.

Banta, M., Brewer, R., Hansen, A., Ku, H. Y., Pacheco, K., Powers, R., Robinson, J., & Tucker, G. (2004). An innovative program for cultivating grant writing skills in new faculty members. *Journal of Research Administration, 35*(1), 17–24. [Authorship was equal among contributors]

Powers, R. A. (2001). Big box-office bucks. *Mathematics Teacher, 94*, 112–118, 125–127.

Proceedings:

Goss, M. L., Powers, R. A., & Dibbs, R. A. (2014). Professional development and student achievement on standardized state exams. *Proceedings of the Seventeenth Annual Conference on Research in Undergraduate Mathematics Education*. Denver, CO: MAA.

Powers, R., Hauk, S., & Goss, M. (2013) Identifying change in secondary mathematics teachers' pedagogical content knowledge. *Proceedings of the Sixteenth Annual Conference on Research in Undergraduate Mathematics Education* (pp. 2-531–2-537). Denver, CO: MAA.

Powers, R. A., & Parker, C. F. (2013). Measuring motivational conditions in mathematics classrooms. In M. Martinez & A. Castro Superfine (Eds.), *Proceedings of the 35th annual*

meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education (pp. 1252-1255). Chicago, IL: University of Illinois at Chicago.

Chamberlin, S. A., & Powers, R. (2011). Assessing affect among upper elementary students who are gifted in mathematics: Validating the Chamberlin Affective Instrument for Mathematical Problem Solving. *Proceedings of the 33rd Annual Conference of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 684-692). Reno, NV: University of Nevada Reno.

Powers, R. A., Glassmeyer, D. M., & Ku, H-Y. (2011). The impact of technology on a graduate mathematics education course contributed research report. *Proceedings of the Fourteenth Annual Conference on Research in Undergraduate Mathematics Education* (pp. 369–380). Portland, OR: MAA.

Powers, R. A., Ku, H-Y., Mayes, R., Akarasriworn, C., & Korkmaz, O. (2011). Online teacher professional development in mathematics education. *Proceedings of the Twenty-second International Conference of the Society for Information Technology & Teacher Education*.

Powers, R. A. (2010). A case for providing online teacher professional development. *Proceedings of the Second International Conference on Technology and Mathematics Education, 2*.

Powers, R. A. (2010). Metacooperative learning and technology: A model for doing mathematics. *Proceedings of the Second International Conference on Technology and Mathematics Education, 2.*

Powers, R. A., & Champion, J. (2008). Teaching and learning college algebra with the TI-Navigator® wireless handheld network. *Proceedings of the Twentieth Annual International Conference on Technology in Collegiate Mathematics, 20, 199–203*.

Powers, R. A. (1997). A numerical, graphical, and analytical approach to solving equations using the TI-92. *Proceedings of the Tenth Annual International Conference on Technology in Collegiate Mathematics, 10*.

Special/Technical Reports:

Powers, R. A. (2004). *Report of rural inservice & preservice teachers partnering to improve content knowledge & instruction through reading and writing.* Unpublished manuscript, University of Northern Colorado.

Powers, R. A. (2002). *A draft report of the methods, results, and conclusions of preliminary investigation of the Conceptions of Mathematics Inventory in MATH 120: Mathematics and liberal arts.* Unpublished manuscript, University of Northern Colorado.

Padrón, Y. P., Waxman, H., Brown, A. P., & Powers, R. A. (2000a). *Improving classroom instruction and student learning for resilient and non-resilient English language learners* (CREDE Research Brief No. 7). Santa Cruz, CA: Center for Research on Education, Diversity, and Excellence.

Padrón, Y. P., Waxman, H., Brown, A. P., & Powers, R. A. (2000b). *Improving the education of resilient and non-resilient English language learners* (Tech. Rep. No. 3.2). Houston, TX: Center for Research on Education, Diversity, and Excellence.

Waxman, H., Cortina, L., Houston, W. R., & Powers, R. A. (2000). *Year two formative evaluation of the family-centered child care collaborative* (Report No. 209). Houston, TX: The Institute for Urban Education.

Invited Publications:

Powers, R. A., & Farmer, J. D. (submitted). Exploring Mayan numerals lesson plan. In S. McMillen (Ed.), *Integrating Mathematics*. Reston, VA: NCTM.

Other Publications:

Powers, R. A. (2001). *Factors affecting the implementation of mathematics education reform practices in high school algebra.* Unpublished doctoral dissertation, University of Houston, Houston, TX.

Works in Progress:

Chamberlin, S. A., & Haynes, A., & Powers, R. A. (2013). *An analysis of teacher questioning in secondary mathematics classes.* Manuscript in preparation.

Powers, R. A., Judd, A. B., Novak, J. D. (2013). *Learning to teach through lesson experiment.* Manuscript in preparation

Powers, R. A., & Parker, F. (2013). *Motivation in undergraduate mathematics and statistics courses.* Manuscript in preparation.

Judd, A. B., & Powers, R. A. (2013). *The influence of lesson experiment on beginning mathematics teachers.* Manuscript in preparation.

PROFESSIONAL PRESENTATIONS: (Date, Author(s), Title, Organization, Location)

Juried:

Papers/Professional Society Sessions:

Morgan, M., & Powers, R. A. (2016, January). *Facilitating classroom discourse: A project designed to help preservice teachers implement high-cognitive demand tasks.* Poster presented at the Twentieth Annual Conference of the Association of Mathematics Teacher Educators, Irvine, CA.

Powers, R. A., & Seehausen, A. (2015, February). *The pivotal teaching moment project: How preservice teachers respond to critical moments of instruction.* Paper presented at the Nineteenth Annual Conference of the Association of Mathematics Teacher Educators, Orlando, FL.

Troudt, M. L., & Powers, R. A. (2015, February). *Professional development, PCK growth, intercultural competence, and student growth on a state mathematics assessment.* Paper presented at the Nineteenth Annual Conference of the Association of Mathematics Teacher Educators, Orlando, FL.

Parker, F., Bartell, T. G., Novak, J., Powers, R. (2014, February). *Teachers developing culturally responsive teaching with the Wlodkowksi & Ginsberg motivational framework.* Paper presented at the Eighteenth Annual Conference of the Association of Mathematics Teacher Educators, Irvine, CA.

Powers, R. A., & Parker, C. F. (2013, November). *Measuring motivational conditions in mathematics classrooms.* Paper presented at the Thirty-fifth Annual Conference of the North American Chapter of the International Group for the Psychology of Mathematics Education. Chicago, IL.

Goss, M., Powers, R., & Hauk, S. (2013, February). *Identifying change in secondary mathematics teachers' pedagogical content knowledge.* Paper presented at the Sixteenth Annual Conference on Research in Undergraduate Mathematics Education. Denver, CO.

Powers, R. A., Parker, C. F., Novak, J. D. (2013, January). *The host teacher mentoring program: Building capacity for mentoring pre-service mathematics teachers.* Presentation at the

Seventeenth Annual Conference of the Association of Mathematics Teacher Educators, Orlando, FL.

Parker, C. F., Powers, R. A., Novak, J. D. (2013, January). *Structured task analysis as a means of teacher PCK development in professional development.* Presentation at the Seventeenth Annual Conference of the Association of Mathematics Teacher Educators, Orlando, FL.

Powers, R., & Glassmeyer, D. (2012, February). *Professional development at a distance: Designing and facilitating online courses for inservice mathematics teachers.* Preconference session presentation at the Sixteenth Annual Conference of the Association of Mathematics Teacher Educators, Fort Worth, TX.

Chamberlin, S. A., & Powers, R. A. (2011, October). *Assessing affect among upper elementary students who are gifted in mathematics: An exploratory study.* Paper presented at the Thirty-third Annual Conference of the North American Chapter of the International Group for the Psychology of Mathematics Education. Reno, NV.

Powers, R. A., Ku, H-Y., & Mayes, R. (2011, March). *Online teacher professional development in mathematics education.* Paper presented at the Twenty-second International Conference of the Society for Information Technology & Teacher Education, Nashville, TN.

Powers, R. A., Glassmeyer, D. M., Ku, H-Y. (2011, February). *The impact of technology on a graduate mathematics education course.* Paper presented at the Fourteenth Annual Conference on Research in Undergraduate Mathematics Education, Portland, OR.

Powers, R., & Novak, J. (2011, January). *Using authentic scholarly practice in an online teacher professional development course.* Round table presentation at the Fifteenth Annual Conference of the Association of Mathematics Teacher Educators, Irvine, CA.

Powers, R., & Judd, A. (2011, January). *The impact on novice teachers' practice after learning to teach from their teaching.* Presentation at the Fifteenth Annual Conference of the Association of Mathematics Teacher Educators, Irvine, CA.

Powers, R., & Novak, J. (2010, October). *Learning to teach better from your own teaching: Ways to treat lessons as experiments.* Presentation at the NCTM 2010 Regional Conference and Exposition, Denver, CO.

Powers, R. A., & Judd, A. (2010, January). *Preparing mathematics teachers to learn to teach from their teaching.* Paper presented at the Fourteenth Annual Conference of the Association of Mathematics Teacher Educators, Irvine, CA.

Novak, J. D., Powers, R. A., & Judd, A. (2009, April). *The lesson experiment: Learning to learn from teaching.* Paper presented at the Annual Conference of the National Council of Supervisors of Mathematics, Washington, DC.

Powers, R. A., & Novak, J. D. (2009, February). *Improving professional development through lesson experiments.* Presentation at the Thirteenth Annual Conference of the Association of Mathematics Teacher Educators, Orlando, FL.

Powers, R. A., & Champion, J. (2008, March). *Teaching and learning college algebra with the TI-Navigator® wireless handheld network.* Paper presented at the Twentieth Annual International Conference on Technology in Collegiate Mathematics, San Antonio, TX.

Hauk, S., Powers, R., & Allison, D. (2007, September). *University of Northern Colorado School of Mathematical Sciences PhD in educational mathematics.* Poster presented at the Doctoral Program in Mathematics Education: A Decade of Progress, Kansas City, MO.

Waxman, H. C., Rivera, H. H., & Powers, R. A. (2006, April). *Classroom and instructional learning environment differences in reading between resilient, average, and non-resilient students.* Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

Chamberlin, M. T., & Powers, R. (2006, January). *Assessing teachers' mathematical knowledge without compromising the supportive learning environment – A follow-up*. Paper presented at the Tenth Annual Conference of the Association of Mathematics Teacher Educators, Tampa, FL.

Powers, R. (2005, November). *Three-dimensional solids in geometry: A group assessment of pre-service teachers.* Paper presented at the School Science and Mathematics Association 2005 Convention, Fort Worth, TX.

Powers, R. (2005, November). *Preparing mathematics teachers to be comfortable at using appropriately classroom technology.* Paper presented at the School Science and Mathematics Association 2005 Convention, Fort Worth, TX.

Blubaugh, W. L., & Powers, R. A. (2003, January). *Tools and technology of secondary mathematics.* Paper presented at the Seventh Annual Association of Mathematics Teacher Educators Conference, Atlanta, GA.

Padrón, Y. N., Waxman, H., Powers, R. A., & Brown, A. (2001, April). *Evaluating the effects of the Pedagogy for Improving Resiliency Program: The challenges of school reform in a high-stakes testing climate.* Paper presented at the annual meeting of the American Educational Research Association, Seattle.

Waxman, H., Powers, R. A., Houston, W. R., & Cortina, L. (2001, April). *The relations between developmentally-appropriate practices and family-centered child care practices.* Paper presented at the annual meeting of the American Educational Research Association, Seattle, WA.

Powers, R. A. (2000, November). *Mathematical modeling at the movies: An Internet activity.* Workshop session presented at the annual meeting of the American Mathematical Association of Two-Year Colleges, Chicago, IL.

Powers, R. A. (1999, November). *Data analysis and the Internet: A sample project.* Poster session presented at the Twelfth Annual International Conference on Technology in Collegiate Mathematics, San Francisco, CA.

Powers, R. A. (1997, November). *A numerical, graphical, and analytical approach to solving equations using the TI-92.* Paper presented at the Tenth Annual International Conference on Technology in Collegiate Mathematics, Chicago, IL.

Workshops, Clinics, Symposia, Conferences:

Powers, R. A. (2004, February). *Integrating mathematical ideas.* Workshop sessions presented for Eaton School District, Eaton, CO.

<u>Invited Presentations:</u>

Key Note Addresses:

Powers, R. A. (2010, June). *A case for providing online teacher professional development.* Second International Conference on Technology and Mathematics Education, Taichung City, Taiwan.

Powers, R. A. (2010, June). *Metacooperative learning and technology: A model for doing mathematics.* Second International Conference on Technology and Mathematics Education, Taichung City, Taiwan.

Lectures:

Powers, R. A. (2014, September). *Experimental probability.* Valley High School, Gilcrest, CO

Powers, R. A. (2012, April). *The practice of statistics.* Poudre School District, Fort Collins, CO

Powers, R. A. (2011, November). *A committee member's perspective on the Colorado Academic Standards – Mathematics*. University Schools, Greeley, CO.

Powers, R. A. (2010, April). *Lesson experiments: A teacher-scholar model of learning to teach from one's own teaching.* Center for the Enhancement of Teaching and Learning Teaching and Learning Fair, Greeley, CO.

Powers, R. A. (2009, October). *The Math TLC: Creating a cadre of highly qualified, culturally competent, and pedagogically effective secondary teachers.* University of Delaware EDUC 838 Research Issues in Mathematics Education, Newark, DE.

Powers, R. A. (2008, November). *The professional development of secondary teachers through lesson experiments.* College of Natural and Health Sciences Distinguished Lecturer Series, Greeley, CO.

Powers, R. A. (2008, September). *APA style.* MED 610 Survey of Research in Mathematics Education, Greeley, CO.

Chamberlin, M., & Powers, R. (2006, March). *A mixed methods approach to investigating assessment in professional development*. Applied Statistics and Research Methods Program Seminar, Greeley, CO.

Chamberlin, M., & Powers, R. (2005, February). *Mathematics instruction with the SMART Board*. Department of Mathematical Sciences, Greeley, CO.

Non-Juried:

Papers/Professional Society Poster Sessions:

Morgan, M, & Powers, R. (2015, September). *Using high cognitive demand tasks to foster successful classroom discussions.* Presentation at the Colorado Council of Teachers of Mathematics 2015 Conference, Denver, CO.

Powers, R. A. (2015, September). *Data displays across grade levels.* Presentation at the Colorado Council of Teachers of Mathematics 2015 Conference, Denver, CO.

Powers, R. A. (2014, September). *Preparing a launch-explore-summary lesson.* Presentation at the Colorado Council of Teachers of Mathematics 2014 Conference, Denver, CO.

Seehausen, A., & Powers, R. A. (2014, September). *How preservice teachers' engage in the pivotal teaching moment project.* Presentation at the Colorado Council of Teachers of Mathematics 2014 Conference, Denver, CO.

Powers, R. A. (2012, September). *Interrelations and partnerships between K-12 and higher education.* Presentation at the Rocky Mountain Association of Mathematics Teacher Educators, Denver, CO.

Crossley, S., & Powers, R. (2011, October). *How will lesson experiments that involve cognitively challenging mathematical tasks enable a teacher to assess student's understandings and misconceptions of mathematical content?* Presentation at the Colorado Council of Teachers of Mathematics 2011 Conference, Denver, CO.

Powers, R., & Judd, A. (2009, April). *Professional development of secondary teachers through lesson experiments.* Presentation at the Mathematical Association of America Rocky Mountain Section Meeting, Golden, CO.

Powers, R. A., Novak, J., & Sasse, E. A. (2008, September). *Metacooperative learning: A model for doing mathematics.* Paper presented at the Colorado Council of Teachers of Mathematics 2008 Conference, Denver, CO.

Powers, R. (2008, September). *Lesson experiment: A way to learn from teaching.* School of Mathematical Sciences Colloquium, Greeley, CO.

Powers, R. (2007, October). *Action research: Improving practice through self-reflection.* Paper presented at the Colorado Council of Teachers of Mathematics 2007 Conference, Denver, CO.

Chang, W., & Powers, R. (2007, July). *An investigation and analysis of demiregular tessellations.* Frontiers of Science Institute, Mathematics and Science Teaching Institute, University of Northern Colorado, Greeley, CO.

Duong, A., Champion, J., & Powers, R. (2007, July). *Using the TI-Navigator system in improving mathematics teaching methods.* Frontiers of Science Institute, Mathematics and Science Teaching Institute, University of Northern Colorado, Greeley, CO.

Powers, R. (2007, April). *Applying the Synectics method of instruction to writing in mathematics*. Mathematical Association of America Rocky Mountain Section Annual Meeting, Pueblo, CO.

Romagnano, L., Gilmore, D., Evans, B., Loats, J. T., Soto-Johnson, H., Chamberlin, M. T., & Powers, R. (2007, April). *The pedagogical preparation of prospective mathematics teachers*. Mathematical Association of America Rocky Mountain Section Annual Meeting, Pueblo, CO.

Powers, R., & Allison, D. (2007, April). *A study of the use of the TI-92 in discrete mathematics*. Mathematical Association of America Rocky Mountain Section Annual Meeting, Pueblo, CO.

Novak, J., & Powers, R. (2006, September). *Modeling number operation on the number line with the Do-Math bear.* Paper presented at the Colorado Council of Teachers of Mathematics 2006 Conference, Denver, CO.

Powers, R., Bromley, W., Larson, P., Greene, M., & Capps, P. (2005, April). *Developing algebraic thinking: A journey from pre-school to college.* A MAA-CCTM joint panel discussion at the Rocky Mountain Section of the Mathematical Association of America, Greeley, CO.

Powers, R. A. (2005, February). *Mathematics education reform: Factors affecting practices in high school algebra.* Paper presented at University of Montana, Missoula, MT.

Chamberlin, M., & Powers, R. (2004, November). *Aluminum bats: A context for geometry and measurement.* Paper presented at the Colorado Council of Teachers of Mathematics 2004 Conference, Denver, CO.

Powers, R. A. (2002, October). *Mayan and Martian numbers: Exploring alternative number systems.* Paper presented at the Colorado Council of Teachers of Mathematics 2002 Conference, Denver, CO.

Powers, R. A. (2002, February). *Standards practices: Factors affecting their implementation in high school algebra.* Paper presented at Winona State University, Winona, MN.

Powers, R. A. (2002, January). *Factors affecting the implementation of* standards *practices in high school algebra.* Paper presented Colorado State University, Fort Collins, CO.

FUNDED PROJECTS:

Oehrtman, M., Novak, J., Parker, C. F., & Powers, R. (2015, September). *Collaborative Research: Initiating a Foundational Research Model for Secondary Mathematical Knowledge for Teaching (INFORMS MKT),* $1,166,640. National Science Foundation: Education & Human Resources Core Research (ECR).

Setter, K., Dalke, J., Powers, R., Harding, J., Bollinger, A. (July, 2015). *NW BOCES and Hayden School District MSP SUMMIT, Third-Year Continuation.* $493,006, Colorado Department of Education.

Setter, K., Dalke, J., Powers, R., Harding-Dekam, J., Bollinger, A. (May, 2014). *NW BOCES and Hayden School District MSP SUMMIT.* $854,252, Colorado Department of Education.

Powers, R. A. (March 2014). *Assessing the Learning Trajectories of Exponential Functions (ALT-EF).* $3000, Office of Sponsored Programs.

Powers, R. A., & Novak, J. D. (March 2012). *Grant-writing Incentive Program (GRIP) Proposal*. $2000, College of Natural and Health Sciences.

Novak, J.D. & Powers, R. A. (March 2012). *Summer Support Initiative (SSI) for Research, Scholarship, Creative works, and Grant Writing.* $3000, Office of Sponsored Programs.

Novak, J., Mayes, R., Christiansen, M., Hauk, S., Powers, R., & Shader, B. (January 2009 – June 2015). *Mathematics Teacher Leadership Center*. Math and Science Partnership (MSP), $4,999,744, National Science Foundation (NSF # 0832026).

Powers, R. A. (January 2008 – August 2008). *Teaching and Learning of Calculus with a Wireless Handheld Network.* Faculty Research and Publication Board Award, $2500, SPARC.

Powers, R. A. (August 2007 – May 2008). *Teaching and Learning of Algebra with a Wireless Handheld Network.* Research Incentive Fund Award, $2600, SPARC.

Powers, R. A. & Champion, J. (June 2007 – August 2007). *Summer Graduate Research Assistant Application for Joe Champion.* AVP for Research and Dean of the Graduate School

Powers, R. A. (January 2004 – January 2005). *Needs Assessment of the Secondary Mathematics Teacher Continuum.* Research Development Award, $2000, SPARC.

PROPOSALS SUBMITTED:

Novak, J., Bartell, T., Parker, C. F., Powers, R., & Klopfenstein, K. (2013, September). *Toward improving teachers' identification and evaluation of instructional practices reflecting a motivational framework for culturally responsive teaching*, $2,000,000. Institute of Educational Sciences. (Under review)

Novak, J. D., Powers, R. A., Parker, C. F., Klopfenstein, K., Oehrtman, M. C., & Datteri, S. (2012, December). *Teach math: Building secondary mathematics teachers' capacity to deliver high quality mathematics instruction*, $8,000,000 (not funded). National Science Foundation: Math and Science Partnership (MSP).

Dollard, C., Parker, C. F., & Powers, R. A. (2012, June). *Developing Curriculum Weaver to Improve Mathematics Teacher Practice.* $929,676 (not funded). U.S. Department of Education, Institute of Education Sciences, Education Research Grants.

Powers, R. A., & Blubaugh, W. L. (2006, December). *Teaching and Learning of Algebra with a Wireless Handheld Network.* $40,000 (not funded), Spencer Foundation.

Powers, R. A. & Bartelheim, F. (2004, May). *Secondary Mathematics Teacher Professional Continuum Alignment Project: Preliminary Proposal.* Teacher Professional Continuum (TPC), $982,000 (not funded), National Science Foundation.

GRANT WORK:

2015 –	Collaborative Research: Initiating a Foundational Research Model for Secondary Mathematical Knowledge for Teaching (INFORMS MKT), developing an assessment to measure student knowledge and skills of exponential functions by strands.
2014 –	Supporting Understanding through Meaningful Mathematical Instructional Tasks (SUMMIT), Colorado MSP, Facilitator of face-to-face and online professional development for K-12 teachers at two locations: Craig and Kremmling, CO.
2011 – 2014	*Reaching All Our Math Potential (RAMP)*, Colorado MSP, Instructor and Lesson Study Facilitator for High School Teachers for two groups: Algebra and Geometry
2009 – 2013	*Mathematics Teacher Leadership Center*, NSF MSP, Instructor and researcher among other roles
2007 – 2009	*Weld County School District 6 MSP Grant*, Colorado MSP, Instructor for

professional development of middle school teachers for two levels: 7th and 8th Grades

PROFESSIONAL CONSULTATION:

Advanced Placement Consultant

Summer 2011, AP Statistics Reader, Daytona Beach, FL

Summer 2009, AP Statistics Reader, Louisville, KY.

Invited Panelist

2013, STEM Teacher Preparation Symposium, University of Northern Colorado, Greeley, CO.

Invited Writer

2006, Instructors guide to *Geometric Structures for Elementary Teachers*, Oklahoma State University, Stillwater, OK.

Conference Proposal Reviewer

Association of Mathematics Teacher Educators Annual Conference

2015 Reviewed 40 submissions from Development of Mathematics Teacher Educators, Pedagogical Content Knowledge, and Teaching and Learning with Technology and made final recommendations for 19 submission in Development of Mathematics Teacher Educators as a member of the AMTE Program Committee

2014 Reviewed 40 submissions and made final recommendations for 53 submissions in Teaching and Learning with Technology as a member of the AMTE Program Committee

2013 Reviewed 44 submissions in Mathematics Content Knowledge as a member of the AMTE Program Committee

2012 Examining Research on Teachers' Knowledge Needed for Teaching Mathematics with Technology Using the TPACK Lens
GeoGebra 4.0 and the Creation of Interactive Worksheets and Visuals
Learning Mathematics in the 21st Century: High School Students' Interactions While Learning Mathematics Online
Using Virtual Manipulatives to Teach Prealgebra and Algebra Concepts
Untitled [An Examination of an Elementary Mathematics Specialist Program]

Conference on Research in Undergraduate Mathematics Education

2013 How to Make Time: The Relationships between Concerns about Coverage, Material Covered, Instructional Practices, and Student Success in College Calculus
Preservice Teachers' Uses of the Internet to Investigate the Proof of the Pythagorean Theorem and its Converse

2012 On The Emergence of Mathematical Objects: The Case of e^(az)
Does/Should theory building have a place in the mathematics curriculum?
An Examination of Proving Using a Problem-Solving Framework

Journal Reviewer

2015–present, Reviewer of article submissions, *Mathematics Teacher Educator*
"An online professional development model to support teacher's ability to examine student work and thinking"

2014–present, Reviewer of article submissions, *PRIMUS*
"Effects of Web-Based Homework on Students' Performance in Freshman Math Classes at an American College in Lebanon"

2013–present, Reviewer of article submissions, *Journal for Research in Mathematics Education*
"Self-explanation training improves proof comprehension"
2006–present, Reviewer of article submissions, *School Science and Mathematics*
"How Much do Mathematics Skills Improve with Age? Evidence from LTT NAEP"
"Are We Ready to Listen? Middle School Students' Suggestions for Teaching STEM"
"Investigating Real-Life Contexts in Textbooks for the Teaching of
One-Variable Linear Equations"
"Promoting Pre-Service Elementary Teachers' Awareness of Learning and Teaching Mathematics Conceptually Through KTEM"
"Developing Mathematical Justification for Whole Number Computation: A Case of Prospective Elementary Teachers"
"The Effectiveness of a Math Methods Course: Confronting Mathematics Anxiety in Elementary Preservice Teachers"
"Elementary School Teachers' Conceptions about Teaching Word Problem Solving"
"Development of Novice Teachers' Perception of Student Critical Thinking"
2006–present, Reviewer of article submissions, *Mathematics Teacher*
"Connecting Ancient Fractions with Modern Problems"
"Using the Dihedral Group on the Square to Introduce Group Theory to Preservice Teachers"
"QED with a CAS"
"Making a Case for Complex Polynomials"
"Analyzing Space Shuttle O-ring Performance with the TI-84"
"Assessing Assessment Items in Data Analysis"
"Making Sense of Graphs as Models via Point-by-Point Operations"
"Where Have All the Flowers Gone?" (Revised based on initial review)
2012, Reviewer of article submissions, *NCSM Journal of Mathematics Education Leadership*
"Lessons Learned While Leading Leaders"
2006, Invited reviewer of article, *International Journal of Technology in Mathematics Education*
"Pushing the Limitations of Technology in Teaching Mathematics"

Invited Reviewer
2015, External review of Dr. Fenqjen Luo's tenure and promotion at Montana State University
2003, Peer review of Franklin Middle School, North Central Association Commission on Accreditation and School Improvement

PROFESSIONAL ASSOCIATION PARTICIPATION:

Membership:
1990 – , National Council of Teachers of Mathematics, Reston, VA
1997 – , American Educational Research Association, Washington, DC
2001 – , Colorado Council of Teachers of Mathematics, Denver, CO
2002 – , School Science and Mathematics Association, Columbus, OH
2003 – , Association of Mathematics Teacher Educators, San Diego, CA
2007 – , Rocky Mountain Association of Mathematics Teacher Educators, Denver, CO
2001 – 2004, Mathematical Association of America, Washington, DC
1997 – 2000, Phi Delta Kappa, Washington, DC
1990 – 1996, American Mathematical Association of Two-Year Colleges, Memphis, TN
1995 – 1996, Colorado Mathematical Association of Two-Year Colleges, Fort Collins, CO

Leadership:
2008 – 2012, President Rocky Mountain Association of Mathematics Teacher Educators
2007 – 2008, President-elect Rocky Mountain Association of Mathematics Teacher Educators
1995 – 1996, President Colorado Mathematical Association of Two-Year Colleges

UNIVERSITY SERVICE:	Date(s)	Position	Activity
University:			
STEP Coordinating Council	2008 –	Appointed Member	NHS Representative
STEP Working Group	2012 – 2014	Co-chair	Revise Secondary PTEP
PEC	2004 – 2007	Elected Member	Secondary PTEP Representative
Natural and Health Sciences:			
Policies and Procedures	2012 –	Math Science Rep.	Revise College Policies
Mathematical Sciences:			
SMS P&P Ad-Hoc	2013 –	Chair	Implement NHS Evaluation
Sec Math Working Group	2012 –	Chair	Revise Secondary Math Major
T.E.A.M.	2011 –	Faculty Advisor	Math Education Club
Sec. Math Minor Advisor	2009 –	Advisor	Advise students with minor
Math PTEP Coordinator	2007 –	Coordinator	Admit all math students
PLACE/PRAXIS	2005 –	Co-coordinator	Advise students in taking exams
Graduate (MA)	2002 –	Committee Member	Oversee the master's program
Graduate (Ph.D.)	2008 – 2009	Committee Member	Oversee the doctoral program
IDLA Course Evaluation	2004 – 2005	Chair	Content evaluation of the courses
MA/Secondary	2002 – 2004	Co-coordinator	Manage records for MA students
Licensure	2002 – 2005	Co-coordinator	Manage records for STEP
Supervise Teachers	2003 – 2004	Co-coordinator	Assign UNC Supervisors
MATH 181/182/387	2002 – 2003	Co-coordinator	Coordinate faculty and lecturers
Education and Behavioral Sciences:			
PTEP Assessment	2002 – 2007	Committee Member	Oversee assessment procedures
Secondary PTEP	2002 – 2007	Committee Member	Oversee policies of the program

GRADUATE STUDENT COMMITTEES:

Doctoral:

Summer 2015	Kitty Roach, *A Study of Novice Instructors' Questioning Techniques and Classroom Discourse Surrounding Those Questions*, Co-Research Advisor
Spring 2014	Rebecca-Anne Dibbs, *The Effects of Formative Assessment on Students' Zone of Proximal Development in Introductory Calculus,* Committee Member
Fall 2013	David Glassmeyer, *Mathematics Teachers' Models of Quantitative Reasoning*, Committee Member
Summer 2012	Nissa Yestness, *A Study of Undergraduate Students' Use of Diagrams in Understanding and Constructing Proofs about Groups, Subgroups, and Isomorphisms,* Co-Research Advisor
Spring 2010	Joe Champion, *The Mathematics Self-Efficacy and Calibration of Students in a Secondary Mathematics Teacher Preparation Program*, Research Advisor
Summer 2009	Rhoda Deon, *The nature of pedagogical content knowledge about combinatorics representations among pre and in-service K-8 teachers.* Committee Member.

Summer 2008 April Judd, *Function, Visualization, and Mathematical Thinking for College Students with Attention Deficit Hyperactivity Disorder.* Committee Member.
Summer 2008 Allison Toney, *Women with Advanced Degrees in Mathematics in Doctoral Programs in Mathematics Education*, Committee Member.
Spring 2007 Clark Dollard, *Preservice Elementary Teachers' Thinking about Situations Involving Probability.* Committee Member.
Summer 2004 Andrew Neumann, *The Mathematical Tasks Framework: A Consequence of and Condition for Professional Development.* Committee Member.
In progress Cheryl Anne Clinger, Completed Comprehensive Exams, Faculty Representative
In progress Michelle Morgan, Preparing for Comprehensive Exams, Research Advisor
In progress Elizabeth Scott-Janda, Preparing for Comprehensive Exams, Research Advisor

Master's:

Fall 2015 Nicole Loeffler, *The Effects of Interact Math on Student Self-Assessment and Formative Assessment* (Action Research Project, Committee Member)
Annie Rentel, *Paper-and-Pencil Versus Computer-Based Assessments: An Action Research Project* (Action Research Project, Committee Member)
Spring 2015 Alees Seehausen, *The Pivotal Teaching Moment Project: How Preservice Teachers Recognize and Attend to Critical Moments of Instruction* (ARP Co-advisor)
Summer 2014 Keith Decker, *Identifying Misconceptions in Cognitive Reasoning in Dividing a Whole into Parts in Order to Improve Student Understanding of the Process of Division* (Math Research Project, Committee Member)
Victor Jimenez, *Learning and Understanding Mathematics Using Self-and Peer-Assessment* (Math Research Project, Committee Member)
Spring 2014 John Buch, *An Application of Isometries in High School Mathematics* (Math Research Project, Committee Member)
Kendra Versoi, *Triangle Congruence Theorems on the Sphere* (Math Research Project, Committee Member)
Summer 2012 Susanne Martino, *The Impact of Flexible Grouping on Mathematical Understandings of Heterogeneous Math Classes* (Action Research Project Committee Member)
Liesl I. Peterson, *How Do Graphic Organizer in the Form of Foldables Improve Retention and Learning?* (ARP Committee Member)
Rosie Phenning, *The Frobenius Coin Problem* (MP Committee Member)
Kathryn Ann Sampson, *How Homework Assigned in a Flipped Classroom Relates to Students' Mathematical Understanding* (ARP Committee Member)\
Spring 2012 Kandy Focht, *Problem Solving Through Writing in Mathematics* (ARP Advisor)
Keith Kennison, *Metacognitive Awareness Activities and Student References to Metacognitive Strategies* (ARP Advisor)
Fall 2011 Bryce Leonhardt, *Is Engaging High School Pre-calculus Student in Written Assessment (Quiz and Test) Corrections Beneficial to Their Learning of Introductory Calculus Topics?* (ARP Advisor)
Summer 2011 Christine M. Bradford, *Student Use of Proof Cards in Writing Geometric Proofs* (ARP Advisor)
Jason Conway, *Project-based Learning & Relevant Problem Solving in a High School Geometry Course – An Action Research Project* (ARP Advisor)

	Stephanie Crossley, *Increasing Students Cognitive Demands through Mathematical Tasks* (ARP Advisor)
	Rebecca Harrison, *Journaling in Mathematics and Its Affect on Student Achievement and Understanding* (ARP Advisor)
	Shirley Reynolds, *Self-Assessment Activities to Improve Student Mathematics Performance* (ARP Advisor)
	Joshua A. Urich, *Graphing Calculator Use and Its Impact on Student Achievement and Understanding of Hypothesis Testing* (ARP Advisor)
Spring 2011	Kristin King, *Fostering Discussion During Small Group Activities through Active Learning in an Introductory Statistics Course* (ARP Advisor)
	Amanda Manley, *Transitioning from Intervention to Mainstream Mathematics using Formative Lesson Experiments: An Action Research Project* (ARP Advisor)
	Kelly Shank, *The Effects of Incorporating Problem Solving in the Geometry Classroom* (ARP Advisor)
Summer 2009	Christine Mac, *Scaffolding Student Success in the Secondary Mathematics Classroom* (ARP Advisor)
Summer 2008	Patrick Freeberg, *Using Active Learning Strategies and Activities in a Probability and Statistics Class to Increase Student Achievement* (ARP Advisor)
	Karen Stohlmann Henderson, *Does the Math Strategies Class Improve Students' Achievement in Their Core Mathematics Class?* (ARP Advisor)
Spring 2008	Brian S. Mierzwa, *How Do Student Centered Activities Impact Engagement? An Action Research Project* (ARP Advisor)
Fall 2007	Cheryl Bates-Olson, *Implementing Single-Gender Classrooms to Improve Student Performance and Attitude in Mathematics* (Committee Member)
Summer 2007	Carol Arthofer, *Displaying Content and Language Objectives for English Language Learners. Does it help students?*
Summer 2007	AnnMarie Cunningham, *I Remember…for Now: The Effect of Review on Long-Term Retention* (ARP Advisor)
Summer 2007	Ricia Ingram, *What are the Effects of Gender-Specific Instruction on Female Students?* (ARP Advisor)
Summer 2007	Jason Jensen, *Guided Discovery vs. Direct Instruction in the Algebra II Curriculum*
Summer 2007	Daniel Zalbowitz, *Does the Use of Statistical Software Increase Students' Understanding of Statistical Concepts?*
Fall 2006	Darren Brungardt, *Action Research Project: Peer Tutoring* (ARP Advisor)
Fall 2006	Eric Haupert, *The Effect of Daily ACT Review*
Fall 2006	Tina Janelle, *Can the Use of a Dynamic Geometry System and an Interactive Electronic Whiteboard in Teaching Geometry Help Students Achieve a Higher van Hiele Level of Thinking?* (ARP Advisor)
Fall 2006	John Zahler, *Does Including Homework as Part of a Final Grade Improve Student Achievement?*
Summer 2006	Toni L. Dennis, *Improving Procedural Knowledge May Result in Improved Conceptual Knowledge*
Summer 2006	Nancy Geisendorfer, *Helping Prospective Elementary Teachers Gain Confidence in Understanding Algebraic Concepts* (ARP Advisor)
Summer 2006	Jessica Klement, *Group Discussion as Part of Individual Assessment: Does it Lead to Better Understanding and Retention of Geometry Concepts?* (Advisor)
Summer 2006	Stacy Southworth, *Does Vocabulary Squares Aid in the Development of*

Vocabulary Words in Geometry? (ARP Advisor)

Spring 2006 Olaf Siverson, *The Effect of Van-Hiele Aligned Geometry Instruction and its Impact on Student Geometrical Understanding* (ARP Advisor)

Summer 2005 Matthew L. Christiansen, *The Effectiveness of Explicit Vocabulary Instruction Using Tiered Differentiated Instruction in the Secondary Mathematics Classroom*. (ARP Advisor)

Summer 2004 Derek Herbert, *Introductory Statistics Module for High School Freshman*, Curriculum Module Committee chair.

Summer 2003 Ian S. Wagner, *Adding Depth to the Mathematics Curriculum through Sequences and Series*, Curriculum Module Committee member.

TEACHING:

Courses Taught:

Summer 2015 MATH 595 Topics in Mathematics (History of Mathematics), Mathematical Sciences

Spring 2016 MED 341 Principles of Teaching Mathematics, Mathematical Sciences, Co-taught with Michelle Morgan
STEP 161/262/363 Observation and Analysis of Student Teaching, Educational Foundations & Curriculum Studies, Co-taught with Alees Seehausen

Fall 2015 MED 441 Methods of Teaching Mathematics, Mathematical Sciences
STEP 161/262/363 Observation and Analysis of Student Teaching, Educational Foundations & Curriculum Studies, Co-taught with Alees Seehausen

Summer 2015 MATH 550 Applied Probability and Statistics, Mathematical Sciences

Spring 2015 MED 701 Educational Mathematics Research, Mathematical Sciences
MATH 464 History of Mathematics, Mathematical Sciences

Fall 2014 MED 441 Methods of Teaching Mathematics, Mathematical Sciences
MED 600 Introduction to Research in Mathematics Education, Mathematical Sciences

Spring 2014 MED 441 Methods of Teaching Mathematics, Mathematical Sciences
STAT 150 Introduction to Statistical Analysis, Mathematical Sciences

Fall 2013 MED 598 Teaching Mathematical Practices in Secondary Schools, Mathematical Sciences

Summer 2013 MATH 550 Applied Probability and Statistics, Mathematical Sciences

Spring 2013 MED 441 Methods of Teaching Mathematics, Mathematical Sciences

Fall 2012 MED 441 Methods of Teaching Mathematics, Mathematical Sciences

Spring 2012 MED 341 Tools and Technology of Secondary Mathematics, Mathematical Sciences
MED 599 Action Research Project, Mathematical Sciences

Fall 2011 MED 599 Action Research Project, Mathematical Sciences

Summer 2011 MED 543 Teaching Geometry, Mathematical Sciences (TA – Melissa Goss)

Spring 2011 MED 701 Educational Mathematics Research, Mathematical Sciences
MED 599 Action Research Project, Mathematical Sciences
MED 441 Methods of Teaching Mathematics, Mathematical Sciences
STEP 161/262/363 Observation and Analysis of Student Teaching, Teacher Education

Fall 2010 MED 599 Action Research Project, Mathematical Sciences
MED 441 Methods of Teaching Mathematics, Mathematical Sciences
STEP 161/262/363 Observation and Analysis of Student Teaching, Teacher Education

Summer 2010	MED 550 Applied Probability and Statistics, Mathematical Sciences
Spring 2010	MED 543 Teaching Geometry, Mathematical Sciences (TA – David Glassmeyer)
	MED 599 Action Research Project, Mathematical Sciences (TA – David Glassmeyer)
	MED 441 Methods of Teaching Mathematics, (Co-taught with Alisa Breitstein), Mathematical Sciences
	STEP 161/262/363 Observation and Analysis of Student Teaching, (Co-taught with Alisa Breitstein and Wayne Trainor), Teacher Education
Fall 2009	MATH 251 Mathematics for K-8 Teachers–No. & Ops., University of Delaware
Summer 2009	MED 510 Advanced Placement Statistics, Extended Studies (Co-taught with Dr. Lee Kucera, Capistrano Valley High School)
Spring 2009	MED 599 Action Research Project, Mathematical Sciences
Fall 2008	MED 600 Introduction to Research in Mathematics Education
	MED 599 Action Research Project, Mathematical Sciences
	MATH 797 Doctoral Proposal Research (Joe Champion)
	MED 622 Dir Study Teacher Research, Mathematical Sciences (Kristen King)
Summer 2008	MED 510 Advanced Placement Statistics, Extended Studies (Co-taught with Dr. Robert Smidt, Cal Poly-San Luis Obispo)
	MED 550 Applied Probability and Statistics, Mathematical Sciences
Spring 2008	MED 674 Teaching and Learning Mathematics on the Secondary Level
	MED 599 Action Research Project, Mathematical Sciences
Fall 2007	MED 543 Teaching Geometry, Mathematical Sciences
	MED 599 Action Research Project, Mathematical Sciences
	MATH 797 Doctoral Proposal Research (Kathy Pendleton)
	MED 622 Dir Study Teaching w/ Tech (Joe Champion)
Summer 2007	MFT 516 Algebra in the Middle Level Mathematics Teaching (Co-taught with Dr. Jeff Farmer)
Spring 2007	MED 550 Teaching Applied Probability and Statistics
	MED 599 Action Research Project, Mathematical Sciences
	MED 441 Methods of Teaching Mathematics, Mathematical Sciences
	STEP 161/262/363 Observation and Analysis of Student Teaching, Educational Foundations & Curriculum Studies
	MED 622 Dir Study Teacher Research (Ricia Ingram and Teri Walker)
Fall 2006	MED 610 Survey of Research in Mathematics Education (Co-taught with Dr. Michelle Chamberlin)
	MED 599 Action Research Project, Mathematical Sciences
	MED 441 Methods of Teaching Mathematics, Mathematical Sciences
	STEP 161/262/363 Observation and Analysis of Student Teaching, Educational Foundations & Curriculum Studies
Summer 2006	MED 510 Advanced Placement Statistics, Extended Studies
	MATH 550 Applied Probability and Statistics, Mathematical Sciences
Spring 2006	STAT 150 Introduction to Statistical Analysis
	MED 599 Action Research Project, Mathematical Sciences
	MED 441 Methods of Teaching Mathematics, Mathematical Sciences
	STEP 161/262/363 Observation and Analysis of Student Teaching, Educational Foundations & Curriculum Studies
Fall 2005	MED 543 Teaching Geometry, Mathematical Sciences
	MED 599 Action Research Project, Mathematical Sciences

	MED 441 Methods of Teaching Mathematics, Mathematical Sciences
	STEP 161/262/363 Observation and Analysis of Student Teaching, Educational Foundations & Curriculum Studies
Spring 2005	MED 701 Educational Mathematics Research, Mathematical Sciences
	MATH 387 Topics of Fundamental Mathematics, Mathematical Sciences (2 sections)
Fall 2004	MATH 387 Topics of Fundamental Mathematics, Mathematical Sciences (2 sections)
Summer 2004:	MATH 387 Mathematics in Our Technological World, Mathematical Sciences
Spring 2004:	MED 441 Methods of Teaching Mathematics, Mathematical Sciences
	STEP 161/262/363 Observation and Analysis of Student Teaching, Educational Foundations & Curriculum Studies
Fall 2003:	MATH 387 Mathematics in Our Technological World, Mathematical Sciences
	MED 441 Methods of Teaching Mathematics, Mathematical Sciences
	STEP 161/262/363 Observation and Analysis of Student Teaching, Educational Foundations & Curriculum Studies
Summer 2003:	MATH 387 Mathematics in Our Technological World, Mathematical Sciences
	MATH 387 Mathematics in Our Technological World, R.E.A.P
Spring 2003:	MED 441 Methods of Teaching Mathematics, Mathematical Sciences
	MED 654 Seminar in College Mathematics Teaching, Mathematical Sciences
	Co-taught MED 622 Directed Studies, Mathematical Sciences
	STEP 161/262/363 Observation and Analysis of Student Teaching, Educational Foundations & Curriculum Studies
Fall 2002:	MATH 181 Fundamentals of Mathematics I, Mathematical Sciences
	MED 441 Methods of Teaching Mathematics, Mathematical Sciences
	STEP 161/262/363 Observation and Analysis of Student Teaching, Educational Foundations & Curriculum Studies
Spring 2002:	MATH 181 Fundamentals of Mathematics I, Mathematical Sciences
	MED 441 Methods of Teaching Mathematics, Mathematical Sciences
	STEP 161/262/363 Observation and Analysis of Student Teaching, Educational Foundations & Curriculum Studies
Fall 2001:	MATH 181 Fundamentals of Mathematics I (2 sections)
	MED 487 Technology, Manipulatives and the NCTM *Standards*

Professional Development Teaching:

2011-2012	Weld/Evans District 6 MSP algebra teacher training, Greeley, CO
	Weld/Evans District 6 MSP geometry teacher training, Greeley, CO
2008-2009	Weld/Evans District 6 MSP 7th grade teacher training, Greeley, CO
	Weld/Evans District 6 MSP 8th grade teacher training, Greeley, CO
Summer 2008	Fort Morgan 6–12 teacher training, co-taught, Fort Morgan, CO
2007-2008	Weld/Evans District 6 MSP 7th grade teacher training, Greeley, CO
	Weld/Evans District 6 MSP 8th grade teacher training, Greeley, CO
Summer 2007	Fort Morgan 6–12 teacher training, co-taught, Fort Morgan, CO

Curriculum Materials Assembled:

Summer 2011:	MED 543 *Teaching Geometry*
Summer 2010:	MATH 550 *Applied Probability and Statistics*
Spring 2007	MED 599 *Action Research Project*

Fall 2004: MATH 387 *Topics in Fundamental Mathematics: Geometry for Elementary Teachers*
Summer 2004: MED 441 *Models of Teaching Mathematics*
Spring 2002: MATH 181 *Fundamentals of Mathematics I*

Courses Developed

Spring 2016 MED 341 Principles of Teaching Mathematics
Fall 2007 MFT 522 Principles and Standards in Middle School Mathematics Teaching
Fall 2004 MED 599 Action Research Project
Fall 2001 MED 381 Fundamental Mathematics Education Lab (with Dr. Helen Gerretson)

PROFESSIONAL DEVELOPMENT ACTIVITIES:

Workshops, Clinics, Symposia, Conferences:

February, 2013, 65th Annual Conference of the American Association of Colleges for Teacher Education, Orlando, FL.
August, 2012, Secondary Math Lab, Ann Arbor, MI: University of Michigan.
October, 2011, CBMS Forum on Teaching Teachers in the Era of the Common Core, Reston VA: Conference Board of the Mathematical Sciences
September, 2011, 3rd International Realistic Mathematics Education Conference, Boulder, CO: University of Colorado School of Education and the Freudenthal Institute USA
August, 2011, Secondary Math Lab, Ann Arbor, MI: University of Michigan.
May, 2007, TI-Graphing Calculator and Navigator Conference, Littleton, CO: Texas Instruments and Littleton Public Schools.
February, 2007, Center for the Study of Mathematics Curriculum K-12 Mathematics Conference, Arlington, VA: Centers for Learning and Teaching Network (CLTNet) Elluminate webcast .
September, 2006, Accreditation, Accountability and Quality, Arlington, VA: NCATE/AACTE.
September, 2005, Mathematics Professional Development Leadership Institute, Denver, CO: WestEd.
June, 2005, GeoSET Workshop, Stillwater, OK: Oklahoma State University.
January, 2004, How to Write the Application Narrative, Greeley, CO: Management Concepts.
September, 2003, Grants Resource Center Fall Meeting, Washington, DC: Grants Resource Center.
April, 2003, Grant Writing Workshop, Greeley, CO: SPARC.

HONORS AND AWARDS:

2008 Scholar in Residence of the Center for the Enhancement of Teaching and Learning
2008 Excellence in Teaching, College of Natural and Health Sciences of the University of Northern Colorado
2007 Professor of the Year, Student Representative Council of the University of Northern Colorado
2007 Summer Graduate Research Assistantship Award – Joseph Champion
2004 Delta Zeta Sorority Outstanding Professor Award
2000 Outstanding Doctoral Student, Department of Curriculum & Instruction, University of Houston
1995 Five-Year Faculty Recognition Award, Front Range Community College
1995 Faculty Advisor Award, Phi Theta Kappa Honor Society, Front Range Community

College

1994 Faculty Advisor Award, Phi Theta Kappa Honor Society, Front Range Community College