

August 2025

Kerrie Lynn McDaniel

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EDUCATION

Ph.D. Department of Plant Biology, Southern Illinois University-Carbondale, Carbondale, IL 1997

Dissertation Title: Cytokinin Modulation of Gene-specific mRNA Abundance: The Effects of Different Cytokinins in Phaseolus vulgaris L. and Glycine max (L.) Merr.

M.S. in Biology, Western Kentucky University, Bowling Green, KY 1990

Thesis Title: Short-term Effects of Manganese-toxicity on ribulose 1,5 bisphosphate carboxylase in tobacco.

B.S. in Biology & Chemistry (summa cum laude), Western Kentucky University, Bowling Green, KY 1988

PROFESSIONAL EXPERIENCE

Professor, Department of Biological Sciences, Western Kentucky University 2025-present

Associate Professor, Department of Biology, Western Kentucky University 2019-2025

- Supervise, write curriculum for, teach in the Human A&P Program
- Research Interests: Bolster the STEM Pipeline, Student Learning & Pedagogy

Assistant Professor, Department of Biology, Western Kentucky University 2013-2019

- Revise Human A&P Program

Instructor, Department of Biology, Western Kentucky University 2002-2013

- Establish A&P Program and Microbiology at Glasgow Campus
- Weekly set-up and teaching A&P and Micro lab/lecture

Instructor, Navetas Program, Western Kentucky University 2011-2015

- Taught General Biology to international students as soft landing to US

Adjunct, Part-time Faculty, Department of Biology, Western Kentucky University 1994-2002

- Taught biology courses as needed by the department

High School Science Teacher, Leeton School, Leeton, MO 1990-1991

- Taught high school biology, chemistry, physics, and general science

TEACHING EXPERIENCE (IN PEDAGOGICAL FACULTY POSITION)

Course	Spring Offering	Fall Offering	Summer or Winter
BIOL 131 Lecture Human Anatomy & Physiology (A&P)	2015*, 2016*, 2017, 2018*, 2019*, 2022*, 2023*, 2024*, 2025*	2021*	Su-2015*, 2016*, 2017*, 2018*, 2019*, 2020*, 2021*, 2022*, 2023*, 2024*, 2025*
BIOL 131 Lab Human A&P	2015^, 2016^, 2017^, 2018^, 2019^, 2020^, 2021^, 2022^, 2023^, 2024^, 2025^	2015^, 2016^, 2017^, 2018^, 2019^, 2020^, 2021^, 2022^, 2023^, 2024^	Su-2015*, 2016*, 2017*, 2018*, 2019*, 2020*, 2021*, 2022*, 2023*, 2024*, 2025*
BIOL 231 Lecture Advanced A&P	2014*, 2021*	2013*, 2014*, 2015*, 2016*, 2017*, 2018*, 2020*, 2022*, 2023*, 2024*	Su-2015*, 2016*, 2017*, 2018*, 2019*, 2020*, 2021*, 2022*, 2023*, 2024*, 2025*
BIOL 231 Lab Advanced A&P	2015*^, 2016*^, 2017*^, 2018*^, 2019*^, 2020*^, 2021*^, 2022*^, 2023*^, 2024*^	2015*^, 2016*^, 2017*^, 2018*^, 2019*^, 2020*^, 2021*^, 2022*^, 2023*^, 2024*^	Su-2015*, 2016*, 2017*, 2018*, 2019*, 2020*, 2021*, 2022*, 2023*, 2024*, 2025*
BIOL 303 Life Science for Middle School Teachers	2016*, 2017*, 2018*, 2020*, 2022*, 2024*	2014*	
BIOL 207 General Microbiology Lecture	2020*	2019	
BIOL 494, 493 494-Intern in Medical Technology	BIOL 494-2015, 2016, 2017 2018, 2019, 2020, 2021, 2022, 2023, 2024	BIOL 493-2015, 2016, 2017 2018, 2019, 2020, 2021, 2022, 2023, 2024	BIOL 492-Su2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024
Summer or Winter Offerings			
BIOL 579 Mechanistic Toxicology	BIOL 420 Introduction to Toxicology	BIOL 113 General Biology Lecture (non-majors)	BIOL 114 General Biology Lab (non-majors)
Su-2019*, 2020*, 2022*, 2023*, 2024*, 2025*	Su-2015*, 2016*, 2017*, 2018*, 2019*	W-2014*, 2015*, 2017*, 2018*, 2019*, 2020*	W-2014*, 2015*, 2016*, 2017*, 2018*, 2020*

*Taught course

^Coordinated, supervised, wrote curriculum for course

CURRICULUM DEVELOPMENT PROJECTS & EXTRACURRICULAR

Advanced Anatomy & Physiology (BIOL 231) Laboratory Curriculum

2014-2024

- Created and established pedagogy-rich curriculum for anatomy labs
- Modified and improved curriculum

Human Anatomy & Physiology (BIOL 131) Laboratory Curriculum

2014-2024

- Modernized and established curriculum rich in hands-on learning and technology
- Updated and modified curriculum in modules for more student-centered approach

National STEM Scholar Program Middle School Life Science Curriculum	2015-2025
<ul style="list-style-type: none"> Wrote and implemented pedagogy-rich curriculum for science teacher workshop Included “on earth” lessons for payload launches aboard Blue Origin’s New Shepard spacecraft (2019, 2022, 2025) 	
Green River Regional Education Cooperative- Curriculum for middle and high School teachers	2022
<ul style="list-style-type: none"> Developed and taught curriculum for “Engaging Brain in Hands-on Science” 	
Curricular Modification and Quarantine Procedures for COVID19 pandemic	2020
<ul style="list-style-type: none"> Modified curriculum to meet the needs of students in BIOL 131 lecture/lab, BIOL 231 Lecture/lab, BIOL 207 Microbiology lecture 	
Green River Regional Education Cooperative Curriculum for Next Generation Science Standards (Elementary School Level)	2013-2016
<ul style="list-style-type: none"> Developed and modeled curriculum for the NGSS for elementary schools 	

AWARDS & HONORS

Provost’s Award for Excellence in Online Teaching & Course Design, WKU	2025
Awarded Center for Innovative Teaching & Learning Teaching Honors, WKU	Multi-year
<ul style="list-style-type: none"> Received Honors: 2019, 2020, 2021, 2022, 2023, 2024, 2025 	
Outstanding Oral Presentation, The 18th Asian Pacific Conference on Giftedness, Takamatsu, Japan.	August 20, 2024
Nomination for University Teaching Award, WKU	
<ul style="list-style-type: none"> Nominated: 2015, 2016, 2107, 2018, 2019, 2020, 2021, 2022 	
Nomination for University Service Award, WKU	Multi-year
<ul style="list-style-type: none"> Nominated: 2015, 2022 	
Awarded Outstanding Junior Faculty Teaching Award, Ogden College, WKU	2018
Awarded Most Enthusiastic Professor, Alpha Delta Pi Sorority, WKU	2015
Awarded Hats Off to Women Award, Office of Institutional Diversity & Inclusion	2014

SERVICE-UNIVERSITY, DEPARTMENTAL, & COMMUNITY

UNIVERSITY SERVICE

Member, Professional Education Council (PEC)	2008-present
<ul style="list-style-type: none"> Monthly meetings to discuss & approve curriculum for P-12 CAEP/SPA Standards, Biology Department & Ogden College (2016-2017) Teacher Education Leadership Committee/Core Curriculum (2018) Admissions & Retention Subcommittee (2008-2017) 	
Member, Academic Program Review Team for Earth, Environmental & Atmospheric Sciences, WKU	February 2025

Presenter, College of Education & Behavioral Studies (CEBS), WKU	March 2024
<ul style="list-style-type: none"> Presented "Metacognition in the Classroom: Strategies to Help Students Study" With Dr. Natalie Mountjoy	
Speaker, Center for Innovative Teaching & Learning (CITL) Workshop, WKU	July 2022
<ul style="list-style-type: none"> From the Gateway Initiative spoke on "Our Experiences with Implementing Metacognition in Gateway Courses" 	
Presenter, Center for Innovative Teaching & Learning (CITL) Workshop, WKU	January 2022
<ul style="list-style-type: none"> "Metacognition: Our Journey through getting our students to think more deeply About their own thinking" with Dr. Natalie Mountjoy 	
Presenter, Center for Innovative Teaching & Learning (CITL) Workshop, WKU	August, 2021
<ul style="list-style-type: none"> "Auspicious Beginnings: Things to do the First Day of Class" 	
Panelist, Center for Innovative Teaching & Learning (CITL) Workshop, WKU	February 2020
"How to Survive the Semester without a Spring Break"	
Presenter, Center for Innovative Teaching & Learning (CITL) Workshop, WKU	February 2020
"Effective Lecture" with Alicia Pennington	
Member, Advisory Board, Center for Innovative Teaching & Learning (CITL), WKU	2019- 2020
Member, Strategic Enrollment Plan (SEP) Colonnade Subcommittee, WKU	2019
Panelist, Girls in Science Outreach Days, WKU	September 2018
Organizer, Dancing in Science (Last Chance to Dance), Gatton Academy of Math & Science Collaborating with Department of Dance	2016-2017
Consultant, Department of Nutrition & Dietetics	October 2015
<ul style="list-style-type: none"> Accreditation Review 	
Member, Outreach Advisory Committee, Ogden College, WKU	2014
Organizer, Noyce Seminar Series, WKU	2012-2015
Advisor, National Science Teacher Association (NSTA) Student Chapter	2005- 2014
Member, Women in Science & Engineering (WISE)	2013-2104
Leader, Girls in Science Outreach Days, WKU	October 2012
Leader, Project A.I.M.S. (Activating Interest in Minority Students), WKU	February 2011
Report Author, Department of Biology Folio for Teacher Education, WKU	2008-2009
Member, Teacher Leader Master's Planned Fifth Year Committee, College of Education, WKU	2007-2008
Member, Strike Force for Writing Critical Performances, SKyTEACH Program, WKU	2007-2008
Event Leader, Science Olympiad, WKU	April 2008
Member, Teacher Education Model Program (TEMP) Task Force, WKU	2004-2008
Representative of WKU, Teacher Quality Summit: Teaching Above the Gathering Storm: Preparing STEM and World Language Teachers for a Global Economy, Louisville, KY	October 2006
Presenter, National Boards Workshop for Elementary Teachers, National Boards for Professional Teaching Standards	2005
Presenter, Faculty Educational Training Center (FACET-now CITL) Workshop, WKU	August 2006
Assessor, Kentucky Internship Program (KTIP), Professional Standards Board	2002-2008
Member, Science Alliance Task Force, Ogden College of Science & Engineering, WKU	2002-2012

Presenter, Faculty Educational Training Center (FACET-now CITL), WKU	2005, 2006
DEPARTMENTAL SERVICE	
Chair, Microbiology Search Committee, Department of Biology, WKU	2024
Member, Department Chair Search Committee, Department of Biology, WKU	2024
Chair, Program Review & Assessment Committee, Department of Biological Sciences, WKU	2024-2025
Co-Chair, Program Review & Assessment Committee, Department of Biology, WKU (Co-Chair-Doug McElroy)	2020-2024
<ul style="list-style-type: none"> • Revised Department Assessment Plan-Developed SLOs, New Modular Assessment Exam, Method to measure Process Artifacts • Collect data and author program and Colonnade reports 	
Member, Recruitment Committee, Department of Biology, WKU	2023- 2025
<ul style="list-style-type: none"> • Booth for Kentucky Science Teacher Association meeting (KSTA) (2024) • Held workshop for KSTA meeting teachers (2024) • Helped develop display case for recruiting (2024-2025) • Hosted Clinton County H/S event (2024) • Participated in dinner with local high school science teachers (2023) • Use data to strategize on how to increase recruitment • Participate in Choose WKU and Recruitment Events 	
Advisor, Pre-Physical Therapy Club, Department of Biology, WKU	2013-present
<ul style="list-style-type: none"> • Help officers plan meetings and events and find speakers for monthly meetings • Keep checking account, complete IRS forms, complete RSO forms 	
Coordinator & Advisor, Medical Laboratory Science Program (MLS), Department of Biology, WKU	2002-present
<ul style="list-style-type: none"> • Advise students interested in MLS and respond to inquiries about the program • Work with preceptors (Owensboro, Vanderbilt, St. Elizabeth) to maintain Affiliation agreements and transfers credits back to WKU 	
Reviewer, Human Anatomy & Physiology Society Educator Journal	2025
Presenter, First Year Seminar Pilot, Department of Biology, WKU	February 2024
<ul style="list-style-type: none"> • Presented “Metacognition-How to Study” with Dr. Natalie Mountjoy to Students enrolled in introductory biology courses 	
Presenter, Biology Seminar Series, Department of Biology, WKU	February 2024
<ul style="list-style-type: none"> • Presented “The National STEM Scholar Program-Propelling the STEM Pipeline With Powerful Partnerships, Projects & Pedagogies” 	
Member, Promotion & Tenure Revision Committee, Department of Biology, WKU	2023
<ul style="list-style-type: none"> • Revised the Tenure & Promotion Guidelines for all Ranks 	
Coordinator, New Faculty Committee-Dr. Hiliary Katz, Department of Biology, WKU	2022-2027
Mentor, New Faculty Committee-Dr. Natalie Mountjoy, Department of Biology,	2022-2027
Chair, Instructor Search Committee, Anatomy, Department of Biology, WKU	2019-2023

Presenter, Herstory Outreach Event, Department of Biology, WKU	February 2020
Member, Curriculum Committee, Department of Biology, WKU	2013-2020
<ul style="list-style-type: none"> • Implemented Science Process Course & minimum Laboratory requirements • Modified and approved curriculum for department 	
Presenter, Department of Biology Faculty Workshop, WKU	March 2019
<ul style="list-style-type: none"> • Presented "Developing Goals" with Dr. Natalie Mountjoy 	
Adviser, MAE-Teacher Leader, Department of Biology & CEBS, WKU	2016- 2018
Co-Author, Strategic Plan, Department of Biology, WKU	2016- 2018
<ul style="list-style-type: none"> • Co-authored and helped develop department's Strategic Plan 	
Member, Two Temporary Instructor Search Committees, Department of Biology, WKU	2017
Member, Search Committee, Pedagogical Assistant Professor Committee, Department of Biology, WKU	2016
Member, Search Committee, Assistant Professor of Microbiology, Department of Biology, WKU	2015
Member, Instructor Search Committees, Department of Biology, WKU	2014
Member, Assistant Professor of Food Microbiology Search Committees, Department of Biology, WKU	2012
Member, Science Education Specialists, SKyTEACH, WKU	2012
Member, Search Committee for Five Master Teachers, SKyTEACH, WKU	2012
Advisor, Medical Technology Club, Department of Biology, WKU	2002-2012

COMMUNITY SERVICE

Leader, Organizer, Presenter, National STEM Scholar Program (NSSP), WKU, Gatton Academy of Math & Science, National Stem Cell Foundation	2016-2025
<ul style="list-style-type: none"> • Wrote curriculum for and presented middle school life science for workshop held yearly on campus for 10 middle school teachers from across the US • Mentored over 80 teachers as they developed, implemented, and presented Their Challenge Project • Authored and submitted proposals to present at the National Science Teacher Association (NSTA) meeting yearly(peer-reviewed) • Developed project for ISS National Laboratory Experience Grant- Paper chromatography • Helped with Download Event with the International Space Station (ISS). Over 200 middle school students were transported to the Kentucky Science Center To engage in science activities and ask questions of the astronauts aboard the ISS. (September 2019) • Designed two payloads for suborbital flights aboard Blue Origin's New Shepard rocket to inspire middle school students. (Launches May 2019, September 2022, December 2023, Summer 2025). • Wrote "on earth" curriculum and activities for middle school students to Participate in Blue Origin payload launches (2019, 2022, 2023) • Represented the National Stem Cell Foundation at the Space X-CRS-18 Launch of Falcon 9 and Dragon Capsule from Cape Canaveral, FL (July 25, 2019) 	

Member, Owensboro Medical Health System Advisory Board for School of Medical Laboratory Science	2007-present
<ul style="list-style-type: none"> • Make recommendations and approvals for the MLS program in Owensboro to maintain National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) • Advisory Board Meeting, Owensboro, KY (March 2023) • Advisory Board Meeting, Owensboro, KY (July 2022) • Met with NAACLS Accreditation Committee, Owensboro, KY (September 2022) • Accompanied Dr. Caboni to Owensboro MLS Program, Owensboro, KY (September 2021) • Met with NAACLS Accreditation Committee, Owensboro, KY (October 2014) 	
Visiting Fellow in Assessment, Advanced Placement (Higher Education Outreach Program), College Board	2023
Reviewed newest Advanced Placement Exam in Biology and offered feedback	
Reviewer, HAPS Educator Journal of the Human Anatomy & Physiology Society	2023
Presenter, Green River Regional Education Cooperative (GRREC) Workshop	June 2022
<ul style="list-style-type: none"> • Developed curriculum for and led two workshops: one for middle school science Teachers and one for high school science teachers Presented hands-on workshop “Engaging the Brain in Hands-on Science”	
Mentor/Advisor, Green River Regional Education Cooperative (GRREC)	2021-2022
<ul style="list-style-type: none"> • Worked with middle school teachers from schools/counties in Kentucky on Life Science lessons. Traveled to schools of the following counties: Breckinridge, Butler, Caverna, Edmonson, Hancock, Hart, Monroe, & Todd 	
Presenter, Mennonite Health Outreach, Department of Nursing, WKU, AHEC & Scottsville Health Department	May 2019
<ul style="list-style-type: none"> • Presented information on the Lymph system to a group of Mennonites wanting To better understand the human body. 	
Keynote Speaker, Tennessee Board of Regents Digital Engagement Initiative Faculty Workshop, Smyrna, TN	October 2018
<ul style="list-style-type: none"> • Presented Keynote address about effectiveness of digital learning tools 	
Member, Executive Committee, Kentucky Academy of Science (KAS)	2014-2018
Chair, Committee on Science Education & Advocacy, Kentucky Academy of Science	2016-2018
Presenter, Green River Educational Cooperative (GRREC) Workshop	January 2016
<ul style="list-style-type: none"> • Presented “Fishing with the NGSS” to Elementary Teachers in GRECC region 	
Presenter, Green River Educational Cooperative (GRREC) Workshop	June 2015
Presenter, Potter Gray Science Days, Potter Gray Elementary School	September 2014
Guest Speaker, Program for Verbally & Mathematically Precocious Youths (VAMPY), Center for Gifted Studies, WKU	July 2014
<ul style="list-style-type: none"> • Guest speaker for Biology session 	
Presenter, Green River Educational Cooperative (GRREC) Workshop	June 2014
Coordinator, Anatomy & Physiology Session, Science Olympiad, WKU	April 2014
Presenter, Green River Educational Cooperative (GRREC) Workshop	November 2013

Presenter, Green River Educational Cooperative (GRREC) Workshop	June, July 2013
Presenter, Green River Educational Cooperative (GRREC) Workshop	February 2013
Presenter, Green River Educational Cooperative (GRREC) Workshop	2009-2012
<ul style="list-style-type: none"> • November 2012 • June 2012 • January 2012 • May, July, October 2011 • June, July 2010- Leader for ASKI-IT 1, ASKIT II, and ASKIT III Grants • October, November 2009 	
Program Reviewer, Educational Standards Board (EPSB)	2012-2013
Member, Test Group, McGraw-Hill Publishing Company LabSmart Symposium	November 2012
Presenter, Writing Under the Microscope Workshop for High School Teachers	June 2012
Reviewer, Kentucky Department of Education Professional Standards Board	June 2005
Developer, W.R. McNeill Science Lab, W.R. McNeill Elementary School	2001-2009
<ul style="list-style-type: none"> • Developed curriculum for NGSS for elementary science lab • Set-up lab and instructed elementary teachers on its use • Raised money from the PTA to purchase lab material 	
Educator, Kentucky Internship Program (KTIP), Kentucky Department of Education	2008- 2009

RESEARCH PROJECTS

Research Projects:

- **Impacts on the STEM Pipeline: Middle School Science Teachers (2016-present)**
 - Does Project-based Professional Development and Creation and Implementation of a Challenge Project affect creativity, collaboration, and pedagogy in the middle school science classroom? (2017-present) (IRB-1077941-7)
 - Projects Storyline and Collaboration- Effects of STEM Scholar Program on Differentiated Learning (IRB-2109053-1)
- **E-Texts/Digital Learning Materials-(2016-present) (IRB 537630-6)**
 - Do Digital Materials Use Increase Student Interest in Anatomy (IRB 1863314-1)
 - Understanding factors influencing student learning using E-texts
 - Student perceptions of E-texts
 - Student Frustration with E-texts
- **Student Perceptions of Using a Storyline in Advanced Anatomy Lab (2022-2023) (IRB 1951249-1)**
- **Study of Metacognition on Student Grades in Biology Courses (2020-present) (IRB 1549774-4)**
- **Evaluation of Student Outcomes in Biology 131 and 231 (2015-2019) (IRB 537630-6)**

EXTERNAL GRANT PROPOSALS

- **Exploring Chromatography in Space: A STEM Learning Experience for Middle School Students**, National Lab Research Announcement 2025-6 Leveraging the ISS National Lab for STEM Education and Workforce Development Grant, National Stem Cell Foundations (2025-2026). Collaborators: Paula Grisante, Kerrie McDaniel, & Rico Tyler, \$155,954.43 (Submitted).
- **National STEM Scholar Program for Middle School Science Teachers**, National Stem Cell Foundation. (2016-2022). Partners: Julia Roberts, Tyler Clark, Rico Tyler, Kerrie McDaniel. \$500,000 (Funded).
 - Extended for four more years (2022-2026)-\$400,00 (Funded)
 - Total Funding (2022-2026)- \$900,000 (Funded)
- **National Science Foundation (NSF) Robert Noyce Teacher Scholarship Program-09-532:** WKU Science and Mathematics Alliance for Recruitment and Retention of Teachers (2009-2015). PIs: Hope Marchionda, Kerrie McDaniel, Janet Tassell, Vicky Metzger. \$898,791 Funded.

------(Pre-Pedagogical Faculty Position)-----

- **CPE (Council for Post-Secondary Education): Writing Under the Microscope: Content Area Writing for the Sciences 293776-2 (2011-2012).** PIs: David Lee, Dean Potter College of Arts and Letters, Chris Ervin, and Kerrie McDaniel. \$25,000 Funded.
 - **National Science Foundation (NSF) Math Science Partnership (MSP) Start Grant**, Kentucky Department of Education, Western Kentucky Math/Science Partnership (2008-2010). PIs Heather Johnson and Rico Tyler. Key Personnel: Kerrie McDaniel and Roger Pankratz \$257,000 Funded.
 - **Kentucky Department of Education (KDE) Grant, Learning Capacity Advancement of Middle School Science and Mathematics (EXPLORE grant).** PI: Roger Pankratz. Supporting Personnel: Janet Tassell, Rico Tyler, Hope Marchionda, and Kerrie McDaniel. This grant
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provided training and mentoring for middle school science teachers to improve Explore scores. \$140,000 Funded.

- **STEP Grant, TNE Learning Network, Academy for Educational Development): Engaging Arts and Science Faculty in the Redesign of Key Academic Courses Required for Elementary Education Teacher Candidates.**(2007-2008). PIs: Roger Pankratz and Kerrie McDaniel. \$10,000 Funded.
- **Carnegie New Teacher Center Learning Network Grant: Train Teacher Educators, Arts and Science Faculty, and School Practitioners in Processes and Skills of Mentoring New Teachers.** (2007-2008). PIs: Roger Pankratz, Kerrie McDaniel, Rico Tyler. \$10,000 Funded.
- **STEP Grant (TNE Learning Network, Academy for Educational Development): A Standards-based Assessment Program to Further Develop Western Kentucky University's Performance Accountability System with the Purpose of Linking Teacher Preparation Processes, Teacher Content Knowledge and Instructional Performance to P-12 Student Learning of State/National Content**_(2005-2008). PIs: Roger Pankratz, Wanda Weidemann, Sam Evans and Toby Daniel Funded
- **Improving Educator Quality State Grant Program: Kentucky Council of Postsecondary Education: East-West Collaborative to Increase the quality of Physical Science Teachers in High-need Middle Schools (SEXTANT).** (2006-2008). PIs:Rico Tyler, Kerrie McDaniel, Roger Pankratz and Middle School Teachers. Funded
- **Carnegie Grant: Mentoring Program for Second Year Elementary-school Teachers.** (2006-2007). PIs: Roger Pankratz, Kerrie McDaniel, and Wanda Weidemann. Funded

INTERNAL GRANT PROPOSALS

- **WKU Office of Research and Creativity Student Grant** (2019), Optimization of latent print development on adhesive surfaces using Wet Powder Suspension methods, Student: Anne Carlisle, Supervisor: Dr. Kerrie McDaniel \$500 (Funded)
- **Honor's Development Grant** (2015). This was a travel award to present at National Biology Teacher Association (NABT) in Providence, RI, Honor's College, WKU. PI: Rebecca Garrison* Supervisor: Dr. Kerrie McDaniel \$400 (Funded)
- **Online Learning Research Grant, Division of Extended Learning & Outreach (DELO)Evaluation of E-Learning Resources and Flipped Classrooms on Student Learning Outcomes and Faculty Pedagogy in 100 and 200 Level Biology Courses** (Fall 2013-2015). PIs: Kerrie McDaniel and Jerry Daday. \$41,740 Funded.

------(Pre-Pedagogical Faculty Position)-----

- **Ogden College of Science and Engineering Action Agenda Grant** (2005, 2006, 2007). *Workshop Support for High School Biology Teachers Teaching Physical Science.* PIs: Kerrie McDaniel and Heather Johnson. \$4724 Funded.
 - **Ogden College of Science and Engineering Action Agenda Grant** (2005). *Support for the Western Chapter of the National Science Teacher Association.* Kerrie McDaniel and Heather Johnson. \$3000 Funded.
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PEER-REVIEWED PUBLICATIONS

McDaniel, K., & Clark, T. (2023). Partnerships and Projects: An Effector of Change in the Middle School Science Classroom, ICERI2023 Proceedings, pp. 1307-1311. doi: 10.21125/ceri/2023.0432.

Novak, E., **McDaniel K.,** & Li, J. (2023). Factors that Impact Student Frustration in a Digital Learning Environment, Computers & Education, Open 100153.

McDaniel, K. (2023). "Worst Thief Ever"-The Use of a Storyline to Engage Students in a Traditional Hands-on Lab Experience. Human Anatomy and Physiology Educator. 27(1), pp. 53-68.

Novak E., **McDaniel, K.,** & Daday, J., Souturk, I. (2021). Frustration in Technology-rich Learning: A scale for Assessing Student Frustration with E-Textbooks. British Journal of Educational Technology. 43(2), pp. 408-431.

McDaniel, K., & Daday, J. (2018). Varied Student Perception of E-text Use Among Student Populations in Biology Courses. European Journal of Science and Mathematics Education, 6(1), 24-36.

Novak, E., Daday, J., & **McDaniel, K.** (2018). Using a Mathematical Model of Motivation, Volition and Performance to Examine Students' E-Text Learning. Educational Technology Research and Development <https://doi.org/10.1007/s11423-018-9599-5>

Novak, E., Daday, J., & **McDaniel, K.** (2018). Assessing the Intrinsic and Extraneous Cognitive Complexity of E-textbook Learning. Interacting with Computers, <https://doi.org/10.1093/iwc/iwy001>.

McDaniel, K., & Daday, J. (2017). An Undergraduate Anatomy Lab Revision Success Story. Human Anatomy and Physiology Society Educator 21 (2): 8-18.

Garrison, Rebecca*, **McDaniel, Kerrie** & Jerry Daday (November 2015). The Effects of Introducing E-texts and E-materials in 100 and 200-level Biology Courses on Teaching Pedagogy. Proceedings of National Association of Biology Teachers. <https://nabt.org/2015-Research-Symposium>

-----**(Pre-Pedagogical Faculty Position)**-----

Tassell, Janet, **McDaniel, Kerrie**, Johnson, Heather, Pankratz, Roger, Norman, Tony, Tyler, Rico (2012). EXPLORE Performance in Mathematics and Science: Why are Middle School Students Unprepared for Success in Mathematics and Science? International Journal of Innovations in Science and Math Education (20)-1, p. 1-23.

Van Der Meer, B.W., Alletto, J.J., Bryant, D., Carini, M., Elliott, L., Gelderman, R., Mason, W., **McDaniel, K.,** McGruder, C.H., Rinehart, C., Tyler, R., Walker, L., (2000). Astrobiology as a tool for getting high school students interested in science. In R.B. Hoover Editor. *Instruments, Methods, and Missions for Astrobiology III* (pp. 106-112). Bellingham, Washington, The International Society for Optical Engineering.

McDaniel, Kerrie, Lightfoot, David. (1997). Accumulation of a gene specific mRNA in response to Cytokinin treatment of leaves in *Phaseolus vulgaris*. Plant Physiology and Biochemistry, 35, (5).

Lightfoot, David, **McDaniel, Kerrie**, Ellis, J., Hammerton, R.,; Nicander N. (1997). Methods for the analysis of cytokinin content, metabolism, and response. In W. V. Dashek Editor. *Methods in Plant Biochemistry and Molecular Biology* (pp.133-152). Boca Raton: CRC Press.

McDaniel, Kerrie, Toman, Frank (1994). The Short-term effects of manganese toxicity on ribulose 1,5 biphosphate carboxylase in tobacco chloroplasts. *Journal of Plant Nutrition*, 17, 523-536.

McDaniel, Kerrie, Lightfoot, David (1994). Cytokinin responsive genes in *Phaseolus vulgaris* L. and *Glycine max* (L.) Merr. *Plant Physiology*, 105, 68.

ARTICALS & INVITED PUBLICATIONS

McDaniel, K. (2023). Invited Contributor, Middle School Magic: STEM Scholars Create Captivating Science Lessons. *The Challenge Magazine for Gifted Studies*, No 55, p. 20.

McDaniel, K. (2019)-Invited Contributor, Opportunities with the National STEM Scholar Program, *The Challenge Magazine for The Center for Gifted Studies*, No. 47, pp.20-21.

McDaniel, K. (2018). Do Your Ears Hang Low? In: Antonetti, J. & Stice, T. *Powerful Task Design 1st Ed.*, Corwin Press Inc., Thousand Oaks, CA. ISBN-13: 978-1506399140 ISBN-10: 1506399142

Tyler, R., **McDaniel, K.** Evans, S., and Day, M. (2015). Next Generation Science Standards (NGGSC), General Education and Teacher Preparation. in *Meet Me in the Commons: A Field Guide to Common Core Standards in Higher Education* edited by Dorie Combs, New Forum Press. ISBN 9781581072785

PEER-REVIEWED PRESENTATIONS (OTHERS LISTED WITH SERVICE)

***Denotes Student Presenter**

McDaniel, K. (with STEM Scholars) (March 19-22, 2025), Projects in the Classroom, National Science Teacher Association (NSTA) meeting, Philadelphia, PA.

McDaniel, K., Clark, T., Roberts, J. (August 16-20, 2024). Transforming Science Learning Environments for Gifted Students Through Implementation of Community-based Projects. The 18th Asian Pacific Conference on Giftedness (APCG), Takamatsu, Japan.

McDaniel, K. (March 2024). New Ways to Teach Information Processing (Via Vision Receptors) in the Middle School Classroom. In conjunction with the National STEM Scholars Share-a-thon at the National Science Teachers Association Meeting (NSTA), Denver, CO.

McDaniel, K., Clark, T. (November 2023). Partnerships and Projects: An Effector of Change in the Middle School Science Classroom. 16th International Conference of Education, Research and Innovation, Seville, Spain.

McDaniel, K. , Novak, E. (April 16, 2023). A Model of Frustration in Technology. American Educational Research Association (AERA) national meeting, Chicago, IL.

McDaniel, K. (March 22-26, 2023). Storyline and NGSS. In conjunction with the National STEM Scholars Share-a-thon at the National Science Teachers Association Meeting (NSTA), Atlanta, GA.

McDaniel, K. (March 30-April 1, 2022). Information Processing through Hearing. In conjunction with the National STEM Scholars Share-a-thon at the National Science Teachers Association Meeting (NSTA), Houston, TX.

Novak, E., McDaniel, K & Daday, J. (Nov.2-6, 2021). Featured Research Presentation: Understanding Student Frustration with E-Learning Materials: Development and Validation of an E-Text Frustration Scale. Association for Educational Communications & Technology (AECT) International Convention. Chicago, IL.

Mountjoy, N. & McDaniel, K. (Nov.8, 2019). It Takes a department to Shift a Paradigm: Starting in the Lab! AAC&U's *Transforming STEM Higher Education* conference, Chicago, IL.

McDaniel, K. (April 13, 2019). I-Pad Microscope Escape Room: Creating Escape Room Experiences for Hands-on Science. In conjunction with the National STEM Scholar Sharathon. National Science Teacher Association (NSTA), St. Louis, MO.

McDaniel, K. (April 12, 2019). Information Processing: Simplifying Everyone's Least Favorite Standard. National Middle Level Science Teacher Association (NMLSTA) in conjunction with National Science Teacher Association (NSTA), St. Louis, MO.

Daday, J., Novak, E., & McDaniel, K. (April 5, 2019). An Empirical Investigation of Student Frustration with E-Textbooks in Undergraduate General Biology Classes. American Educational Research Association (AERA, Peer-reviewed, Toronto, CAN.

Novak, E., Daday, J. & McDaniel, K. (April 13-April 17 2018). Examining Factors Influencing E-text Learning Using a Mathematical Model of Motivation, Volition, and Performance. American Educational Research Association (AERA), Peer-review selection out of 13,000 submissions, New York, NY.

McDaniel, K., Tyler, R., Clark, T., & Stem Scholars. (March 14-17, 2018). National Stem Scholar Sharathon for Middle School Teachers. National Science Teacher Association (NSTA), Atlanta, GA.

Novak, E., Daday, J. & McDaniel, K. (April 27-May 1, 2017). Assessing Intrinsic and Extraneous Cognitive Complexity of E-textbook Learning, American Educational Research Association (AERA), Peer-review selection out of 13,000 submissions, San Antonio, TX.

Novak, E., Daday, J. & McDaniel, K. (Oct. 19-22, 2016). Using Mathematical Model of Motivation, Volition, and Performance to Examine Students' E-text Learning, Featured Research, Featured Presentation, Association for Educational Communications Technology, Los Vegas, NV.

Novak, Elena, McDaniel, Kerrie & Daday, Jerry (Nov. 3-7, 2015). Undergraduate Biology Students' Use and Attitude Towards Digital Textbooks. Association for Educational Communications and Technology (AECT), Indianapolis, IN.

McDaniel, Kerrie, Fuller, Amanda & Gabe Draper (November 7, 2015). What Floats Your Boat? A NGSS Lesson Presented by the Kentucky Academy of Science. Kentucky Science Teacher Association, Lexington, KY.

Garrison, Rebecca* (Kerrie McDaniel, mentor), (March 28, 2015). The Effects of New Material on Teaching Methodology in General Biology Courses. Student Research Conference, Western Kentucky University, Bowling Green, KY.

Garrison, Rebecca*, McDaniel, Kerrie & Jerry Daday (November 2015). The Effects of Introducing E-texts and E-materials in 100 and 200-level Biology Courses on Teaching Pedagogy. National Association of Biology Teachers (NABT), Providence, RI.

McDaniel, Kerrie, Johnson, Heather & Crystal Ingle (Dec. 6-9 2014). Reduce DWFIs in Your High DWFI Courses Now Without Lowering Standards: Approaches From Two Institutions in STEM Disciplines. Southern Association of Colleges and Schools Commission on Colleges Annual Meeting. Nashville, TN.

McDaniel, Kerrie, DaDay, Jerry & Thomas Patterson* (Oct. 29-31 2014). Assessing the Impact E-text, Flipped Classroom and ipad Usage in an Anatomy and Physiology Course. Twentieth Annual Online Learning Consortium International Conference on Online Learning (formally Sloan-C). Lake Buena Vista, FL.

------(Pre-Pedagogical Position)-----

McDaniel, Kerrie and Noyce Scholars* (April 12, 2013). The Foundations of Living Things: Cells for Elementary Students. National Science Teacher Association National Conference, San Antonio, TX.

McDaniel, Kerrie and Noyce Scholars* (October 20, 2012). Standards and Content and Inquiry, Oh my! Louisville, KY.

McDaniel, Kerrie and Noyce Scholars* (March 31, 2012). Breaking It Down! Making Energy Transformations in Life Science Easy and Fun!. National Science Teacher Association (NSTA) National Conference, Indianapolis, IN.

McDaniel, Kerrie, Crawford, Kathryn*, Spinks, & Joye Beth*, (March 12, 2011). Photosynthesis Strategies: Foundations of Ecological Food Webs. National Science Teacher Association (NSTA) National Conference, San Francisco, CA.

McDaniel, Kerrie, Marchionda, Hope, & Tassell, Janet. (March 11, 2011). Western Kentucky University Science and Mathematics Alliance for Recruitment and Retention of Teachers (WKU SMARRT): Recruiting, Preparing and Retaining Math and Science Teachers for High Needs Areas, The Society for College Science Teaching, San Francisco, CA.

McDaniel, Kerrie, Crawford, Kathryn* & Spinks, Joye Beth*, (Dec. 3, 2010). It's Alive! Promoting Critical Thinking on the First Day of Biology Class. National Science Teacher Association (NSTA) Area Conference on Science Education, Nashville, TN.

McDaniel, Kerrie, Marchionda, Hope, Tassell, Janet, & Metzgar, Vicky. (Nov. 13, 2010), Year One Success and Frustrations: Robert Noyce Scholarship Program to Recruit, Prepare and Retain STEM Teachers for High Needs Areas. Kentucky Academy of Science, Western Kentucky University, Bowling Green, KY.

Marchionda, Hope, McDaniel, Kerrie, Tassell, Janet, Metzgar, Vicky. (July 8, 2010), invited presentation. Western Kentucky University Science and Mathematics Alliance for the Recruiting and Retention of Teachers. NSF (National Science Foundation) Robert Noyce Scholarship Program Conference: Building Excellence in STEM Teaching, Washington, D.C.

Johnson, Heather, McDaniel, Kerrie. (Jan. 25, 2010). Western Kentucky Math Science Partnership. Math/Science Partnership Learning Network Conference, National Science Foundation, Washington, D.C.

McDaniel, Kerrie (presenter), Weidemann, Wanda, Pankratz, Roger, Johnson, Heather. (March 2008). Using Content Area Assessment Data in Math and Science to Impact Course Development and Program Changes for the Preparation of Elementary Teachers. NSTA Conference, Boston, MA (Seaport Hotel).

Johnson, Heather, McDaniel, Kerrie (March 2008). Bringing STEM (Science, Technology, Engineering and Mathematics) Role Models to Every Classroom in Kentucky. NSTA Conference, Boston, MA (Convention Center).

Pankratz, Roger, McDaniel, Kerrie (presenters), Evans, Sam, Kessler, Bruce, Lee, David, Murley, Tim (Discussants) (February 2008). An Education Partnership with Science and Engineering, Arts and Humanities, and Two School Districts That Prepare Teachers to Impact P-12 Learning. Symposia at AACTE (American Association of Colleges for Teacher Education), New Orleans, LA.

Kessler, Bruce, Weidemann, Wanda, McDaniel, Kerrie, Pankratz, Roger, Evans, Sam. (2007) A (Successful) Example of How Data on Student Learning Can Impact Program Change in Context Areas Unit: AACTE (American Association of Colleges for Teacher Education) session, New York Hilton (Sutton Complex) Feb. 25 3:15-4:30

McDaniel, Kerrie, Weidemann, Wanda; Pankratz, Roger, Evans, Sam, Kessler, Bruce. (2007). Connecting Candidate Assessment to Measure of Student Learning (Preconference-session: Participants are charged a fee to attend), AACTE (American Association of Colleges for Teacher Education), Sat., Feb. 24 9:00-12:00. Hilton, New York (Sutton Complex), New York. (I was the main speaker representing WKU on this project).

Johnson, Heather & McDaniel, Kerrie. (2007). Standards-based Assessment-aligned Microtube Experiments. National NSTA (National Science Teacher Association) meeting, St. Louis, MO. (March 29-Apr. 1, 2007).

McDaniel, Kerrie & Johnson, Heather (2007). Content Standards and Inquiry: A Formula for Incorporating Inquiry into any Standards-based lesson. National NSTA (National Science Teacher Association) meeting, St. Louis, MO. (Mar. 29- Apr. 1).

McDaniel, Kerrie (Sept. 2006). Presented data to the AACTE STEP-committee on our data from our STEP grant. AACTE meeting, Chicago, IL.

McDaniel, Kerrie, Johnson, Heather, Ayers, Robin, Weidemann, Wanda. (2005). Teacher Education Model Program (TEMP): A Standards-based Master's Degree Program in Elementary Education. Kentucky Academy of Science, November 2005, Richmond, KY.

Johnson, Heather & McDaniel, Kerrie (2005). Partnering Home School Science Students with University Resources. Kentucky Academy of Science, November 2005, Richmond, KY.

McDaniel, Kerrie, Elliott, Larry, Clauson, John Mark (2004). Use of Standard Surface Motility Plates for Demonstration of Motility in Introductory Micro Teaching Laboratories. American Society for Microbiology Branch Meeting, October 2005, Bowling Green, KY.

McDaniel, Kerrie, Meier, Ouida. (2003). Impacting Elementary Science Education through Hands-on Science Labs. Kentucky Academy of Science, November 2003, Bowling Green, KY.

PROFESSIONAL AFFILIATIONS

- Human Anatomy & Physiology Society (HAPS)
- National Science Teacher Association (NSTA)
- Online Learning Consortium (OLC)
- Kentucky Academy of Science (KAS)
- American Educational Research Association (AERA)
- Association for Educational & Communication Technology (AECT)

PROFESSIONAL LEARNING & DEVELOPMENT ATTENDED

- National Science Teacher Association Meeting (NSTA), Philadelphia, PA (March 19-22, 2025).
- Online Learning Consortium Conference, Orlando, FL (November 20-24, 2024).
- The 18th Asia-Pacific Conference on Giftedness, Takamatsu, Japan (August 17-20, 2024).
- Green River Educational Cooperative & National STEM Scholars Workshop, "Learning & the Brain-Inspiration, Innovation and Ingenuity: The Mind Behind Curiosity", Dr. John Medina, Bowling Green, KY June 5-6, 2024.
- National Science Teacher Association Meeting (NSTA), Denver, CO (March 20-23, 2024).
- International Conference of Education, Research & Innovation (ICERI), Seville, Spain (November 13-15, 2023).
- American Education Research Association (AERA), Chicago, IL (April 12-16, 2023).
- National Science Teacher Association Meeting, Atlanta, GA (March 22-26, 2023).
- CITL Professional Development- Blackboard Ultra Training, April 2023, June 2023.
- WKU Professional Development Day, Bowling Green, KY (January 12, 2023)
- National Science Teacher Association Meeting. Houston, TX (March 30-April 3, 2022).
- Gateway Course Initiative Project- Center for Innovative Teaching and Learning-Initiative to Implement Intervention to Reduce DWFs in Anatomy (2021-2023).
- International Technology and Engineering Educators Association (ITEEA) Meeting. Orlando, FL (March 7-13, 2022).
- Association for Educational Communications & Technology (AECT) International Convention. Chicago, IL, (November 2-6, 2021).
- iClicker Training- Trained on use and implementation of iclickers in large lecture courses. Bowling Green, KY 2021.
- Higher Education Hiring Consortium, "Hiring Diverse Faculty", webinar, August 2020.
- Using Math in Everyday Science, Dr. Tabithia Williams, National STEM Scholar Program, Mary Nixon Speaker/Workshop Program (August 2020).
- CITI Program Course (Basic Refresher Course)- Human Subjects Research/Social Behavioral Research Course-February 21, 2020- Collaborative Institutional Training Initiative
- Student Success Summit, Western Kentucky University, January 23, 2020.
- Association of American Colleges and Universities (AAC&U), Project Kaleidoscope- Transforming STEM Higher Education Conference, Chicago, IL, Nov. 7-9, 2019.
- Online Learning Consortium- Accelerate Conference, Orlando, FL, Nov. 19-22, 2019.
- ACUE- Association of College and University Educators, Effective College Teaching Certificate Course, Jan.-Nov. 2019).
- Brain-based Learning, Dr. John Medina, National STEM Scholar Program, Mary Nixon Speaker/Workshop Program, Bowling Green, KY (June 5, 2019).
- Title IX Training (Catharsis), Western Kentucky University Human Resources via IT, Fall 2019.
- National Science Teacher Association (NSTA) National Conference. Sponsored by NSTA, St. Louis, MO, (April 10-14, 2019).
- American Education Research Association (AERA), Toronto, Canada, April 5-9, 2019.

- McGraw-Hill Symposium, Nashville, TN (Jan. 31-Feb. 2, 2019)
- Online Learning Consortium-Accelerate (OLC), Orlando, FL, Nov. 14-16, 2018.
- Evidence-based, Interactive and Peer-Instruction Methods, Dr. Eric Mazur, National STEM Scholar Program, Mary Nixon Speaker/Workshop Program, Bowling Green, KY (June 6, 2018).
- Respondus Training, Information Technology, Western Kentucky University, (January 16-17, 2018).
- National Science Teacher Association (NSTA) National Conference. Sponsored by NSTA, Atlanta, GA, (March 14-17, 2018).
- Kentucky Academy of Science (KAS), Annual meeting, Murray, KY Nov. 3-4, 2017.
- National Science Teacher Association (NSTA), National Conference, Los Angeles, CA, (March 27-April 1, 2017).
- Small Teaching: From Minor Changes to Major Learning, Dr. James Long, Center for Innovative Teaching and Learning, (July 27, 2017).
- HIPS-High Impact Performance Strategies for the Classroom, Center for Faculty Development, Western Kentucky University, (October 30, 2016).
- Association for Educational Communications and Technology (AECT) Annual Conference. Sponsored by the AECT, Las Vegas, NV, (October 19-22, 2016).
- Kentucky Academy of Science (KAS) Annual meeting, Louisville, KY, (Nov. 4-5, 2016).
- National Science Teacher Association (NSTA) National Conference. Sponsored by NSTA, Nashville, TN, (March 31-April 3, 2016).
- NABT Professional Development Conference. Sponsored by the National Biology Teacher Association (NABT), Providence, RI, (November 11-14, 2015).
- Association for Educational Communications and Technology (AECT) Annual Conference. Sponsored by the AECT, Indianapolis, IN, (November 4-6, 2015).
- Kentucky Science Teacher Association Annual Meeting. Sponsored by the KSTA/NSTA, Lexington, KY, (November 6-8, 2015).
- The Impact of Senate Bill (2009) on Assessment and Accountability, tutorial, Feb. 19, 2015.
- The Next Generation Science Standards Crossing Divides and Cutting into the Future, webinar, (February 8, 2015).
- Title IX Training for Sexual Harassment, WKU online training, (Jan. 2015).
- Southern Association of Colleges and Schools (SACS), Nashville, TN, (December 6-9, 2014).
- Online Learning Consortium International Conference on Online Learning, Lake Buena Vista, FL, (Oct. 29-31, 2014).
- Human Anatomy and Physiology Annual Conference (HAPS), Jacksonville, FL (May 24-29, 2014).
- McGraw-Hill Symposium on Human Anatomy and Physiology, Laguna Beach, CA (March 6-9, 2014).
- McGraw-Hill Training, Bowling Green, KY (November 11, 2013).
- Institutional Technology Training (IT), WKU, Bowling Green, KY (July 1, 2013).
- McGraw-Hill Training (July 29, 2013: August 20 and 22).
- Anatomy in Clay Workshop, Denver, CO (June 19-23, 2013).
- McGraw-Hill Training, Bowling Green, KY (May 8, 2013).

------(Pre-Pedagogical Faculty Position)-----

- National Science Teacher Association Conference on Science Education, San Antonio, TX (April 10-13, 2013).
- National Science Teacher Association Conference on Science Education, Louisville, KY (Nov. 18-20, 2012).
- Collaborative Institutional Training Initiative (CITI) training: Social/Behavioral Research Refresher Course (August 21, 2012).
- National Science Teacher Association National Conference on Science Education, Indianapolis, IN (March 28-31, 2012).

- Architecture for Implementing the Core Standards: Strategies, Partnerships and Progress Council for Post-Secondary Education, Louisville, KY (Feb. 27-29, 2012).
- Literacy Design Collaborative Training for the Kentucky Department of Education Workshop, Lexington, KY (August 8-10, 2011).
- National Science Teacher Association National Conference on Science Education, San Francisco, C (March 10-13).
- The Society for College Science Teaching (SCST) annual meeting, San Francisco, CA (March 10-13, 2011).
- National Science Teacher Association Area Conference on Science Education, Nashville, TN (Dec. 2-4, 2010).
- Kentucky Academy of Science Annual meeting, Bowling Green, KY (Nov. 12-13, 2010).
- NSF Robert Noyce Teacher Scholarship Program Conference: Building Excellence in STEM teaching, Washington D.C. (July 7-9, 2010).
- MSP Learning Network conference, National Science Foundation, Washington D.C. (Jan. 23, 2010-Jan. 26, 2010).
- Tutorial "Online Research Ethics Course", Practical Ethics Center, University of Montana, Montana, USA, (Dec. 1, 2009-Dec. 2, 2009).
- Tutorial "Social/Behavioral Research Course, Basic Course", Collaborative Institutional Training Initiative, (Nov. 14, 2009-Nov. 15, 2009).
- Tutorial "Social and Behavioral Responsible Conduct of Research Basic Course 1", Collaborative Institutional Training Initiative Program, (Nov. 13, 2009-Nov. 14, 2009).
- Workshop "Identifying Students and Scholarships for Deserving Students", Office of Sponsored Programs/Ogden Dean Office, WKU (Aug. 26, 2009).
- Workshop "Nuts and Bolts of Advising", Academic Advising and Retention Center/Office of Dean, Ogden College, WKU (Aug. 26, 2009).
- Workshop "Curricular Implications of the President's Task Force Report on Access and Quality", Office of the Provost, WKU (Aug. 21, 2009).
- Workshop "Engaging Their Spirits and Helping Students Connect: What the Core and Liberal Education Curriculum Can and Must Do", Office of the Provost, WKU (Aug. 21, 2009).
- Tutorial "IT-Blackboard Grade Center Training (for new upgrade), Institutional Technology (IT), WKU, (Aug. 21, 2009).
- Seminar, "The Impact of Mathematics Teaching Environment Through Establishing Developing and Maintaining and Sustaining Professional Learning Communities", Teachers Assisting Students to Excel in Math-MSP, National Science Foundation, Washington D.C. (Jan. 27, 2009).
- MSP Learning Network conference, National Science Foundation, Washington D.C. (Jan. 24-27, 2009).
- Seminar "Five Realities of Math/Science Today" by Arthur Levine, National Science Foundation, Washington D.C. (Jan. 26, 2009).
- Seminar "Supporting and Evaluating Professional Collaboration Among Secondary Mathematics and Science Teachers", Project Pathways-MSP, National Science Foundation, Washington D.C. (Jan. 26, 2009)

OTHER LEARNING OPPORTUNITIES

- Advanced Floral Design HORT 309, Western Kentucky University, Spring 2024
- Introduction to Floral Design HORT 209, Western Kentucky University, Spring 2020

MENTORING, STUDENT COMMITTEES & SUPERVISION

UNDERGRADUATE MENTORING

Undergraduate Internships Supervised (BIOL 369 & BIOL 475)

- Katie May Williams, Biology 369, Internship at TJ Sampson Hospital, Glasgow, KY (Fall 2023).
- Jessica Sandfoss, Biology 475, Teaching as Learning (Fall 2022).
- AnnClaire McGee, Biology 369 Project, Teaching Literature Project (Spring 2022).
- Hemali Patel, Biology 369, Thoroughbred Diagnostics, Bowling Green, KY (Spring 2022).
- Patton Allen, Biology 369, Teaching Internship. Undergraduate Teaching Assistant in Anatomy and Physiology (Fall 2020).
- Matthew Crawford, Biology 369, Teaching Internship. Undergraduate Teaching Assistant in Anatomy and Physiology (Fall 2020).
- Delaney Puckett, Biology 369, Teaching Internship. Undergraduate Teaching Assistant in Anatomy and Physiology (Fall 2020).
- Hadley Shaver, Biology 369, Teaching Internship. Undergraduate Teaching Assistant in Advanced Anatomy and Physiology (Fall 2020).
- Maddie Sturdivant, Biology 369, Teaching Internship. Undergraduate Teaching Assistant in Anatomy and Physiology (Fall 2020).
- Madison Hansen, Biology 369, Teaching Internship. Undergraduate Teaching Assistant in Anatomy and Physiology (Fall 2020).
- Kylie Eilers, Biology 369, Teaching Internship. Undergraduate Teaching Assistant in Anatomy and Physiology (Fall 2020).
- Rachel Paugh, Biology 369, Teaching Internship. Undergraduate Teaching Assistant in Anatomy and Physiology (Fall 2020-Spring 2021).
- Brooke Walden, Internship Medical Laboratory Science, Owensboro Medical Health Park, Owensboro, KY (May 14- June 1, 2018).
- Pamela Tackett, Internship in Medical Laboratory Science, Owensboro Medical Health Health Park, Owensboro, KY (May 19-June 5, 2015).
- Tim Maniere, Biology 369 Teaching Project. Teaching Assistant in Human Anatomy and Physiology. (Spring 2015).

Service on Professional Committees

- Kylie Eilers, Pre-Medical Committee, Western Kentucky University, (2022)
- Delaney Puckett, Pre-Medical Committee, Western Kentucky University, (2021)
- Erin Lindhurst, Pre-Medical Committee, Western Kentucky University, (2021)
- Patton Allen, Pre-Medical Committee, Western Kentucky University, (2021)
- Ashley Johnson, Pre-Medical Committee, Western Kentucky University, (2018)
- Kathryn Thompson, Dental School Committee, Western Kentucky University, (2015)

Honor Thesis Students Supervised

- Anne Carlisle, Optimization of latent print development on adhesive surfaces using Wet Powder Suspension methods, 2019.
- Rebecca Garrison, Honor's Thesis Advisor. Title: The Effects of New Materials and Teaching Methodologies on Low-level Biology Courses". Defended May 1, 2015 (passed).
- Ka Wang Li, Second Reader Honor's Thesis. Title: Quality Change and Thermal Inactivation of *Escherichia coli* O157:H7 in Non-intact Beef and Veal Patties by Double Pan Broiling. Defense: Nov. 19, 2014 (passed).

Student Presentations

- Rebecca Garrison, Western Kentucky Student Research Conference, poster presentation. Title: The Effects of New Materials and Teaching Methodologies on Low-level Biology courses. (March 29, 2015).
- Garrison, Rebecca*, McDaniel, Kerrie & Jerry Daday (November 2015). The Effects of Introducing E-texts and E-materials in 100 and 200-level Biology Courses on Teaching Pedagogy. National Association of Biology Teachers (NABT), Providence, RI.
- McDaniel, Kerrie, DaDay, Jerry & Thomas Patterson* (Oct. 29-31, 2014). Assessing the Impact E-text, Flipped Classroom and iPad Usage in an Anatomy and Physiology Course. Twentieth Annual Online Learning Consortium International Conference on Online Learning (formally Sloan-C). Lake Buena Vista, FL.

------(Pre-Pedagogical Faculty Position)-----

- Stephanie Burba, Amanda Keith & Shelby Overstreet (March 31, 2012). Breaking It Down! Making Energy Transformations in Life Science Easy and Fun!. National Science Teacher Association (NSTA) National Conference, Indianapolis, IN.
- Joye Beth Spinks, Noyce Scholar, Robert Noyce Scholarship Program. Attended regional Noyce Scholarship meeting in Indianapolis and presented a poster, "Promoting Professionalism in Pre-service teachers", (April 2011).
- Kathryn Crawford and Joy Beth Spinks, Noyce Scholars, Robert Noyce Scholarship Program. National Science Teacher Association, Nashville, TN, "It's Alive! Promoting Critical Thinking on the First Day of Biology Class" (Dec. 3, 2010).

Undergraduate Research (Pre-Pedagogical Faculty Position)

- Shoap, D., Undergraduate research supervisor, Interdisciplinary Studies Department, "Factors Affecting Teacher Attrition Rates", (Jan. 28, 2010-May 2010).
- Ritter, N., Undergraduate Research Supervisor, College of Education and Behavioral Science Department, "Research in Middle Grades Education", Completed (Aug. 26, 2008-March 2009).

GRADUATE STUDENT MENTORING

Graduate Student Committees

- Emmanuella Ofaka, (2023-2025). Master's degree Thesis Committee, Department of Biology.
- Tori Watkins, (2022-2023). Master's degree non-thesis advisor, Department of Biology.
 - BIOL 516 Mentor: "A Meta-analysis of the Relationship between Social Media Use and Adolescent Health" (Fall 2023).
- Felicia Wright Skinner (2018-2020). Master's degree non-thesis advisor, Department of Biology.
- Ciera Gary (2017-2018). Master's degree non-thesis advisor, Department of Biology.
- Ruth Ann Boyd (2013-2016). Master's degree non-thesis advisor, Department of Biology, passed oral exam Fall 2016.
- April West, (2013-2016). Master's degree non-thesis advisor in Biology. Project title: Motivation of Low Achieving High School Biology Students to Learn Science.
- Graduate Committee member for Roliera West (Spring/Summer 2014).

Doctoral Committee Member

- Kerri Adkins (2016-2019). Doctoral Candidate in Educational Leadership. Oral Exam passed Fall 2016, Thesis Defense October 16, 2019.

SUPERVISION OF TEACHING ASSISTANTS & INSTRUCTORS IN ANATOMY LAB

Semester	Undergraduate TAs	Graduate TAs	Instructors
Spring 2025	2	3	0
Fall 2024	1	3	1
Spring 2024	2	4	0
Fall 2023	2	3	0
Spring 2023	4	3	0
Fall 2022	5	3	0
Spring 2022	0	3	2
Fall 2021	0	3	3
Spring 2021	8	3	0
Fall 2020	11	3	0
Spring 2020	0	4	2
Fall 2019	2	3	2
Spring 2019	0	4	2
Fall 2018	0	2	3
Spring 2018	0	4	3
Fall 2017	0	4	4
Spring 2017	0	4	2
Fall 2016	1	3	3
Spring 2016	1	2	5
Fall 2015	2	1	5
Spring 2015	3	3	3
Fall 2014	3	3	3
Spring 2014	4	3	4
Fall 2013	5	2	2

COMMITMENT TO DIVERSITY EQUITY & INCLUSION

- **Member**, Higher Education Hiring Consortium (2020-2024). Vision: Inclusive Higher Education Workplace where People from all Perspectives & Backgrounds can Thrive.
- **Attendee**, National Science Teacher Association Meeting, Session “Gender-Inclusive Biology Teaching: Language, Concepts & Impacts”, Denver, CO. (March 21, 2024).
- **Attendee**, American Educational Research Association Meeting, Session “Revisiting the Pipeline in STEM Pathways Research: Alternatives that Reflect Systemic, Cultural Contextual Features, Chicago, IL (April 15, 2023).
- **Attendee**, National Science Teacher Association Meeting, Session “Beyond the Surface of Race, Diversity & Inclusion”, Atlanta, GA, (March 24, 2023).
- **Attendee**, National Science Teacher Association, Session “Building Safe Spaces: the Importance of Inclusivity in STEM Education”, Keynote Speaker: Dr. Raven Baxter, University of California, Houston, TX (April 2, 2022).

- **Attendee**, Higher Education Hiring Consortium, “Hiring Diverse Faculty”, Webinar, August 2020.