

This packet contains the details of my activity since starting at Embry-Riddle Aeronautical University – Worldwide in August 2021. Below is a brief overview of my activity versus expectation on each tenure-track faculty pillar of teaching, research, and service.

## Teaching

I have received stellar student evaluations for all courses I have taught at ERAU-W. All quantitative responses related to Instructor Experience (questions 1-9 on old evaluations and question 7 on new scale) average to 4.66 on a 5-point scale. For open response comments about the instructor, I have received 81 entirely positive comments, 6 neutral comments, and 0 negative comments. This overwhelmingly positive response in my student evaluations illustrates how students enjoy my courses for my extensive feedback and expertise in teaching. Exemplary quotes are provided in the Summary of Teaching Effectiveness reflection.

My peer observations are equally as positive. When designing courses (such as the new Programming for Data Science course CSCI 251) I attend to varying levels of conception as well as student affect (attitudes, emotions, and values). Assignments are designed to both intellectually challenge students as well as provide supports for a safe environment to learn without fear of judgement. Students are provided significant content feedback along with encouragement to continue their strong work. My teaching philosophy in the Summary of Teaching Effectiveness section expands on this focus of both teaching and fostering students as people who can excel at mathematics.

I have participated in numerous teaching development opportunities both within and outside of ERAU-W. The most significant was my one-year fellowship New Experiences in Teaching (NExT) with the Mathematics Association of America. This program is designed for new tenure-track mathematics faculty to learn about teaching innovations and expectations.

## Research

My scholarly activity, compared to total expectations outlined in the COAS ERAU-W Academic Guidelines and Criteria for Tenure and Promotion to Associate Professor, is provided in a summary chart below.

	Peer-Reviewed Publications	Conference Presentations	Internal/External Funding Proposals
<b>Year 1: AY21-22</b>	3	5	2
<b>Year 2: AY22-23</b>	3	2	2
<b>Year 3: AY23-24</b>	1	4	3
<b>Year 4: AY24-25</b>	6	9	3
<b>Year 5: AY25-26</b>	3	3	4
<b>Total Activity</b>	16	23	14
<b>Expectation</b>	5	5	1

Peer-reviewed publications were submitted to a variety of well-respected locations: national conference proceedings (9), peer-reviewed education journals (6), and as a book chapter (1). Presentations primarily took place at national conferences (18), though I also presented at ERAU-hosted local and regional events (5) and was invited to talk about my research at 3 other universities as part of seminar series on 4 different occasions. I have had moderate success with external funding: I have been a co-PI on successful NSF grants (2) and subawards attached to NSF grants (1) while also being PI (2) and co-PI (1) on unsuccessful external grants. [UPDATE when 4 pending grants are set] I have had stellar success with internal funding: I have been PI (2) and co-PI (2) on successful college-level (3) and university-level (1) internal grants. My Research Agenda provides a short description of how my active research projects contribute to my overarching research agenda on utilizing machine learning and hypothetical learning trajectories to model student thinking and learning.

## Service

I have actively served at all levels of ERAU-W as well as in my professional community. In my first two years at ERAU-W, I participated in the College of Arts & Science's Faculty Council as well as chaired the ERAU-W Faculty Senate Academic Technology committee. After the sudden passing of Dr. Karen Keene in February 2023, I stepped up to serve as Associate Chair of the department of Mathematics, Science, and Technology in addition to the various service I perform for my department. From January to May 2024 I was also Acting Chair as we continued searching for a permanent chair. I continued to serve as Associate Chair for another year to help acclimate the new department chair Tim Smith. Starting August 2025 I passed on the Associate Chair role to be Program Chair for the newly-created Bachelor of Science in Data Science.

Outside of Embry-Riddle, I am involved in the Mathematical Association of America (MAA), had been involved with the Special Interest Group on Research in Undergraduate Mathematics Education (RUME), and am currently becoming involved with the Special Interest Group on Statistics and Data Science Education (SDS-Ed). The MAA is the largest national association of American and Canadian mathematicians with a membership of over 24,000. I serve on the MAA Council on Teaching and Learning, the Committee on the Teaching of Undergraduate Mathematics (CTUM), and as chair for the Subcommittee on Technology in Mathematics Education. These groups allow for interaction and influence of college educators, especially with relation to technology. RUME was the first Special Interest Group of the MAA and is the largest national association of collegiate mathematics education researchers in the United States. I have served on small committees in RUME as a stepping stone toward running for a leadership role within the research community, though I have recently pivoted to SDS-Ed as a better fit for the roles I server at ERAU and the research field I have grown in to. Outside of ERAU and my professional communities, I serve as a frequent journal reviewer and grant reviewer for the National Science Foundation. For journals, I am commonly called on to review papers on APOS Theory, a theoretical framework I have published on, as well as student learning through technology. For grants, I commonly review for the NSF Improving Undergraduate STEM Education (IUSE) initiative as I have been a co-PI on two successful IUSE grants so far.