

Aida E. Jiménez Esquilín

Associate Professor, Biology

School of Arts and Sciences
West Virginia University
Institute of Technology

Email: aej00015@mix.wvu.edu
Phone: 304-929-1351

ORCID: 0009-0000-9724-6653
[Google Scholar](#) [Linked In](#)
[Faculty page at WVU Tech](#)

ABOUT ME:

Applied microbial ecologist
specializing in soil-plant-
wastewater associated
microbiomes.

**Experienced educator and
program leader** with a track
record in curriculum design,
assessment, and innovative
STEM pedagogy at multiple
institutions.

**Successful grant writer and
project PI/Co-PI** securing NSF,
state, and foundation funding for
research, teaching innovation,
and student success initiatives.

Active scholar and mentor with
peer-reviewed publications,
undergraduate research
supervision, and leadership roles
in professional scientific
organizations.

EDUCATION TRAINING

Research Fellow	Soil Microbiology USDA-ARS-AFSRS, WV	2006-2011
Ph.D.	Soil Science-Soil Microbiology Colorado State University, CO	2003-2006
M.A.	Biology University of Colorado, CO <i>Honors: Outstanding Graduate</i>	2001-2003
B.S.	Molecular Biology University of Great Falls, MT <i>Honors: Magna Cum Laude</i>	1998-2001

ACADEMIC APPOINTMENTS

Associate Professor of Biology School of Arts and Sciences WVU Institute of Technology, Beckley WV 25801	2023-
Courses	BIOL 240 & Lab- Microbiology BIOL 111 & Lab-General Biology I BIOL 225-Biological Methods BIOL 416 & Lab -Cell Biology BIOL 497-Research CHEM 451- Biochemistry AEM 401 & Lab- Environmental Microbiology
Associate Professor of Biology & Program Director Assistant Professor of Biology Dept. of Natural Sciences University of Charleston, Charleston WV 25304	2018-2022 2013-2018
Duties	Manager of program budget Curator of curriculum Assessor of program learning outcomes Writer of program reports and schedules
Courses	BIOL127 & Lab- Allied Health Microbiology BIOL 130 & Lab- Biology for Majors BIOL 419 & Lab- Microbial Ecology NSCI 220- Statistics in Science & Research BIOL 495-Research in Science
Assistant Professor of Biology Mountain State University, Beckley WV 25801	2009-2012
Courses	BIOL 101-General Biology BIOL 300-Microbiology BIOL 2xx-Biochemistry

FUNDED GRANTS

- 2025 PI Expanding the First2 STEM Success Network WVU Tech-Institutional Team Support 2025/2026. High Rocks Corporation \$11,340.
- 2024 Co-PI Expanding the First2 STEM Success Network WVU Tech-Institutional Team Support 2024/2025. WV HEPC \$20,000.
- PI Building an Inter-institutional Collaboration for STEM Achievement among Small Universities in Appalachia. (Planning grant for S-STEM Track 3 Proposal). National Science Foundation \$100,000.
- 2023 PI WV HEPC and Community and Technical College System OER grant (BIOL 240-Microbiology) WV HEPC \$1000.
- PI Leveraging our own to increase retention and success in an Introductory Biology course at WVU Institute of Technology: Course Embedded Peer Teaching Assistants (PTAs). WVU Tech FY23 Campus Transformation grant \$2999.69.
- 2021 Co-PI First2 Network Summer Immersive at University of Charleston. WV HEPC \$ 23,500.
- 2020 PI WV HEPC and Community and Technical College System OER grant (NSCI 220-Statistics in Science) WV HEPC \$1000.
- PI First2 Network Summer Immersive at University of Charleston. WV HEPC \$21,400.
- 2019 PI Scholars Program for Environmental Challenges. (S-STEM Track 1) National Science Foundation. \$648,409. (-2022)
- PI Exploring the role of the microbiome of *Epifagus virginiana* in the colonization of *Fagus grandifolia*. Appalachian College Association-Ledford Scholars program. \$3,900.
- PI Is cellulose degradation a factor in the colonization of the American Beech, *Fagus grandifolia*, by parasitic plant *Epifagus virginiana*? Appalachian College Association-Ledford Scholars program. \$3700.
- 2018 PI Proposal to purchase a qPCR Thermal Cycler System to be used in Research Experience Capstone course (Instrumentation grant) WV HEPC \$19,108.72.
- 2014 PI Science behind the arts program (STEAM program). Beckley Area Foundation and the Benedum Foundation. \$3,850.

PROFESSIONAL DEVELOPMENT, CONFERENCES & WORKSHOPS

Great Teachers Seminar, North Bend State Park- 2025.

CITI IRB Social and Behavioral Research Investigators 2-Refresher Course, (online course), WVU- 2024.

Introduction to Evaluation 101 Certification (online course), American Evaluation Association - 2024.

Scholarship of Teaching and Learning Community Meetings- SoTL article discussion; WVU TLC-2023.

Seminars in Science Pedagogy: Cognitive load and teaching; Active learning in science. (Virtual), Council for Independent Colleges – 2021.

DNA Metabarcoding for CURES Workshop (Virtual), CSHL-DNA Learning Center Teacher Training Program-2020.

Course-based student microbiome research, Conference for Undergraduate Educators, American Society for Microbiology, Tysons, VA-2019.

Research on Teaching and Learning Summit Conference, Center for Excellence in Teaching and Learning, KSU, Kennesaw, GA -2017.

Transforming Undergraduate STEM Education Conference, Association of American Universities & Colleges, Boston, MA-2016.

Strategic Grant Development Workshop, ISFD, University of Charleston, Charleston, WV-2014.

Teaching and Learning Institute II, Appalachian College Association, Lenoir-Rhyne University, Hickory, NC -Online teaching and learning-2014.

Teaching and Learning Institute I, Appalachian College Association, Ferrum College, Ferrum, VA-2013.

Assessment Institute: Best practices for Program-level assessment. IUPUI, Indianapolis, IN-2011.

SELECTED PUBLICATIONS AND PRESENTATIONS

Oral Presentations (Invited marked with ★)

★ Jiménez Esquilín, A. E. (Author & Presenter). S-STEM Planning Focus Groups. First2 Network Spring Co-Conference, Virtual May 17, 2025.

★ Jiménez Esquilín, A. E. (Author & Presenter). S-STEM Planning. First2 Network Fall Conference, Virtual -November 2, 2024.

Jiménez Esquilín, A. E. (Contributor). Elevator Pitches to Connect Content and Answer “Why must I take this class?” Helping Students Transition from K–12 to Future Engineering Careers by Plugging the Leaky Pipeline. American Society for Engineering Education Pre-College Engineering Education Conference, Portland, OR -June 22, 2024.

★ Jiménez Esquilín, A. E. (Author & Presenter). Getting People Involved and Decreasing Single-Student and Faculty Load. First2 Network Spring Conference, Canaan, WV -May 17, 2024.

Jiménez Esquilín, A. E. (Author), Waugh, L. (Presenter). Identifying and Characterizing Antibiotic Producers Found in and on the Haustorium of *Epifagus virginiana*. West Virginia Academy of Science Annual Meeting, West Liberty, WV -April 6, 2024.

★ Jiménez Esquilín, A. E. (Author & Presenter). Scholars Program for Environmental Challenges at the

University of Charleston, a Small PUI in Appalachia. AAAS S-STEM Symposium, Washington, DC - September 2022.

Jiménez Esquilín, A. E., & Lafferty, J. A Case Study of the Impact of Bridging Immersive Summer Research into a Freshman-Level CURE. American Chemical Society General Conference, Virtual -April 2021.

Jiménez Esquilín, A. E. Developing STEM Identity in Female Undergraduates in a Small Private Appalachian Institution. American Society for Microbiology Conference for Undergraduate Educators, Tysons, VA -August 2019.

Jiménez Esquilín, A. E., Harris, Z., & Duncan, C. Microbial Substrate Utilization in Soils of Two WV Watersheds with Different Vegetation Structures. WV Academy of Sciences Annual Meeting -April 2018.

Jiménez Esquilín, A. E. Effects of Specifications Grading on Achievement Goal Orientation in a Flipped Statistics for Science and Research Course. Research on Teaching and Learning Summit, Kennesaw, GA -October 2017.

Dotseth, E. J., Blankenship, J., & Jiménez Esquilín, A. E. Flooding Events and Mosquito Activity in Appalachia. Entomology Society of America Annual Conference, Denver, CO -November 2017.

Jiménez Esquilín, A. E. More Homework, Less Grading: Giving Timely Feedback While Developing a Growth Mindset Using Specifications Grading. ACA-Summit, Kingsport, TN -September 2016.

Jiménez Esquilín, A. E. The Science Behind the Art Experience Pilot Project: First Impressions of an Integrated Art and Science After-School Program in Southern WV. WNY EdCO S.T.E.A.M. Conference, Buffalo, NY -August 2016.

Peer-Reviewed Publications

Research impact: h-index 6 | Research Interest Score: 110.8 (66th percentile) | Citations: 286

Jiménez Esquilín, A. E. (2024). Identifying and characterizing antibiotic producers found in and on the haustorium of *Epifagus virginiana*. Proceedings of the West Virginia Academy of Science, 96. <https://pwvas.org/index.php/pwvas/article/view/1055>

O'Neill, K. P., Godwin, H., & Jiménez Esquilín, A. E. (2010). Reducing the dimensionality of soil macroinvertebrate datasets using indicator species analysis: A case study along an Appalachian meadow–forest gradient. *Soil Biology & Biochemistry*, 45, 217–235.

Jiménez Esquilín, A. E., Stromberger, M. E., & Shepperd, W. (2007). Soil scarification and wildfire interactions on microbial communities and carbon. *Soil Science Society of America Journal*, 72, 1–7.

Jiménez Esquilín, A. E., Stromberger, M. E., Massman, W. J., Frank, J. M., & Shepperd, W. D. (2007). Microbial community structure and activity in a forest soil scarred by slash pile burning. *Soil Biology & Biochemistry*, 39, 1111–1120.

Massman, W. J., Frank, J. M., Jiménez Esquilín, A. E., Stromberger, M. E., & Shepperd, W. D. (2006). Long-term consequences of a controlled slash burn and slash masticating to soil moisture and CO₂ at a southern Colorado site. Proceedings of the 27th Conference on Agricultural and Forest Meteorology, American Meteorological Society, San Diego, CA.

Jiménez Esquilín, A. E., & Roane, T. M. (2005). Antifungal activities of actinomycete strains are associated with high-altitude sagebrush rhizosphere. *Journal of Industrial Microbiology & Biotechnology*, 32, 378–381.

Bozlee, B., Exharos, G. J., Jiménez, A. E., et al. (2002). Measurement of the index of refraction of solids by UV–Vis spectroscopy. *Journal of Chemical Education*, 79, 169.

SERVICE

Professional Service

- President, West Virginia Academy of Science-2025–present
- President-Elect, West Virginia Academy of Science-2023–2025
- University Representative, West Virginia Academy of Science-2017–2022

Institutional Service at WVU Institute of Technology

- Principal Investigator, NSF-S-STEM Grant 2024-2025
- Engaged Teaching Scholar-2025–present
- Campus Safety Committee, Member-2025–present
- HSTA camp faculty-2025.
- WVU Tech URDC abstract review and selection committee, 2024-present
- Liaison, First2 Network Institutional Committee-2024–present
- Faculty Assembly Athletic Committee, Member-2023–present
- Faculty Assembly Library Committee, Member-2023–2025
- Biology Safety Officer-2023–present
- Biology Program Assessment Manager-2023–present
- Biology Faculty Search Committees (4 total)-2023–present
- First2 Network Institutional Committee, Member-2023–present

Selected at previous institution

- Member, Data Analytics Faculty Search Committee-2018–2019
- Member, Dean of Arts and Sciences Search Committee-2018–2019
- Director, Biology Program-2018–present
- Faculty, Honors College-2017–2020
- Member, Academic Integrity Committee (appointed by Dean)-2015–2018
- Mentor, UNIV First-Year Experience-2014–2016

MEMBERSHIPS

American Society for Microbiology-Contributing Member since 2018

American Society for the Advancement of Science-Member since 2018

WV Academy of Sciences- Member since 2017