

Wm. Patrick Boyle IV
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An experienced teacher with a Master's degree in Physics and a research focus in education.. Service minded with broad interests: looking to promote community science engagement, understand and communicate science issues, and foster new students of physics.

Teaching Experience

Instructor 2022 - Present

Department of Natural Sciences, University of South Carolina Beaufort

- Lead instructor for introductory physics lab and lecture.

Instructor 2017 - 2019

Department of Physics, Miami University

- Lead instructor for major's first year SCALE-UP physics courses.
- Designed and taught an energy and environment course for non-majors.

Graduate Assistant 2015 - 2017

Department of Physics, Miami University

- Instructed and managed a non-major's physics laboratory.
- Instructed in first year SCALE-UP physics courses.

Undergraduate Assistant 2014 - 2015

Department of Physics, Miami University

- Assisted in instructing first year SCALE-UP physics courses.

Education

Miami University 2015 - 2017

Master's of Science in Physics | [Thesis](#)

- Research focused on physics laboratory class reformation in accordance with current literature.
- Included lab design and teaching, along with Rasch analysis techniques.

Miami University 2012 - 2015

Bachelor of Arts in Physics

- Initial research in quantum spectroscopy, investigating hyperfine splitting in cesium atoms. Acquired a variety of basic optical lab skills.
- Later research focused on studio physics (SCALE-UP) implementation and the transition process.

Publications & Presentations

Boyle, W. P. (2016, November). Measuring the effect of critical thinking exercises on conceptual understanding in a non-major's physics laboratory. Poster presented at the Graduate Research Forum at Miami University. Oxford, OH.

Boyle, W. P. (2015, April). Investigation of attitudes in introductory physics students. Poster presented at the Undergraduate Research Forum at Miami University. Oxford, OH.

Bayram, S. B., Arndt, P., Popov, O. I., Güney, C., **Boyle, W. P.**, Havey, M. D., and McFarland, J. (2014, December). Quantum beat spectroscopy: Stimulated emission probe of hyperfine quantum beats in the atomic Cs $8p^2P_{3/2}$ level. *Physical Review A*, 90(6).

Boyle, W. P. (2013, June). Hyperfine quantum beat spectroscopy of the Cs 8p level with pulsed pump-probe technique. Poster presented at the Joint Meeting of the APS Division of Atomic, Molecular, & Optical Physics and the CAP Division of Atomic, Molecular, & Optical Physics. Quebec, Canada.

Awards & Professional Societies

Yoga Alliance RYT200 Certified Yoga Instructor	April 2019 - Present
Department of Physics Glenn and Betty Julian Graduate Teaching Award	May 2017
Miami University Graduate Certificate in College Teaching	May 2017
Department of Physics Outstanding Senior Award	May 2015
Sigma Pi Sigma	2015 - Present
Department of Physics James and Carole Garland Scholarship	May 2014

Outreach

Buckeye Science and Engineering Fair Judge	April 2022, '19, '18
Science and Engineering Fair of Northern Kentucky Judge	Feb. 2022, '18, '17
Southwest Ohio Science & Engineering Expo Judge	March 2019, 2018
Adopt-a-Physicist Forum Host	October 2018
State Science Day Judge	May 2018, 2017
Talawanda Science Week Presenter	May 2017, 2015
Careers Involving Quantitative Skills Day Guide	May 2016
Discover the Sciences Presenter	September 2015

Other Employment Experience

Engineering Technician GIRD Systems, Cincinnati Ohio	Jan. 2020-May 2022
<ul style="list-style-type: none">• Responsible for designing, building, and testing RF circuitry.• Troubleshooter for malfunctioning circuit card assemblies.• Increased efficiency in property database and logistics.• Supports onsite hardware efforts for remote engineers.	

Farmhand

Summer 2019

Blackbird Farms & Earthkeeper Farm, Grand Rapids Michigan

- Ran the farmer's market stand for Earthkeeper Farm.
- Planted, cultivated, harvested, and cleaned produce.
- Managed irrigation at Earthkeeper Farm.

Assistant to the Director of Instructional Labs

Summer 2015

Department of Physics, Miami University

- Developed database for accessing department equipment and available lab experiments.

Assistant to the Director of Instructional Labs

Summer 2014

Department of Physics, Miami University

- Built and maintained various apparatus for teaching laboratories.