

**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

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**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

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**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

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**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

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

## Outreach

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

## Other Employment Experience

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

**Farmhand**

Summer 2019

Blackbird Farms &amp; 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.