Welcome to our Biology Education Area (BEA)!

If a faculty position that involves great teaching is your hope or ambition, our BEA will help you achieve a competitive edge. BEA is for everyone who is interested in teaching, in teaching-related research, or in understanding the importance of community, a sense of belonging, and cultural relevancy for educating the next generation. We are committed to helping all students develop the advanced reasoning and problem-solving abilities that are so critical to new discoveries in the life sciences and to society.

Our common goal is to promote high quality instruction and to enhance learning by applying educational research to course and curriculum design. BEA affiliates are mobilizing our department, the university, and professional societies nationwide by transcending sub-disciplinary boundaries and working across all the research areas to help answer discipline-specific questions related to teaching and learning.

Members and affiliates of our area include:

- a) Research-active faculty who complement bench or field research with educational innovation,
- b) Science faculty who now mainly teach,
- c) Non tenure-track instructors, and
- d) People in the Purdue International Biology Education Research Group (PIBERG).

BEA gives all biology graduate students the opportunity to contribute to PIBERG scholarship and other biology education research projects like these:

- Development of Course-based Undergraduate Research Experiences (CUREs);
- Classroom and laboratory instructional innovation to improve teaching and learning;
- Helping students to visualize and reason about evidence to understand the richness and complexity of data that informs biological knowledge;
- Integration of engineering practice and design principles with the life sciences;
- Education of and outreach to high school biology students and teachers;
- Biology faculty development.

When you meet our BEA faculty affiliates, ask about their projects, publications, leadership, and awards of distinction – or contact me if you have questions about the various recognitions given to our BEA faculty.

Nancy Pelaez, Associate Professor and BEA Convener
Fellow, American Association for the Advancement of Science
Fellow of the Royal Society of Biology (FRSB)
Twitter @PurdueBioEd or email npelaez@purdue.edu

http://docs.lib.purdue.edu/pibergim/4

Seven Basic Competency Areas of Biological Experimentation
BEA Summary

**BEA Faculty Members**

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
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<tbody>
<tr>
<td>Bartlett</td>
<td>Ed, Associate Professor, BEA and NP</td>
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<td>Bernal</td>
<td>Ximena, Associate Professor, BEA and EEB</td>
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<td>Camarillo</td>
<td>Ignacio, Associate Professor, BEA and NP</td>
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<td>De</td>
<td>Rupa, Continuing Lecturer of Anatomy and Physiology</td>
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<td>Eichinger</td>
<td>David, Associate Professor, BEA and C&amp;I</td>
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<td>Gardner</td>
<td>Stephanie, Assistant Professor, BEA Deputy Convener</td>
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<td>Guzey</td>
<td>Selcen, Assistant Professor, BEA and C&amp;I</td>
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<td>Humphrey</td>
<td>Sean, Continuing Lecturer of General Biology</td>
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<td>Minchella</td>
<td>Dennis, Professor, BEA and EEB</td>
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<td>Pelaez</td>
<td>Nancy, Associate Professor, BEA Convener</td>
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<td>Sahley</td>
<td>Chris, Professor, BEA and NP</td>
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<td>Walter</td>
<td>Tom, Continuing Lecturer of Microbiology</td>
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<tr>
<td>Yurchenko</td>
<td>Olga, Continuing Lecturer of Plant Molecular Biology</td>
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**BEA Projects**

Integration of Engineering Design and Life Science: Investigating the Influence of an Intervention on Student Interest and Motivation in STEM Fields, NSF # 1721141; Amount: $1,375,896

Excellence in STEM Teaching in Indiana through Integrating Engineering Practice and Design Principles, NSF # 1758487; Amount: $1,415,500

Grappling with Graphs: Researching and Improving Student Graphing Skills Using An Interactive Digital Graphing Tool, NSF # 1726180; Amount: $475,000

Exploring Biological Evidence: Helping Students Understand the Richness and Complexity of Evidentiary Constructs in Biology, NSF # 1661124; Amount: $1,270,154

Teachers and Researchers Advancing Integrated Lessons in STEM (TRAILS), NSF # 1513248: Amount: $964,235

RCN-UBE: ACE-Bio Network: Advancing Competencies in Experimentation – Biology, NSF # 1346567; Amount: $500,000

AGEP-Transformation: The CIC Professorial Advancement Initiative, NSF # 1309173; Amount: $345,740

**Leadership Roles**

Associate Dean for Undergraduate Education, College of Science
Associate Editor, Advances in Physiology Education
Chair-Elect, American Association for the Advancement of Science (AAAS) Section on Education (2019-2022 for a 3-year term; first year as chair-elect, second year as chair, third year as retiring chair)
Director, Center for Faculty Success, Office of the Provost
Editorial Board Member, CBE--Life Sciences Education
Program Director, Louis Stokes Alliance for Minority Participation (LSAMP)

**Honors and Distinctions**

American Society of Parastologists' Distinguished Service Award
Charles B. Murphy Award for Outstanding Undergraduate Teaching Fellow of the American Association for the Advancement of Science Fulbright Scholar
J. Alfred and Martha O. Chiscon Undergraduate Teaching Award Member of the Teaching Academy
Murphy Exceptional Early Career Award Purdue 150th Anniversary Professor
University Student Government Excellence in Teaching Award

Pelaez et al., *Life Sciences Education* 17(2), 2018.