

EEhEE Honors-in-the-Major Proposal

Bachelor's in Elementary Education with Honors in Environmental Education

An upper-division honors program integrating environmental education into K-8 classrooms
2018 Bryan Nichols, PhD and & Lori Dassa, EdD

Degree: Bachelor's in Elementary Education (K-6) with Honors in Environmental Education and ESOL/Reading endorsement

Note: Received 2018 Distinction Through Discovery curriculum grant from the Office of Undergraduate Inquiry to develop research-based assignments for honors enrichment of SCE 4350.

Program Summary

We are proposing a new upper-division honors in the major program, within the Department of Teaching & Learning's Bachelor's in Elementary Education (K-6) with ESOL/Reading endorsement degree. The new EEhEE program would attract preservice teachers who are passionate about nature, animals, and/or environmental issues. It would show them how nature and environmental education can be integrated into elementary and middle school classrooms, and give them the inquiry tools to examine their own practice and contribute to an exciting new body of research in education, health, and social science. Incorporating a strong undergraduate research theme, the program would explicitly link teacher research, scientific inquiry (as defined by state and national standards), and the latest information on the benefits of getting young learners out of the classroom more often. It would include honors enrichment that highlights environmental science content themes and environmental education pedagogies directly applicable from grades K-8. It would also include certification in state and national environmental education curricula (Association of Fish and Wildlife Agencies, 2018; Cronin-Jones, 1992), and is designed for accreditation by the North American Association for Environmental Education.

Coursework and experiences would be centered around northern Palm Beach and Martin counties, with their impressive range of high-quality natural sites and community expertise. In addition to learning how to teach in their own schoolyards, EEhEE students would learn how to effectively integrate visits to, and from, community partners like local nature centers, gardens, wildlife rehabilitation clinics, and city, county, and state parks. For their student teaching, they would be placed in Palm Beach or Martin County green schools, including those with grounds that facilitate getting young learners outside more.

Justification

There is increasing recognition that children benefit cognitively and emotionally with more time spent outside (e.g., the national Cities Connecting Children to Nature initiative; a roundup of examples of how is available at www.neefusa.org/nature/water/benefits-environmental-education). Many young learners do not thrive when they are required to

sit quietly indoors for extended periods of time, so there have been recent revivals in outdoor, nature, and place and community-based teaching. This includes numerous state-level No Child Left Inside initiatives here in the USA, as well as international efforts like the *udeskole* (outdoor school) concept in Scandinavian countries. Constructive time outdoors appears to have an insufficiently studied but potentially large impact on qualities that parents, schools, and communities are increasingly interested in, including self-efficacy, perseverance, and resilience. Beyond education, there is increasing recognition that contact with nature has positive implications for human health (Frumkin et al., 2017) and environmental justice, so the EEhEE program could generate research, expertise, and leadership here at FAU and in our surrounding communities. Although all reflective teachers end up conducting research on their own practice in one way or another, this opportunity would provide motivated preservice teachers with explicit instruction and direct experience with the nature of science, scientific inquiry, and the associated links with teacher action research.

The program would be led by the coordinator of the Environmental Education Master's Degree program and the Coordinator for Effective Teaching Practices. As environmental education is inherently interdisciplinary and lends itself well to STEM (Science, Technology, Engineering & Math) and arts-based pedagogies, input, expertise, and collaborations would be encouraged from interested parties within FAU and the community.

Course enrichment for the EEhEE, including the teaching capstone project, will incorporate the North American Association for Environmental Education's *Professional Development of Environmental Educators: Guidelines for Excellence* (NAAEE, 2017b), a set of recommendations for the preparation and continuing education of teachers and other environmental educators. Program data will be collected with the goal of getting the program accredited by NAAEE (two years of assessment data are required), to help it achieve national/international recognition.

The proposed honors program will not involve additional expenditures for materials, supplies, or other related areas. Honors sections will be taught at the Jupiter campus, where the science room size already reduces the professor/student ratio. As the program establishes itself, grants and improved integration with FAU and district environmental education programs will help generate interest and funding. By learning tools to actively research their own practice and innovations, EEhEE graduates will be able to help their schools get more children outside and contribute to exciting new areas of research and pedagogy. A primary goal, which speaks to FAU's community engagement platform, is to build and integrate a diverse professional network of research-capable educators who are passionate about environmental science, justice, and education. Using the *Community Engagement: Guidelines for Excellence* (NAAEE, 2017a) as a guide, this network would include undergraduates, environmental education masters students, school district personnel, scientists, and a growing web of formal and informal educators working in the community.

Components

Entry requirements

We will require a minimum GPA of 3.0 (program minimum is 2.5), as well as a 500-word essay describing why students are interested in integrating environmental education into their teaching career. Experience suggests there is only a small percentage (<10) of elementary education majors who are passionate about nature and willing to seriously consider teaching outdoors more, so we anticipate keeping it well below the 20 percent honors cap. The students we want to attract to the program are the ones we think would thrive when given a chance to work harder for something they care about. We would also actively recruit preservice teachers from local communities that are underrepresented in environmental education. Many district children rarely get a chance to visit the beach or the world-famous Everglades wetlands just west of us, and one of the goals of the program is to develop a network of teachers that will help change that. An honors program in environmental elementary education will be rare globally, so as the program establishes itself, we hope to set an example that will attract passionate preservice teachers from beyond the district, state, and country as well.

Standards

To remain in the program, students must maintain a 3.0 GPA in the major, meet the requirements of Honors Compacts (SCE 4113, EDG 3324, student teaching), take the honors-enriched version of SCE 4350 (Jupiter campus), attend occasional workshops, pass the required state certification exams to teach, and remain in good standing with the Coordinator for Effective Teaching Practices during classroom experiences (Effective Teaching Practices 2 and student teaching).

Honors-level enrichment

The intensive elementary education program incorporates state certification and endorsements, with a credit overload and no room for electives. As a result, honors enrichment will be achieved by the following:

An honors compact during **SCE 4113 Science Content and Standards for K-6 Teachers**.

While they take this course, the first in the science education sequence, EEhEE students will complete an honors compact that includes becoming familiar with the Palm Beach County school district Field Research Ranger Program (<https://www.palmbeachschools.org/ec/science/>). They will make at least two visits to district-approved environmental education providers, interview staff there, and write a paper on how field trips could be used to help teach the state standards-based science content they are learning.

SCE 4350 Principles and Methods: K-9 School Science. An honors-enriched section will be taught by the environmental education program coordinator, with an emphasis on integrating learning within and beyond the classroom, including better links to community partners, the use of outdoor classrooms within school grounds, and other nature, place, and

outdoor-based pedagogies. The program coordinator is a member of the North American Association for Environmental Education Guidelines Trainers' Bureau, and honors students will learn about the various Guidelines for Excellence produced by the NAAEE, including those that cover environmental literacy, educational materials, and community engagement. Honors requirements would also include certification in the nationally renowned Project Wild Curriculum (Association of Fish and Wildlife Agencies, 2018) and Florida-based Schoolyard Wild activities (Cronin-Jones, 1992) and content. Both require students to teach lessons that integrate environmental themes and activities into state science standards. The course would include explicit links between inquiry-based education, state nature of science standards, and scientific practices and attitudes.

EDG 3324 Effective Teaching Practices 2. The Coordinator for Effective Teaching Practices, working with the Coordinator for the Environmental Education program and the School Districts of Palm Beach and potentially Martin Counties, will strive to place honors students in officially designated Green Schools, with supervising classroom teachers who have experience with outdoor and nature education, on and beyond their school grounds. Part of the goal is to establish a network of such teachers, as well as develop professional learning communities that can help increase local expertise. During this practicum, students will take CITI Institutional Research Board training focusing on educational research, and receive instruction focusing on teacher action research.

EDE 4943 Student Teaching or Accelerated Introduction into Teaching Capstone. Throughout the honors program, students will have had the opportunity to visit and work with science and education experts from northern Palm Beach and Martin Counties, including The River Center (Loxahatchee River District), Jonathon Dickinson and MacArthur Beach State Parks, Loggerhead Marine Life Center, and more. However, the capstone experience for preservice teachers is their semester-long internship in an actual district classroom, working with a university supervisor and a coordinating teacher as they transform from a student into professional educator. Students who are especially ready may choose to apply to the FAU Accelerated Introduction into Teaching (AIT) program and be teacher of record. As part of either experience, they will work with their coordinating teacher and the honors faculty to develop, implement, and communicate a research project related to their environmental education practice. Students will prepare a paper and presentation based on their research. These projects will be shared and used to build local expertise and curricula in scientific and environmental education. Depending on the semester of their student teaching, venues to present research may include FAU's Annual Undergraduate Research Symposium, the League of Environmental Educators of Florida (LEEF) conference, school district STEM events, or other events at Pine Jog Environmental Education center (Palm Beach County) or Jonathon Dickinson State Park (Martin County).

If you have questions or input about this proposal, please do not hesitate to contact Bryan Nichols (nicholsb at fau.edu).

Key References

- Association of Fish and Wildlife Agencies. (2018). *Project Wild: K-12 curriculum & activity guide*. Washington, DC: Association of Fish and Wildlife Agencies.
- Cronin-Jones, L. (1992). *Schoolyard wildlife activity guide*. Gainesville, FL: FWFC.
- Frumkin, H., Bratman, G. N., Breslow, S. J., Cochran, B., Kahn Jr, P. H., Lawler, J. J., ... Wolf, K. L. (2017). Nature contact and human health: A research agenda. *Environmental Health Perspectives*, 125(7).
- NAAEE. (2017a). *Community engagement: Guidelines for excellence*. Washington, DC: North American Association for Environmental Education.
- NAAEE. (2017b). *Professional development of environmental educators: Guidelines for excellence*. Washington, DC: North American Association for Environmental Education.

Approved by:

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