

# Introduction to Environmental Education

Online Course  
Cornell University Civic Ecology Lab  
September 12 – October 16, 2017



Cornell University



**Description:** Learn about environmental education foundations and approaches—including place-based education, nature and adventure education, climate change education, and environmental action in schools and non-formal settings—through pre-recorded lectures, readings, and case studies. Participants can form local groups to take the course together, form bilingual groups to help participants with limited English, or try out new media like Comic Life to get their educational message across. You will apply research-based knowledge to start new or enhance existing environmental education programs, strengthen your professional networks by exchanging ideas and resources with peer educators around the world, and gain professional credentials.

**Participants:** Beginning and aspiring environmental educators, including teachers, nonformal educators, environmental or park managers, zoo or botanic garden educators, volunteers, and university students. This course can also support ongoing professional development of more experienced environmental educators. Available to students in any country. Materials are in English with Chinese translations.

**Cost: Suggested \$50 fee.** Options available to pay a higher fee to sponsor another student or pay a lower or no fee if you have limited ability to pay or live in a country without credit card or Alipay system. See registration link.

**Certificates:** Participants who complete the course are awarded Cornell University certificates. Students who complete all assignments in Weeks 1-4 will earn the *Achievement Certificate*. Students who complete all assignments in Weeks 1-4 plus complete the course project will earn the *Expert Certificate*. Weekly assignments include watching lectures, readings, and discussion questions. Course project is a short lesson or activity plan for your current or future environmental education program.

**Educational approach:** The course is based in three principles: (1) Learning is social: we learn effectively within a social context, thus networking and exchange of ideas among participants is crucial; (2) Learning can lead to innovation: course participants can work together building on the course materials to develop new ideas for environmental education; and (3) Learning can foster practice change: we will discuss how course ideas and new ideas emerging in this course can be implemented in real environmental education programs. The course will use the *edX edge* learning management system and optional closed groups on Facebook, WeChat, Telegram, and other social media to facilitate idea and resource exchange.

## Learning outcomes

Through this course, you will:

1. Understand history, theories, and terminology that define environmental education.
2. Compare and contrast various environmental education approaches.
3. Expand your network of environmental educators to support your future projects.
4. Produce activity plans appropriate for your current or future educational programs.

**Course Instructors:** Yue Li and Marianne Krasny, Cornell University Civic Ecology Lab

**Dates:** September 12 – October 16, 2017. Course includes 4 weeks of content (approximately 4 hours of work per week), plus 1 extra week to complete course project.

# Introduction to Environmental Education: Lectures

## Week 1: Foundations

We introduce the course and environmental education and students introduce themselves and their work or studies.

- **Lecture 1:** Course introduction
- **Lecture 2:** Foundations of environmental education

## Week 2: Formal and Nonformal

This week we focus on environmental education approaches as defined by where the program takes place. *Formal* environmental education takes place in K-12 schools while *nonformal* environmental education is provided by museums, botanical gardens, zoos, nature centers, libraries, after-school clubs, communities centers, camps, and other out-of-school settings.

- **Lecture 3:** Environmental education in the classroom and green schools
- **Lecture 4:** Nonformal environmental education

## Week 3: Place and Nature

This week we review place-based, nature, residential and adventure programs. These programs can happen in both wild/rural and urban areas.

- **Lecture 5:** Place-based environmental education
- **Lecture 6:** Nature-based, residential and adventure programs

## Week 4: Climate Change and Action

This week we focus on climate change education and education that fosters collective action.

- **Lecture 7:** Environmental action
- **Lecture 8:** Climate change education

## Week 5 (Expert Certificate): Design Lesson or Activity Plan

Participants wanting to earn the Expert Certificate have one extra week to complete the course project, which entails applying the course material to design a lesson or activity plan.

# Introduction to Environmental Education: Lectures

## Week 1: Foundations

We introduce the course and environmental education and students introduce themselves and their work or studies.

**Lecture 1:** Course introduction

### Readings

#### Required

UNESCO (1977). Tbilisi Declaration. <http://www.gdrc.org/uem/ee/tbilisi.html>

#### Optional

Explore the North American Association for Environmental Education and eePRO website, starting with this definition of environmental education. <https://naaee.org/about-us/about-ee-and-why-it-matters>

For a comparison of Environmental Education and Education for Sustainable Development, see: Monroe, M.C. (2012). The co-evolution of ESD and EE. *Journal of Education for Sustainable Development*, 6(1), 43-47.

<http://journals.sagepub.com/doi/abs/10.1177/097340821100600110>

**Lecture 2:** Foundations of environmental education

### Readings

#### Required

Biedenweg, K., Monroe, M. C., & Wojcik, D. J. (2013). Foundations of Environmental Education. In M. C. Monroe & M. E. Krasny (Eds.), *Across the Spectrum: Resources for Environmental Educators* (pp. 9-27). Washington DC: North American Association for Environmental Education.

#### Optional

Monroe, M.C., Wojcik, D. J., & Biedenweg, K. (2016). A variety of strategies for environmental education. In M.C. Monroe & M. E. Krasny (Eds.), *Across the Spectrum* (pp. 47-64). Washington, DC: NAAEE

## Week 2: Formal and Nonformal

This week we focus on environmental education approaches as defined by where the program takes place. *Formal* environmental education takes place in K-12 schools while *nonformal* environmental education is provided by museums, botanical gardens, zoos, nature centers, libraries, after-school clubs, communities centers, camps, and other out-of-school settings.

### Lecture 3: Environmental education in the classroom and green schools

#### Readings

##### Required

Chapman, P. (2014). *Environmental Education and Sustainability in U.S. Public Schools*.

Retrieved from Berkeley, CA:

<http://www.invernessassociates.org/sites/default/files/USGreenSchools12114.pdf>

Eco-Schools Tools and Resources. <http://www.ecoschools.global/seven-steps/> Read the sections titled *Seven Steps*, *Themes*, and *Educational Principles*.

##### Optional

*Eco-Schools*. Explore the videos on the home page and under tools and Resources, Videos, to learn more about Eco-Schools in different countries. <http://www.ecoschools.global/>

*Green Schools*. Explore the US Green Schools website. <http://www.usgreenschools.org/home.html>

### Lecture 4: Nonformal environmental education

#### Readings

##### Required

Heimlich, J. E. (1993). Nonformal Environmental Education: Toward a Working Definition. *The Environmental Outlook. ERIC/CSMEE Informational Bulletin*.

##### Optional

Explore additional chapters in: Monroe, M.C. & M. E. Krasny (Eds.), *Across the Spectrum*. Washington, DC: North American Association of Environmental Education.

## Week 3: Place and Nature

This week we review place-based, nature, residential and adventure programs. These programs can take place in both wild/rural and urban areas.

### Lecture 5: Place-based environmental education

#### Readings

##### Required

Pages 4-10. Getting Smart. (n.d.). *What is Place-based Education and Why Does it Matter?*  
<http://www.gettingsmart.com/wp-content/uploads/2017/02/What-is-Place-Based-Education-and-Why-Does-it-Matter-3.pdf>

##### Optional

Glasson, G. E. (2017). *Place-based STEM Education*. Retrieved from Blacksburg, VA:  
[https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0ahUKEwjEhIS-IHWAhVH6yYKHTa9C9cQFggqMAA&url=http%3A%2F%2Fwww.oired.vt.edu%2Finnovate%2Fwp-content%2Fuploads%2F2015%2F09%2FGlasson-Place-based-STEM-Education\\_020617-3.pdf&usg=AFQjCNGzAYGtKXdy\\_zK-H27Zp4kqwS1VA](https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0ahUKEwjEhIS-IHWAhVH6yYKHTa9C9cQFggqMAA&url=http%3A%2F%2Fwww.oired.vt.edu%2Finnovate%2Fwp-content%2Fuploads%2F2015%2F09%2FGlasson-Place-based-STEM-Education_020617-3.pdf&usg=AFQjCNGzAYGtKXdy_zK-H27Zp4kqwS1VA)

Kudryavtsev, A. Stedman, RC & ME Krasny (2012) Sense of place in environmental education, *Environmental Education Research*, 18:2, 229-250.  
<http://dx.doi.org/10.1080/13504622.2011.609615>

If you are interested in place-based learning, explore more written and videos resources here.  
<http://www.gettingsmart.com/placebasededucation/> You can scroll down to “Contribute” to see how you might write a blog for this website. Here is an example blog post that traces the history of place-based learning in the context of environmental education. Smith, G. A. (2016). *The Past, Present and Future of Place-Based Learning*. Retrieved from  
<http://www.gettingsmart.com/2016/11/past-present-and-future-of-place-based-learning/>  
(Perhaps you can work with fellow students to write a multi-authored piece on making place-based education work in an online course!)

### Lecture 6: Nature-based, residential and adventure programs

#### Readings

##### Required

Hecht, K., & Monroe, M. (2016). Connecting with Parents to Connect Children to Nature. In M.C. Monroe & M. E. Krasny (Eds.), *Across the Spectrum* (pp. 165-180). Washington, DC: NAAEE.

##### Optional

Explore the Tools and Resources on the *Children & Nature Network* website. Scroll down so you don't miss anything. Note resources available in multiple languages including Chinese, Spanish, and French. <http://www.childrenandnature.org/learn/tools-resources/>

Satterlee, D. J., & Cormons, G. D. (2008). Sparking Interest in Nature-Family Style. *Young Children*, 63(1), 16-20.

## Week 4: Climate Change and Action

This week we focus on climate change education and education that fosters collective action.

### Lecture 7: Environmental action

#### Readings

##### Required

Schusler, T. M. (2014). Environmental Action and Positive Youth Development. In M.C. Monroe & M. E. Krasny (Eds.), *Across the Spectrum: Resources for Environmental Educators* (pp. 107-130). Washington DC: NAAEE.

EarthForce. Read the *overview* and each step in the *community action and problem solving page*. <http://earthforceresources.org/community-action-and-problem-solving-process-an-overview/>

##### Optional

Mueller-Sims, K. (2016). Environmental Citizens through Earth Force Evaluation. In M.C. Monroe & M. E. Krasny (Eds.), *Across the Spectrum: Resources for Environmental Educators* (pp. 251-260). Washington DC: NAAEE.

Browse through the 2016 winning projects in the President's Environmental Youth Award (PEYA) Winners, US Environmental Protection Agency.

<https://www.epa.gov/education/presidents-environmental-youth-award-peya-winners>

### Lecture 8: Climate change education

#### Readings

##### Required

Krasny, ME and B DuBois. (2016). *Climate Adaptation Education: Embracing Reality or Abandoning Environmental Values?* Environmental Education Research. 10.1080/13504622.2016.1196345. <http://dx.doi.org/10.1080/13504622.2016.1196345>

NNOCCI. (2017). *The Problem with Solutions -- and How to Fix It*.

<http://climateinterpreter.org/features/problem-solutions%E2%80%94and-how-fix-it>

##### Optional

Simon, A., Volmert, A., Bunten, A., & Kendall-Taylor, N. (2014). *The Value of Explanation: Using Values and Causal Explanations to Reframe Climate and Ocean Change*. Washington, DC, FrameWorks Institute.

Hauk, M. and E. Pickett (2017). *Community Climate Change Education*. Washington, DC, NAAEE. <https://naaee.org/cepro/resources/community-climate-change-education>

## **Week 5 (Expert Certificate): Design Lesson or Activity Plan**

Participants wanting to earn the Expert Certificate have one extra week to complete the course project, which entails applying the course material to design a lesson or activity plan.