



# Environment and Education: From Theory to Practice.

Dr Hanan Ginat

3 weekly lecture hours, 3 credits.

## **Course description:**

Environment and Education (EE) are both major issues in the 21st century. This course will initially provide a historical overview of the main themes and different concepts and approaches to environmental education in the world in the 21<sup>st</sup> century. The course will then examine various methods of learning and teaching about the environment and the connections between the environment, education and the community. This course will include activities in class, personal projects and computerized activities. There will be one daylong, local field trip. Each student will prepare a personal project that will include developing, and optionally, running an environmental program for school-aged children

## **Grade components**

Quizzes	10%
Midterm exam	25%
Final Project	40%
An essay (I have a dream)	5%
Participation	10%

## **Course Requirements**

- 1 one-day field trip, which is mandatory.
- Lessons will include worksheets, exercises (“active learning”), etc.
- The students are expected to complete the required readings and come to class prepared to discuss that week’s readings.

## **Course Schedule**

### **Week One 1: Introduction to the course**

1. The importance of Environmental Education in the 21st Century
2. Environmental Education and the Earth Systems

Readings: - Unesco 1978, **The Tbilisi Declaration**, *Connect 3*, pp 1-9



- **Unesco 1992**, Promoting Education, Public Awareness and Training, Agenda 21 – *United Nation conference on Environment and Development*

**Week Two:**

1. Different approaches for Environmental Education
2. Explanations about the Personal Projects

Readings: - **Education for a Sustainable Future** (1977) – By Unesco

- Williams B. et al, 1969, **The Concept of Environmental Education**. *The Journal of Environmental Education 1: 1 pp30-31*
- Orr D., 1994, **What is Education For?** The Education, Environmental and Human Prospect, (Library of Congress Cataloging in Publication Data)
- Hill R., 2000, **Environmental Education for Sustainable Future – National Action Plan (Australia)**.

**Week Three:**

1. Environmental Education in the 21<sup>st</sup> century – samples from the world.
2. Varied pedagogic tools for EE – Environmental Citizenship and Ecological Literacy

Readings: - Berkowitz A, Ford M. and Breware A., 2005 **A framework for integrating ecological literacy, civics literacy and environmental citizenship in environmental education** (A chapter in the book: *Environmental and Education Advocacy – Changing perspectives of Ecology and Education*).

- Palmer J., and Neal P., 1994, **Environmental Education: International development and progress**. (Chapters 2,3,4 in the book: *The handbook of environmental education*)

**Week Four:**

1. A workshop as a tool for EE
2. EE as a tool for cooperation between Jewish and Arabs
3. Using the near environment for EE
4. Media as a tool for EE

**Week Five:**

1. **Midterm Exam**
2. Environmental Citizenship and Ecological Literacy
3. Fieldtrip as an educational tool for EE
4. Preparation of our fieldtrip

**Reading** - Unesco, 2002, Education for Sustainability – From Rio to Johannesburg" (some part from the full document that can be found in:

<http://unesdoc.unesco.org/images/0012/001271/127100e.pdf>)



**Orion N., 2003, Teaching Global science literacy: A professional development or a professional change. In Mayer, V. (Ed.), *Implementing global science literacy***

**Orion N., Earth Science Education + Environmental Education = Earth  
Dobson, 2004, Citizenship and Ecological Challenge**

**Week Six: Fieldtrip to Eilat.**

This will be an outdoor environmental education field trip in the desert and near the gulf. Included will be visits in schools in Eilat.

**Week Seven:**

1. Computerized educational projects as a pedagogic tool and their contribution to learning and teaching
2. Using a laboratory and other apparatus as pedagogic tools for learning
3. Preparation for the field trip

Readings: **Orion N., 2003, The outdoor as a central Learning Environment in the Global Science Literacy Framework: from theory to practice. In Mayer, V. (Ed.), *Implementing global science literacy* (pp. 33-66)**

**Broman G., Holmberg J. and Robert K.H, 2000, Simplicity without reduction Upstream towards the Sustainable Society. *International Journal of the Institute for Operations Research and the Management Science.* 30(3)**

Note: The lesson will be in Ma'ale Shaharoot School and will include a meeting with Mr. Michael Levy (the Head of the High School)

**Week Eight:**

1. Earth Science Education in Israel – The rationale, the Curriculum and its Application
2. How to build a curriculum?
3. Students present their projects Presenting Personal Projects

**Week Nine:**

1. "Action Research" and S-LTER as Environmental
2. Varied pedagogic tools for EE (include IRP)
3. Different pedagogic ways to use Environmental Educations in the lesson – Samples from Israel and from the world)

**Weak Ten:**

**The Philosophy of Environmental Education**



Readings: - Brennan A., 1991, **Environmental Awareness and Liberal Education**.  
(*British Journal of Education Studies*, Vol. 39)

- Volk, T.L., (1993), **Integration and Curriculum Design**, *Environmental Education Teacher Resource Handbook* pp45-75
- Palmer J.A. (1998),, **"Towards Progress and Promise"** *Environmental Education in the 21<sup>st</sup> Century* pp 240-244
- *Dobson 2007, Environment Citizenship toward and Sustainable Development, Sus. Dev. 15, 276-285*

#### **Week Eleven:**

1. The Effectiveness of Environmental Education in Israel -
2. Presenting Personal Projects

**Readings:** - Ginat H., Orion N. and Geinosar T., , 2005, **High School Students Reaerch Project in Earth Sciences as a Pedagogic Tool (Israel)**. *New Zealand Teacher Science*.

#### **Week Twelve:**

- A. Presentations of the student's personal projects
- B. Workshop and Discussion after the presentation:  
How to improve the students awareness for the "Global warming" in elementary and high schools?

#### **Week Thirteen:**

- A. Presentations of the students personal projects
- B. Summary lesson
- C. "I have a Dream" – writing a final essay

#### **Recomended Reading List**

1. De Shalit Avner, 1996, "The ten commandments how to fail in Environmental Campain"
2. Manitoba Education and training (2000) – "Education for a sustainable future: a resource for curriculum developers, teachers and administrators"
3. Mcniff J. (1988) **Action Research. Principles and practice**. Routedge.



מכון הערבה

Arava Institute

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4. Palmer J.A. (1998) "Towards Progress and Promise" *Environmental Education in the 21<sup>st</sup> Century* pp 240-244
5. Mayer, V.J. 2002, Global science literacy. Dordrecht, The Netherlands: Kluwer.
6. Kim, D.H. 1999. Introduction to system thinking. In system thinking tools and applications. Pegasus Communications, Inc.
7. White L., 2001, "The Historical Roots of our Ecologist Crisis ". Western Man Environmental Ethics
8. International Institute for Human Education (1999). "Why Humane Education?" *Sowing seeds Workbook USA*
9. Holenber J., Lundsquist U., Roberts K. and Wackarinagle M., 1999, The Ecological footprint from a system perspective of Sustainability. *The Ecological Footprint from a Systems Perspective of Sustainability. International Journal of Sustainable Development and World, Ecology* 6: 17-33.
10. Braus David Wood, J.A. (1993) "Environmental Education for Schools" Peace Corps USA
11. Berkowitz, A.R., C.H. Nilon and K.S. Hollweg. Editors. 2003. *Understanding Urban Ecosystems: A New Frontier for Science and Education. Springer-Verlag, Inc., New York.*

ובעברית:

12. הפרק: "מחקר פעולה הלכה למעשה". מתוך הספר: "זיקות פילוסופיות ומתודולוגיות בין מחקר פעולה לבין פרדיגמת המחקר האיכותי" אסופת מאמרים בהוצאת מכון מופת ובעריכת דלית לוי.
13. אבני נ., 2004, "חשיבה אקולוגית כבסיס לחינוך סביבתי". עבודה לתואר דוקטור באוניברסיטת בן גוריון. ע"מ: 1-9, 38-42, 135-150