



Full Syllabus



Course Title

Environmental education for sustainability – Insights from research

Lecturer

Prof. Daphne Goldman

Semester

2nd, spring

Course requirements

Attendance in all the classes and the field trip; reading requirements; conducting a short (≤ 10 minute) presentation (peer-teaching) individually or in pairs on final project; one home assignment.

Final grade components

Final project 75%; short class presentation 15%; intermediate home assignment 10%.

Course schedule

Class no.	Subject and Requirements (assignments, reading materials, tasks, etc.)
1	Introduction – Significant Life Experiences; Orientation to the course; The environmental crisis as a crisis of values and the role of environmental education. Bright, 2003; Pe'er, et al., 2013
2-4	Overview of ESE as an educational approach: Historical overview of ESE as an evolving field; aims, principles and characteristics of ESE; Connecting education to SDGs; Citizen science- converging science education and ESE [UNESCO-UNEP, 1978, 1990; UNESCO, 2017; Gough, 2002; Wals, 2009; Wals et al., 2014]
	Philosophical approaches to incorporating ESE in the educational system – Israel as a case study. The <i>whole school</i> approach to sustainability – EcoSchools / GreenSchools – achievements and challenges emerging from current research [Heimlich, 1991; Goldman et al., 2018; Cincera and Krajhanzi, 2013; Gough, 2005]
5	Architecture as pedagogy, the building as a teacher – The Porter School building as a case study (critical tour of the building and home assignment) [Orr, 1993, 1997]
6	Consultation meetings on final project
7-8	Characterizing the citizen of a sustainable society – a mapping of selected frameworks: environmental literacy; eco-literacy (thinking like an ecosystem); ecological literacy; environmental citizenship [Capra, 1996; Cao, 2015; Dobson, 2007; Hadjichambis & Reis, 2020; Orr, 1992]
9-10	The behavioral gap – the challenge of changing behavior: what research is teaching us about the impact of ESE on learner outcomes; models developed within psychological and social research concerning factors (internal, external) that influence behavior; New Environmental Paradigm scale; positive psychology of the environment [Corral-Verdugo, 2012; Dunlap, 2008; Goldman et al., 2020; Kollmus and Agyeman, 2002]



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11(**)

Fieldtrip – selected educational sites representing different types of formal and non-formal ESE settings in Israel

12-13

Student presentations

Required course reading

Readings will be selected from this list

- Capra, F. (1996). *The Web of Life – A New Scientific Understanding of Living Systems*. Anchor Books Doubleday. Chapter 1. Deep Ecology – A New Paradigm, pp. 3-13; Epilogue: Ecological Literacy, pp. 297-304.
- Dobson, A. (2007). Environmental citizenship: Towards sustainable development. *Sustainable Development*, 15, 276-285. DOI:10.1002/sd.344.
- Dunlap, R. E. 2008. The New Environmental Paradigm Scale: From marginality to worldwide use. *The Journal of Environmental Education*, 40 (1), 3-18.
- Goldman, D., Hansmann, R., Činčera, J., Radović, V., Telešienė, A., Balžekienė., & Vávra, J. (2020). Education for Environmental Citizenship and Responsible Environmental Behaviour. In: A.Ch. Hadjichambis, P. Reis, D. Parakseva-Hadjichambi, J. Cincera, J. Boeve-de Pauw, N. Gericke and M.C. Knippels (Eds.). *Conceptualizing Environmental Citizenship for 21st Century Education* (pp. 115-138). Cham, Switzerland: Springer. DOI 10.10007/978-3-030-20249-1.
- Goldman, D., Ayalon, O., Baum, D., & Weiss, B. (2018). Influence of ‘Green School Certification’ on students environmental literacy and adoption of sustainable practice by schools. *Journal of Cleaner Production*. DOI: 10.1016/j.jclepro.2018.02.176
- Hadjichambis, A.Ch., and Reis, P. (2020). Introduction to the conceptualization of environmental citizenship for twenty first century education. pp. 1-14 in: Hadjichambis, A.Ch., Reis, P., Paraskeva-Hadjichambi, D., Činčera, J., Boeve-de Pauw, J., Gericke, N., and Knippels, M.C. [eds]. *Conceptualizing Environmental Citizenship for 21st Century Education*. Cham, Switzerland: Springer
- Heimlich, J. 1992. Promoting a concern for the environment. *ERIC Clearinghouse for Science Mathematics and Environmental Education*, Columbus OH. ED351206
- Hollweg, K.S., Taylor, J.R., Bybee, R.W., Marcinkowski, T.J., McBeth, W.C. & Ziodo, P. (2011). *Developing a Framework for Assessing Environmental Literacy*. Washington, DC: North American Association for Environmental Education. Available at <http://www.naaee.net>
- Kollmus, A., & Agyeman, J. (2002). Mind the gap: why do people act environmentally and what are the barriers to pro-environmental behavior? *Environmental Education Research*, 8(3), 239-260.
- Orr, D. 1992. *Ecological Literacy- Education and the Transition to a Postmodern World*, Albany: State University of New York Press. Chapter V. Ecological literacy. Pp. 85-95.
- Orr, D. (1993). Architecture as pedagogy. *Conservation Biology*, 7(2), 226-228.
- Orr, D. (1997). Architecture as pedagogy II. *Conservation Biology*, 11(3), 597-600.
- Stern, P.C. (2000). Toward a coherent theory of environmentally significant behavior. *Journal of Social Issues*, 56(3), 407-424.
- UNESCO-UNEP (1978). The Tbilisi Declaration. *Connect*, 3(1), 1-8.
- UNESCO (2017). *Education for Sustainable Development Goals – Learning Objectives*. Available at: <http://unesdoc.unesco.org/images/0024/002474/247444e.pdf>
- Wals, A.E.J. (2009). Exploring pathways to sustainable living: Emancipatory environmental education. *Encyclopedia of Life Support Systems (EOLSS)*, pp 209-229.



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Optional course reading

- Bright, C. (2003). Chapter 1. A History of Our Future. Pp. 3 – 13, in Linda Starke (Ed). State of the World 2003. W.W. Norton & Company, New York and London.
- Cao, B. (2015). Environment and Citizenship. London and New York: Routledge.
- Cincera, J. & Krajhanzl, J. (2013). Eco-Schools: what factors influence pupils' action competence for pro-environmental behavior? *Journal of Cleaner Production*, 61, 117-121.
- Corral-Verdugo, V. (2012). The positive psychology of sustainability. *Environment, Development and Sustainability*, 14, 651-666.
- Goldman, D., Pe'er, S. & Yavetz, B. (2017). Environmental literacy of youth movement members – is environmentalism a component of their social activism? *Environmental Education Research*, 23(4), 486-514. DOI: 10.1080/13504622.2015.1108390
- Gough, A. (2005). Sustainable Schools: renovating educational processes. *Applied Environmental Education and Communication*, 4, 339-3521.
- Gough, A. (2002). Mutualism: A different agenda for environmental and science education. *International Journal of Science Education*, 24, 1201-1215. DOI: 10.1080/09500690210136611.
- North American Association for Environmental Education 2004. Environmental Education Materials: Guidelines for Excellence. Washington, D.C.: NAAEE. <https://naee.org/eepro/publication/guidelines-excellence-series-set>
- OECD (2013). Greening household behavior: Overview from the 2011 survey. OECD Studies on Environmental Policy and Household Behavior, OECD Publishing.
- Pe'er, S., Yavetz, B. and Goldman, D. (2013). Environmental Education for Sustainability as Values Education - The Challenge for Teacher Educators. In: R. Richenberg, S. Shimoni, S. Kleeman and M. Ben-Peretz (Eds.) *Embracing the Social and the Creative: New Scenarios for Teacher Education*. Maryland: Rowman and Littlefield Publishing Group Inc. and the MOFET Institute.
- Roth, C.E. (1992) Environmental Literacy: Its Roots, Evolution and Directions in the 1990's. Columbus OH: ERIC Clearinghouse for Science, Mathematics and Environmental Education.
- Schwartz, S.H. (2012). An Overview of the Schwartz Theory of Basic Values. *Online Readings in Psychology and Culture*, 2(1) <http://dx.doi.org/10.9707/2307-0919.1116>
- Stern, P.C. (2011). Contributions of psychology to limiting climate change. *American Psychologist*, 66(4), 303-314.
- Stern, P.C. (2000). Toward a coherent theory of environmentally significant behavior. *Journal of Social Issues*, 56(3), 407-424.
- Stevenson, R.B., Brody, M., Dillon, J., and Wals, A.E.J. (2013). *International Handbook of Research on Environmental Education*. American Educational Research Association and Routledge, New York and Oxford
- UNESCO-UNEP (1990). Basic Concepts of Environmental Education. *Connect*, XV(2).
- Wals, A.E.J., Brody, M., Dillon, J., & Stevenson, R.B. (2014). Convergence between science and environmental education. *Science*, 344, 583- 584.

Comments

- (*) The sequence and duration of learning units and topics may change during the course adapting to development in the course
- (**) Conducting the fieldtrip is dependent on possibilities of the department



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Plagiarism

The strength of the university depends on academic and personal integrity. In this course, you must be honest and truthful. Plagiarism is the use of someone else's work, words, or ideas as if they were your own. Here are three reasons not to do it:

1. By far the deepest consequence to plagiarizing is the detriment to your intellectual and moral development: you will not learn anything, and your ethics will be corrupted.
2. Giving credit where it is due but adding your own reflection will get you higher grades than putting your name on someone else's work. In an academic context, it counts more to show your ideas in conversation than to try to present them as sui generis.
3. Tel Aviv University punishes academic dishonesty severely. The most common penalty is suspension from the university, but students caught plagiarizing are also subject to lowered or failing grades as well as the possibility of expulsion.