



SYLLABUS

Learning from Leonardo: Art/Science and Ecomedia Literacy

Instructor: Carl Bybee

Language of Instruction: English

UO Credits: 4

Contact Hours*: 40

SIENA, ITALY

COURSE DESCRIPTION

“Here, then, are the principal signs of Leonardo’s genius: his relentless curiosity, intellectual fearlessness, capacity for intense concentration, attention to detail, holistic memory, commitment to the empirical method, and pervasive systemic thinking. Most of us will not be able to develop these characteristics of genius to anywhere near Leonardo’s degree. But we can all be inspired by his specific ways of work—as a scientist, artist, and designer—and learn valuable lessons from his method. The great challenge of our time is to build and nurture sustainable communities—communities designed in such a way that their ways of life, businesses, economy, physical structures, and technologies respect, honor, and cooperate with nature’s inherent ability to sustain life. The first step in this endeavor, naturally, must be to understand how nature sustains life. It turns out that this involves a new ecological understanding of life, also known as “ecological literacy,” as well as the ability to think systemically—in terms of relationships, patterns, and context.”

Capra, Fritjof. *Learning from Leonardo: Decoding the Notebooks of a Genius*.

“Unlike the traditional media literacy approach that focuses on the study of texts, symbols, and messages as separate from living systems, in my view, in order to encourage green cultural citizenship, Ecomedia Literacy should support learners to reconnect an awareness of media with their physiological impact on living systems; recognize media’s phenomenological influence on the perception of time, space, place, and cognition; understand media’s interdependence with the global economy, and how the current model of globalization impacts living systems; analyze how media form symbolic associations and discourses that promote environmental ideologies; and become conscious of how media impact our ability to engage in sustainable cultural practices by encouraging new uses of media that promote sustainability. Ultimately, the goal of Ecomedia Literacy is to encourage mindfulness for how everyday media practice impacts our ability to live sustainably within earth’s ecological parameters for the present and future. In doing so, it promotes the understanding that media as a whole are a socio-technological ecosystem embedded within living systems.”

López, Antonio. *Greening Media Education: Bridging Media Literacy with Green Cultural Citizenship*

Leonardo left a legacy of genius that ranged from his paintings, including perhaps the most famous painting in history, the Mona Lisa, to his remarkable anatomical studies which include the iconic Vitruvian Man, to his work in engineering, astronomy, sculpture and mathematics. While Leonardo, born in Vinci, Tuscany in 1452, is often held up as the historical epitome of Renaissance genius, he is now being turned to as an inspiration for answering one of the most pressing questions of the 21st century. How do we find a balance between the achievements of modern technology and the fragile health of our planet?

Leonardo da Vinci was working in a time before the split between art and science, between the humanities and science. As Fritjof Capra writes, Leonardo can be seen as working through an ecological world view, where art and science are informed by each other to understand the complex dynamics by which life is sustained and nurtured. Leonardo's attention to "relations, patterns and context" can be seen as inspiring crucial first steps in western culture to map out, in Capra's words, "a new ecological understanding of life" known as "ecological literacy." This ecological, systems worldview can be seen as a means for rethinking the relationship between humans, technology and nature and for re-understanding the spectacular communication technologies of our time.

This course will engage with Leonardo's work as he integrated art and science into what we will call an ecological worldview. We will explore his work on water, earth and plants as well as his work on the human body to explore this integration, reading about his work, reading excerpts from his work and visiting and observing drawings, working models and constructions of his work including the Leonardo Da Vinci Museum and the Uffizi in Florence and the Museo Leonardino di Vinci in Vinci. The course will then engage with Siena through the lens of Ecoliteracy, attending to the historical lessons of sustainability and their representations (including Lorenzetti's 1328 fresco, *The Allegory of Good and Bad Government*, The Fisiocritici Onlus Academy Natural History Museum, the Mezzadria Museum) as well as contemporary placemaking and sustainability practices (for instance Bottega di Stigliano's integration of restaurant and local sourcing and Spannocchia's organic farm initiative) informed by Peter Rowe's *Civic Realism*, his exploration of city and place featuring Siena and Antonio Lopez's *Greening Media Education: Bridging Media Literacy with Green Cultural Citizenship*. Given that the University of Siena was the host for The 10th annual International Sustainable Campus Network 2016 Conference, there will be many opportunities to interact with the University, from courses such as *Environmental Economics* and *New Media and Globalization*, to campus initiatives such as Greening USiena.

COURSE OBJECTIVES

This course examines the intersection of art/science inspired by the work of Leonardo Da Vinci to develop a systems-oriented ecological world view contributing to the concept and practice of Ecoliteracy and Ecomedia Literacy.

Student Outcomes. Students who successfully complete this course will:

- ❖ Improve research and writing skills
- ❖ Improve individual and group presentation skills
- ❖ Understand Leonardo Da Vinci's contribution to a systems-oriented ecological world view
- ❖ Develop an integrated understanding of art/science
- ❖ Develop an understanding of and ability to apply Ecoliteracy in the context of Siena and Tuscany

INSTRUCTIONAL METHODOLOGY

This course will be conducted through readings, outdoor discussions, excursions, films, mini-lectures, journaling, guest lectures and creative writing. Primary texts for our engagement with Leonardo Da Vinci will be Fritjof Capra's *Learning from Leonardo: Decoding the Notebooks of a Genius* and his *A Systems View of Life: A Unifying Vision*, co-authored with Italian chemistry professor Pier Luigi Luisi. Our primary text for engaging with Ecoliteracy and Ecomedia Literacy will be Antonio Lopez's *Greening Media Education: Bridging Media Literacy with Green Cultural Citizenship*. In addition, the class will draw on Richard Kahn's *Critical Pedagogy, Ecoliteracy and Planetary Crisis*, Peter Rowe's *Civic Realism*, and Daniel Goleman's *Ecoliterate: How Educators Are Cultivating Emotional, Social, and Ecological Intelligence*. Key essays will include Roland Barthes "Toward a Psychosociology of Contemporary Food Consumption" and excerpts from Italo Calvino's *Marcovaldo: or The Seasons in the City*. We will plan for at least one visit from representatives of the University of Siena, most likely from their "Environmental Economics" course and/or the *Greening USiena* initiative. Perhaps we will be able to coax Professor Pier Luigi Luisi and/or Professor Antonio Lopez to visit from Rome. Excursions to be drawn from and include those mentioned above: Leonardo Da Vinci Museum and the Uffizi in Florence; the Museo Leonardino di Vinci in Vinci; Lorenzetti's 1328 fresco, *The Allegory of Good and Bad Government*; The Fisiocritici Onlus Academy Natural History Museum; the Mezzadria Museum) as well as contemporary placemaking and sustainability practices (for instance Bottega di Stigliano's integration of restaurant and local sourcing and Spannocchia's organic farm initiative).

COURSE READINGS (Tentative)

- Barthes, Roland, "Toward a Psychosociology of Contemporary Food Consumption" in Counihan, Carole, and Penny Van Esterik, eds. *Food and Culture: A Reader*. 3 edition. New York: Routledge, 2012. (Excerpts)
- Calvino, Italo. *Marcovaldo: Or the Seasons in the City*. 1 edition. San Diego, CA: Mariner Books, 1983. (Excerpts)
- Capra, Fritjof. *Learning from Leonardo: Decoding the Notebooks of a Genius*. 1st edition. San Francisco: Berrett-Koehler Publishers, 2013. (Excerpts)
- Capra, Professor Fritjof, and Pier Luigi Luisi. *The Systems View of Life: A Unifying Vision*. Cambridge: Cambridge University Press, 2014. (Excerpts)
- Goleman, Daniel, Lisa Bennett, and Zenobia Barlow. *Ecoliterate: How Educators Are Cultivating Emotional, Social, and Ecological Intelligence*. 1 edition. San Francisco, CA: Jossey-Bass, 2012. (Excerpts)
- Kahn, Richard, and Richard V. Kahn. *Critical Pedagogy, Ecoliteracy, & Planetary Crisis: The Ecopedagogy Movement*. Peter Lang, 2010. (Excerpts)
- López, Antonio. *Greening Media Education: Bridging Media Literacy with Green Cultural Citizenship*. New York: Peter Lang Inc., International Academic Publishers, 2014. (Excerpts)
- Rowe, Peter G. *Civic Realism*. Reprint edition. Cambridge, Mass.: The MIT Press, 1999. (Excerpts)

METHOD OF EVALUATION (GRADING)

Shared journal writing [weekly topics]	25%
Creative writing assignments [3]	25%

Class presentations and discussion of assigned readings 25%
Final essay/research paper 25%

COURSE OUTLINE (details under development)

Week 1 Leonardo: Artist or Scientist or Both at the Same Time

Week 2 A Systems View of Life

Week 3 The Notebooks

Week 4 Introducing Ecoliteracy

Week 5 Introducing Ecomedia Literacy

Week 6 Cultivating Emotional, Social, and Ecological Intelligence

Week 7 Greening the University of Siena

Week 8 Greening Siena and Tuscany

Week 9 Greening the Media

Week 10 Leonardo and an Ecological Future