

School of Art and Multimedia Design, Netanya College, Netanya, Israel
Learning at the Intersections of Art, Science, Technology, and Culture

Syllabus

Art, Science, Technology, and Culture

Aim of the Course:

New definitions of art will be developed in relation to the impact of scientific advances, digital technologies, and new media on contemporary thought, experience, and cultural values. Semiotic and morphological analysis will provide the primary methodologies for examining new interdisciplinary directions in art as traditional cultures encounter globalization. Exemplary artworks will be studied that explore concepts in the physical, biological, social, behavioral and mathematical sciences, and use such new technologies as digital information systems, computers, robotics, telecommunications, and genetic engineering.

Course Topics:

- Semiotic taxonomy of contemporary art forms
- Morphological analysis of cultures as structures of consciousness
- Interdisciplinary links between the arts, sciences, and cultural values
- Biological artworks: ecology, anatomy, physiology, genetics, biofeedback
- Physical science artworks: materials science, electromagnetics, geology, geography, meteorology, space exploration, global positioning systems
- Social science artworks: community structures, demographics, ethnicity, group behavior, space-time structures of consciousness, ethical and spiritual values
- Behavioral science artworks: creativity, sense modalities, artificial intelligence
- Mathematical art: algorithms, geometry, tessellations, topology, fractals, artificial life
- Kinetic art: kinetic sculpture, light art, cinema, videoart, robotics, sound environments, interactive installation art
- Telecommunications art: web art, fax art, radio, television, telephone, videoconferencing
- Information systems art: digital photography, video installations, computer games, interactive documentary, virtual reality, data bases, flow charts

Course requirements:

Attendance and participation in class
Reading bibliography
Research and creative project

Bibliography:

M. Alexenberg, *The Future of Art in a Digital Age: From Hellenistic to Hebraic Consciousness*. Bristol, UK: Intellect Books, 2006.

M. Alexenberg, "Semiotic Redefinition of Art in a Digital Age," D. L. Smith-Shank (ed.), *Semiotics and Visual Culture: Sights, Signs, and Significance*. Reston, VA: National Art Education Association, 2004.

M. Alexenberg, "From Science to Art: Integral Structure and Ecological Perspective in a Digital Age," Mary Stokrocki (ed.), *Interdisciplinary Art Education*, Reston, VA: National Art Education Association, 2005.

R. Ascott and E. A. Shanken, *Telematic Embrace: Visionary Theories of Art, Technology, and Consciousness*. Berkeley: University of California Press, 2003.

C. Harris, *Art and Innovation: The Xerox PARC Artist-in-Residence Program*. Cambridge, MA: MIT Press, 1999.

L. Manovich, *The Language of New Media*. Cambridge, MA: MIT Press, 2001.

J. Naisbitt, *High Tech High Touch: Technology and our Accelerated Search for Meaning*. London: Nicholas Brealey, 2001.

S. Wilson, *Information Arts: Intersections of Art, Science, and Technology*. Cambridge, MA: MIT Press, 2002.

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