

LELAND GIOVANNELLI

CURRICULUM VITAE

Teaching Professor, Herbst Program for Engineering, Ethics & Society
 College of Engineering and Applied Science
 University of Colorado Boulder
 Boulder, CO 80309-0422

EDUCATION

- Ph. D., University of Chicago, 1999.** Department of History.
 History of Science concentrations: History of European Astronomy through the Renaissance;
 Biological Science in Ancient Greece and Rome. Additional history field: Political Thought
 of the Italian Renaissance.
- M.A., University of Chicago, 1979.** Committee on General Studies in Humanities.
 Concentrations: European Science from Antiquity to Newton; Italian Renaissance: Politics, Art,
 and Literature.
- B.A., St. John's College, Annapolis, MD, 1978.**
 Concentrations: Great Books of the Western World, emphasis in mathematics and science.

EMPLOYMENT

**Herbst Program for Engineering, Ethics & Society, College of Engineering and Applied
 Science, (CEAS), University of Colorado Boulder.**

Teaching

- 2017 to present: Teaching Professor (in CEAS's first Teaching Professor cohort).
 2003-2017: Senior Instructor.
 1999-2003: Assistant Professor.
 1993-1995: Senior Instructor.
 1991-1993: Instructor.
 1989-1991: Discussion Moderator (as Graduate Student Teaching Assistant).

Administration

- 2015-2019: Director. 6/1/15 - 12/31/19.
 2012-2015: Co-Director. 7/1/12 - 5/31/15.
 1993-1995: Associate Director.
 1991-1993: Program Coordinator.

Herbst courses taught. *Asterisk = externally commissioned and/or grant-supported course.*

HUEN 1010: Engineering, Ethics & Society. (Was *Humanities for Engineers.*) Surveys
 multiple humanistic themes and fields: genres include short story, lyric poetry, science
 fiction, medieval epic, theater; texts include philosophy, history, art, ethnic and women's
 studies, etc.

***HUEN 1010-800.** Same as above, but taught exclusively to ESL/ELL students: discussion
 proceeds at a slower pace, with lessons on grammar, social customs, language, etc.
Supported by Engineering Excellence Fund Grant. Piloted in fall, 2015.

***HUEN 1850: History of Engineering: The Social Impact of Technology.** Includes
 agriculture, metallurgy, construction, transportation, communication, warfare, etc., up to
 the Atomic Age. Extensive use of original texts stresses social consequences of STEM
 change. *Commissioned as gateway H&SS course for the Goldshirt Program, BOLD
 Center, CEAS. Piloted in fall, 2009; required for each cohort until 2016.*

HUEN 2100: History of Science and Technology to the Age of Newton. Includes warfare,
 astronomy, construction, mathematics, medicine, etc. Extensive use of original texts.

- HUEN 2120: History of Modern Science from Newton to Einstein.** Starting from the Scientific Revolution, includes chemistry, electromagnetism, classical atomic theory, theories of evolution, etc. Extensive use of original texts.
- HUEN 2130: History of Modern Technology from Steam Age to Atomic Age.** Features textiles, mining, steel-production, steam power, railroads, etc., plus social changes in labor, legislation, etc. Extensive use of original texts.
- *HUEN 2843: Women and Engineering.** Combines women's history of engineering with guest-lectures by female engineers; explores multiple forms of objectification and helps students understand how to oppose them. *Funded by Innovative Inclusion Ideas, Associate Dean for Education in CEAS, and Engineering Excellence Fund* to support women in engineering. (2843 = Special Topics.)
- *HUEN 2360/3360: Gaining a Global State of Mind for Effective Engineering Practice.** Examines cultural attitudes (towards, e.g., gender, power, fate, time, etc.) across multiple cultures; includes units on history, economics, comparative religion, and environment; reveals students' own values through extensive use of original texts. *Commissioned as gateway course for the CEAS Global Engineering Minor. Piloted in fall, 2016; to be taught annually.*
- HUEN 3100: The EES Seminar.** (Was *Advanced Humanities for Engineers*.) Explores literature and philosophy; includes short story, lyric poetry, theater, philosophy, slave narrative, as well as acting and reproducing artwork.
- HUEN 3200: Humanities for Engineers 2** (discontinued). Deep-dive after HUEN 3100's survey; past sections included *History and Film, Literature and Film*, and various works of fiction in historical context.
- HUEN 3543: History of Western Medicine.** Includes ancient and classical medicine, Islamic contributions, Renaissance innovations, the French hospital system, germ theory, anesthesia, women in medicine, etc. Extensive use of original texts.
- HUEN 4100: Humanities for Engineers 3.** Multiple versions, e.g., *Heroism in Plutarch, Kierkegaard, and Kurosawa* and *Philosophy and Literature of the Long 19th Century*.
- HUEN 3843-904: High-contact-hour independent study.** Credits and subjects as needed:
 Philosophy, Literature, and the Arts.
 Memoir and Persuasion: Marcus Aurelius and Augustine.
 Origins of Existentialism.
 Theme and character in *Les Misérables*.
 History of American Film by Decade.
 History and Literature, from Dante to Shaw.
 Folkloric Origins of Grimm's Fairy Tales.
 Western Philosophy from pre-Socratics to 19th century.
 History of science.
 Using History of Science to Enhance Secondary School Science Courses.
 History of Physics in the Long 19th Century.
 History of Astronomy from Antiquity through Newton.
 History of Chemistry from Antiquity to the Bohr Atom.
 William Harvey and the Circulation of the Blood.
 Social sciences and engineering-related.
 Ethical Construction in Earthquake Zones: Christchurch, New Zealand.
 History of Aviation to the 1960s.
 Readings in Globalization.
 Objectification of the Other.
 A Journey of Self-Discovery through Film.
- *No course number:** Summer workshop for international graduate students; see service. *Supported by multiple CEAS grants; see Grants and Awards, below.*

Other CU courses taught:

- FYSM 1000-042: Ethical Person, Ethical Engineer. Team-taught with Dr. Christy Bozic. First-Year Seminar pilot, combining humanist perspective (Giovannelli) with engineering management perspective (Bozic).
 HIST 4314: History of Science from Ancients to Newton.
 HIST 4324: History of Science from Newton to Einstein.
 HIST 4020: History Capstone (Team-taught): History of Science, Ancients to Einstein.
 CATECS: Technical Writing for Engineers. Distance learning video course.

St. John's College, Annapolis, MD.

- 1985-1989: Tutor (title of all faculty members). Course content taught:
 Philosophy and literature of ancient Greece and Rome.
 Introductory ancient Greek.
 European philosophy and literature from the fall of Rome to the 17th century.
 Western mathematics and astronomy from Euclid to Newton.
 Extra-curricular algebra review workshops.

Commonwealth School, Boston, MA.

- 1979-1985: High School Teacher. Courses taught:
 Algebra II, Geometry, Beginning Calculus.
 Ancient, Medieval, and Renaissance History courses.
 Philosophy (multiple courses and themes).
 Epic and Scripture: selections from the *Iliad* and the *Bible*.
 Expository Writing.

Kennedy School of Government, Harvard University, Cambridge, MA.

- 1982, 1983: Special Instructor in Mathematics, Mason Fellowship Summer Program. Taught math refresher course for career-changing adults seeking an MA in Public Policy.

Simon's Rock College, Great Barrington, MA.

- 1980, 1981: Assistant Coordinator, Summer Math Program for Junior High School Students.

SELECTED SERVICE AT CU BOULDER, beyond directorial functions.

- Fall, 2020. First-Year Seminar Advisory Committee, charged with review of proposals.
 January 2020. Invited speaker at Mechanical Engineering Department Retreat.
 2018-2019. First-Year Experience Advisory Committee. Included attending and presenting at multiple orientation workshops in summer 2019.
 2018-2019. Invited presenter for two graduate teaching workshops in Department of Philosophy.
 2017, 2018. Designed and taught one-week summer workshop for international graduate CEAS students, including 15 hrs. of cultural orientation, interactive discussion and practice teaching.
 Spring 2017. Participant at multiple CEAS education workshops and visioning sessions.
 2016-2019. Faculty advisor, Educational Excellence Fund Committee.
 2016-2017. Herbst representative to Climate of Writing Committee.
 2012-2019. Herbst representative to UEC, CEAS; voting member since November 2017.
 2012-2019. Humanities & Social Science Advisor, CEAS, and Chair of the CEAS Humanities and Social Science Committee, charged with reviewing courses for H&SS content.
 2013-2014. Faculty advisor for student-run *Colorado Engineer Magazine*.
 2012-2013. Chair, Writing Evaluation Committee for ABET and beyond.

PUBLICATIONS

- Multiple *Course Readers* of highly edited selections from original sources. These readers are highly interdisciplinary and include introductions to individual texts, plus reading notes and questions. *Seminar Readers* include detailed prompts and how-to guides to painting, music, and film. COVID versions were digital, not print.

- “The Motorcycle’s First Century: Materials, Mechanics and Culture,” in “Roundtable: Teaching Motorcycle Studies,” *International Journal of Motorcycle Studies*, Fall 2012. Peer-reviewed on-line journal.
- “Teaching the Design History of the Motorcycle,” *International Journal of Motorcycle Studies*, July 2006. Peer-reviewed on-line journal.
- “Reconstructing Thales,” book review of Patricia O’Grady, *Thales of Miletus* (Ashgate, 2002) for *Metascience*, Vol. 12, No. 2 (July 2003): 231-234. Peer-reviewed.
- “Conceptual Difficulties in Teaching History of Science and Technology to Engineering Students.” *Annual Conference Proceedings*, Michigan Academy of Science, Arts, and Letters, Vol. 34 (March 2003): 437-444. Peer-reviewed.
- Herbst Seminar Workbook*, American Heritage Publications, 1995. Workbook to accompany the Herbst Seminar of Humanities; 263 pp.; designed for student and faculty use.
- “Teaching Students to Think for Themselves,” *Annual Conference Proceedings*, American Society for Engineering Education, 1991: 2008-2014.

CONFERENCE PRESENTATIONS

- “Global Engineering: What do we mean by it, and how are we preparing our students for it?” Co-author: Robyn Sandekian. Annual ASEE Conference. June, 2017.
- “Exploiting Existing Stereotypes in Engineering Education.” (One-third of integrated presentation titled *Culture, Ethnicity, and Gender in Engineering Education*.) Intersections Symposium on Race, Gender, and Sexuality in Research and Teaching, CU Boulder, November, 2016.
- “Conceptual Difficulties in Teaching History of Science and Technology to Engineering Students.” Annual Conference, Michigan Academy of Science, Arts, & Letters. March, 2002.
- “Teaching the Design History of the Motorcycle.” Annual Conference, Michigan Academy of Science, Arts, and Letters. March, 2002.
- “The Path to Freedom in *The Narrative of the Life of Frederick Douglass*.” 2nd International Conference on Slave Narratives, Wilberforce University, OH. October, 2001.
- “A Humanities Course for Engineering Students.” Connections Conference, sponsored jointly by Tempe University and DeVry University of Technology, AZ. November, 2001.
- “Grading Group Participation.” Annual Conference, American Society of Engineering Education. June, 1993. (Also given as a workshop presentation for the Faculty Teaching Excellence Program, University of Colorado Boulder.)
- “So, Did They Learn to Think for Themselves?” Annual Conference, American Society of Engineering Education. June, 1992.
- “Teaching Students to Think for Themselves.” Annual Conference, American Society of Engineering Education. June, 1991.

OTHER SPEAKING ENGAGEMENTS

- Invited speaker at Western Academic Talent Search Colorado State Ceremony, Coors Event Center. (For high-achieving K-12 students.) May, 2019.
- Guest Lecturer on the History of Medicine. Two-hour guided discussion to launch IPHY 2500, *Perspectives in Health and Medicine*, at CU Boulder, annually since 2008 to the present. (Same presentation, September, 2013, at Anschutz campus.)
- Guest lecturer on Greek Science, Mathematics, and Technology. Two lectures for HUEN 3350: *Gods, Heroes, and Engineers*, at CU Boulder. Annually since 2015.
- Guest Speaker on American college education at the Center for International Education (CIE). One-hour presentation on making the transition from CIE to college courses. June, 2016.
- Pre-performance panel moderator, panel on Antarctic exploration, for Longmont Theatre’s production of *Terra Nova*, by Ted Tally. Longmont, CO. January, 2009.
- Pre-performance panelist, panel on scientific responsibility, for Boulder Ensemble Theatre Company’s production of *Copenhagen*, by Michael Frayn. Boulder, CO. February, 2008.

Panelist, panel on “Informational Technology Ethics: Napster, Copyright, and Everything After,” for the Japha Ethics Symposium, University of Colorado. Boulder, CO. October, 2003.
 Invited Teaching Effectiveness Lecturer. “Undergraduate Engineering Education: The Right Preparation for Law School,” for Franklin Pierce Law Center. Concord, NH. November, 2002.

ASEE SERVICE: American Society for Engineering Education, Liberal Education Division.

1991-1992: Junior Program Chair.

1992-1993: Senior Program Chair.

1993-1994: Division Secretary.

AWARDS and GRANTS

2017: Increase in Fixed Commitment, from the Engineering Excellence Fund to the Herbst Program of Humanities: \$36,000, to begin in 2018.

2017: Grants from Engineering Excellence Fund (\$3000), the Associate Dean for Education (\$1500), and Inclusive Innovation Ideas (\$1500): a total of \$6000 to support course development and teaching of *Women and Engineering*. Pilot course in January, 2018.

2017: Applied for, but did not receive, NSF Grant for Ethical Engineering.

2017: Grant from CEAS Dean of Graduate Education: \$4000 for one-week Workshop for international graduate engineering students; covered course development, salary, and TA.

2016: Grant from Engineering Excellence Fund: \$23,320 for *Gateway Course for the New Global Engineering Minor*; covered course development and RA/TA salary.

2016: Grant from Engineering Excellence Fund: \$1500 for monthly film series on *Science Fiction in Film*; covered rental of Fiske Planetarium and projectors.

2015: Grant from Engineering Excellence Fund: \$22,400 for ESL version of first-year Herbst Program seminar, HUEN 1010; covered fall pilot and multiple sections until 2017.

2013: Sullivan-Carlson Innovation in Education Award, College of Engineering and Applied Science at CU-Boulder.

2011: Professor with the Biggest Heart Award, Bold Center, College of Engineering and Applied Science at CU-Boulder.

2010: Dean’s Award for Outstanding Teaching, College of Engineering and Applied Science at CU-Boulder.

1993: Outstanding Educator Award, American Society for Engineering Education.

LANGUAGES

Reading and conversation: French and Italian.

Amateur pursuit: Chinese, Arabic, and American Sign Language.

CERTIFICATION

Human Research Social Behavioral Research Investigators and Key Personnel 1, Basic Course.
 May 2019.