

UCLA Leaders in Sustainability Graduate Certificate Program 2011

Program Background

“Sustainability” (loosely defined as the simultaneous consideration of economic, environmental and social factors) has become a key element in decision-making in many areas of business, public policy, public health and increasingly in the natural and social sciences as well. By definition, sustainability requires a multi-disciplinary perspective. The Leaders in Sustainability (LiS) Graduate Certificate aims, first, to provide a mechanism for graduate students in any discipline at UCLA to pursue their interests in sustainability, and second, to attract top-caliber students with these interests to UCLA’s graduate schools. The LiS Certificate builds on the existing LiS program, which was first started in 2006-07 from the Anderson School and which has been administered by the Institute of the Environment and Sustainability (IoES) since 2009. The program has been quite successful with 60 graduates so far and more than 160 students currently enrolled.

Admissions Requirements

The certificate is aimed at graduate students (masters and doctoral) who will become decision-makers in various types of organizations (businesses, non-profits, governmental, academic, etc...) and who will have to address the three dimensions of sustainability. The certificate is open to all graduate students at UCLA.

To participate in the certificate program, students must be currently enrolled at UCLA, submit a CV, and fill in an online form answering the following questions:

(See <http://www.ioe.ucla.edu/article.asp?parentID=9120>)

1. Why are you interested in Leaders in Sustainability?
2. What is your experience in sustainability (work/volunteer etc.)?
3. How does your academic focus relate to sustainability?
4. How will this program help you achieve your career goals?

Curriculum

The requirements for successful completion of the certificate are four courses (16+ units) and the completion of a Leadership Project. Details are as follows:

- Leaders in Sustainability core course (4 units)
 - All students will participate in a core graduate course on sustainability offered by IoES faculty during the winter quarter.¹
 - This course is an introduction to the concept of sustainability and the leadership skills students will need to make a positive impact on their chosen dimension of sustainability. This class combines environmental, social and economic perspectives in a wide range of contexts, using a mix of class formats to bring out the unique multidisciplinary nature of the audience.

¹ Note: IoES does not currently offer graduate courses. In the past, this core course has been offered via the urban planning department or the environmental science and engineering program. IoES anticipates being able to offer graduate-level courses by Fall 2011.

- 3 or more additional graduate-level courses (at least 12 units, or equivalent in semester units)
 - Courses are focused on issues of sustainability or address a closely-related topic.
 - Students select courses from economics, engineering, environment, law, management, natural sciences, public health, public policy, social sciences, and urban planning, among others (see Appendix A for a list of sample courses).
 - Students may also petition for approval of another appropriate course(s).
 - At least *one* of these three courses must be *outside* a student's home school.
 - Each student must submit a study plan that includes the proposed set of courses and Leadership project, for approval by the LiS Director by the fall of the student's graduation year. The LiS Director will determine, on a case-by-case basis, whether the proposed course portfolio exhibits sufficient evidence of multidisciplinary before approving the proposed course list. I.e., no courses are automatically "pre-approved".
- Sustainability Leadership project
 - All students must complete a project related to sustainability.
 - These projects may be part of the students' regular departmental graduation requirements.
 - LiS faculty will assist students in identifying suitable group or individual projects, or students may propose their own projects, subject to the LiS Director's approval.
 - Examples of past projects include:
 - starting a nonprofit organization with UCLA alums, called the Los Angeles Sustainability Collaborative, that funds graduate students to conduct research on issues of environmental sustainability;
 - co-organization of the annual California Clean Innovation conference;
 - serving as Editor in Chief of the *UCLA Journal of Environmental Law and Policy*;
 - helping initiate, plan, and implement the first Bicycle and Pedestrian Count for the City of Los Angeles to gauge how infrastructure is being used to measure changes over time.
- In addition to the formal requirements of the certificate program, all students are encouraged to participate actively in relevant events organized by the Institute of the Environment and Sustainability, including seminars, conferences, etc.

Completion Requirements

Students must pass the four required courses and satisfactorily complete a Leadership project. The minimum grade point average is the same as for the student's graduate degree program(s) in the department or interdepartmental program.

Evidence of a student's satisfactory completion of a certificate program will be provided by the Institute of the Environment and Sustainability.

Student Assessment

Ideally students register for the certificate early during their graduate studies, and participate actively in courses and events throughout their time at UCLA. However, students can enroll for the certificate at any time during their graduate studies.

Each student must submit a study plan that includes the proposed set of courses and Leadership project, for approval by the LiS Director by the fall of the student's graduation year.

Faculty Expertise

The certificate is a joint venture of many graduate programs at UCLA, with support from faculty in a wide range of schools at UCLA, and is hosted and administered by the IoES. There are two co-directors of the program, currently Professor Charles Corbett of the UCLA Anderson School of Management and Professor Magali Delmas of the Institute of the Environment and Sustainability.

An interdisciplinary executive board composed of faculty from different departments/schools oversees the certificate program, and an advisory board provides broad guidance for the future development of the certificate and ensures broad representation within the program.

LiS Executive Board:

Charles Corbett (co-director)	Professor, Anderson School of Management
Magali Delmas (co-director)	Professor, Institute of the Environment and Sustainability
JR DeShazo	Associate Professor, Dept. of Public Policy, School of Public Affairs
Sean Hecht	Lecturer, School of Law, Executive Director, Environmental Law Center
Tim Malloy	Professor, School of Law
Vasilios Manousiouthakis	Professor, Dept. of Chemical & Biomolecular Engineering

LiS Advisory Board:

Randall Crane	Professor, Dept. of Urban Planning
Christopher Erickson	Professor, Anderson School of Management
Deborah Estrin	Professor, Dept. of Computer Science
Eric Hoek	Associate Professor, Dept. of Civil and Environmental Engineering
Sanford Jacoby	Professor, Anderson School of Management
Jennifer Jay	Associate Professor, Dept. of Civil and Environmental Engineering
William Kaiser	Professor, Dept. of Electrical Engineering
Thomas Smith	Professor, Institute of the Environment and Sustainability and Dept. of Ecology and Evolutionary Biology
Romain Wacziarg	Associate Professor, Anderson School of Management

Number of Students

The LiS program was developed in Winter 2007 with 18 students piloting the program. The program was launched in Fall 2008. In 2007-2008, there were 49 students enrolled with six graduating, in 2008-2009 there were 99 students enrolled with 29 graduating, and in 2009-2010 there were 137 students enrolled with 24 graduating.

In Fall 2010 we received 68 new applications and we anticipate that enrollment will increase somewhat in the next year or two. We may decide to cap enrollment if interest continues to increase too much, in which case we will develop more stringent admissions requirements.

Students who enroll in the program are indeed coming from all over campus. In 2009-2010 the 137 students represented 30 different programs with enrollment weighted toward the professional schools (see Appendix 2).

Administrative Contacts

Co-Directors of LiS: Prof. Charles Corbett, Anderson, charles.corbett@anderson.ucla.edu, x51651
Prof. Magali Delmas, IoES, delmas@ioes.ucla.edu, x59310

IoES Academic Director: Dr. Cully Nordby, nordby@ucla.edu, x75607

IoES Student Affairs Officer: Royce Dieckmann, rdieckmann@ioes.ucla.edu, x69193

Appendix 1. Sample courses for UCLA Graduate Leaders in Sustainability program

Department	Course #	Course title
Architecture and Urban Design	CM247A	Introduction to Sustainable Architecture and Community Planning
Architecture and Urban Design	442	Building Climatology
Chemical Engineering	219	Pollution Prevention for Chemical Processes
Chemical Engineering	223	Design for Environment
Civil and Environmental Engineering	226	Geoenvironmental Engineering
Civil and Environmental Engineering	245A	Aquatic Inorganic Chemistry
Civil and Environmental Engineering	250A	Surface Water Hydrology
Civil and Environmental Engineering	250B	Ground Water Hydrology
Civil and Environmental Engineering	250C	Hydrometeorology
Civil and Environmental Engineering	252	Engineering Economic Analysis of Water and Environmental Planning
Civil and Environmental Engineering	259A	Civil/Environmental Engineering Seminar Series
Civil and Environmental Engineering	M262A	Introduction to Atmospheric Chemistry and Air Pollution
Civil and Environmental Engineering	266	Environmental Microbiology
Civil and Environmental Engineering	266	Environmental biotechnology
Environmental Health Sciences	203	Seminar: Ecotoxicology
Environmental Health Sciences	208	Built Environment and Health
Environmental Health Sciences	212	Applied Ecology
Environmental Health Sciences	225	Atmospheric Transport and Transformations of Airborne Chem.
Environmental Health Sciences	C235	Environmental Policy for Science and Engineering
Environmental Health Sciences	M239	Pollution Prevention
Environmental Health Sciences	240	Fundamentals of Toxicology
Environmental Health Sciences	C252D	Properties and Measurement of Airborne Particles
Environmental Health Sciences	C257	Risk Assessment and Standard Setting
Environmental Health Sciences	258	Identification and Analysis of Hazardous Waste
Environmental Health Sciences	C264	Fate and Transport of Organic Chemicals in the Aquatic Environment
Law	M286	Land Use Regulation
Law	M290	Environmental Law
Law	292	Water Law
Law	293	Public Natural Resources Law
Law	326	Health Law and Policy
Law	342	Climate Law and Policy
Law	350	Energy Law, Policy and Climate Change
Law	360	Environmental Policy for Science, Engineering and Law
Law	419	Environmental Law Clinic
Law	438	Public Policy Clinic: Land Use: The Environment and Local Govt
Law	441	Environmental Aspects of Business Transactions

Law	505	Seminar: Sustainability, Green Development, and the Law
Law	513	Environmental Law Special Topics: Environmental Law in the Supreme Court
Law	527	Seminar: Environmental Law & Policy Seminar: International Environmental Law
Law	554	
Law	560	Regulation of the Business Firm
Law	719	Environmental Law Clinic
Law	909	Topics: Environmental Law
Management	246A	Business and the Environment
Management	246C	Management in Public and Private Nonprofit Sectors
Management		Industrial Ecology
Management	298D	Special Topics in Mgmt: Law and Mgmt of Nonprofits
Management	298D	Special Topics in Mgmt: Green Energy Entrepreneurship
Management	298D	Special Topics in Mgmt: Social Entrepreneurship
Public Policy	M222	Transportation Economics, Finance, and Policy
Public Policy	M223	Transportation and Environmental Issues
Urban Planning	202A	Land Use
Urban Planning	219	Special Topics in the Built Environment: Green Collar Jobs, Green Buildings and Social Justice
Urban Planning	219-2	Special Topics in the Built Environment: Built Environment and Health
Urban Planning	234B	Conservation in Inhabited Landscapes
Urban Planning	M254	Transportation, Land Use, & Urban Form
Urban Planning	M255	Transportation Planning
Urban Planning	M258	Transportation and Environmental Issues
Urban Planning	C260	Environmental Politics and Governance
Urban Planning	262	Urban Environmental Problems: Water Resources
Urban Planning	M264A	Environmental Law
Urban Planning	M264B	Environmental Law
Urban Planning	C265	Environmentalism: Past, Present, Future
Urban Planning	269	Special Topics in Environmental Analysis and Policy: Smart Growth
Urban Planning	269	Special Topics in Environmental Analysis and Policy: Green Building and Development
Urban Planning	284	Looking at Los Angeles
Urban Planning	291	Intro to Sustainable Architecture & Community

Appendix 2. Programs represented by students enrolled in the Leaders in Sustainability program 2009-2010.

<u>Degree Program</u>	<u># Students</u> *
MBA	35
M.A. Urban Planning	33
M.A. Public Health	14
J.D.	10
Fully Employed MBA	7
D. Environmental Science and Engineering	6
M.A. Public Policy	5
Executive MBA	2
Ph.D. Geography	2
Ph.D. Atmospheric and Oceanic Sciences	2
Ph.D. Electrical Engineering	2
Ph.D. Molecular Biology	2
M.A. Architecture	2
Ph.D. Civil and Environmental Engineering	2
M.A. Latin American Studies	1
M.S. Biostatistics	1
Ph.D. Mechanical Engineering	1
Ph.D. Molecular Toxicology	1
Ph.D. Computer Science	1
M.A. Library and Information Sciences	1
M.S. Environmental Health Sciences	1
M.S. Mechanical Engineering	1
Ph.D. Materials Science and Engineering	1
M.S. Materials Science and Engineering	1
Ph.D. Community Health Sciences	1
Ph.D. Asian Languages and Cultures	1
Ph.D. Chemistry (Physical Chemistry)	1
Ph.D. Health Services	1
M.S. Manufacturing Engineering	1
M.S. Nursing	1

* Students in dual programs were double counted.