

July 11, 2013

**BRUNO NACHTERGAELE, Chair**  
Academic Senate – Davis Division

**Re: Proposed major in Sustainable Environmental Design**

Dear Bruno,

At the May 10, 2013 meeting, the CA&ES Executive Committee voted unanimously to support the proposed major in Sustainable Environmental Design housed in the Department of Human Ecology pending final approval from the Committee on Undergraduate Majors and Courses (UMAC). At a prior meeting of the Executive Committee (EC), the proposal was discussed and clarification was requested by the EC relative to three points. The department has provided the requested clarification (attached) and UMAC has unanimously endorsed the proposed major (attached). The college looks forward to the approval of the proposed major in Sustainable Environmental Design and the implementation of this major in the Department of Human Ecology. The major is consistent with strengths of the campus and the College of Agricultural and Environmental Sciences in sustainable systems in agriculture and in the environment.

Sincerely,



Chris Calvert, Chair  
CA&ES Executive Committee

/bn

Attachments

c: Mary Delany, Interim Dean  
Ken Shackel, chair, UMAC  
Ana Stevenson, academic counselor, CA&ES Dean's Office  
Patsy Eubanks Owens, chair, Human Ecology

June 26, 2013

**To: Chris Calvert**  
**Chair, College Executive Committee**  
**RE: Proposal for a new Sustainable Environmental Design major**

Dear Chris,

The Undergraduate Majors and Courses Standing Committee has reviewed the proposal for a Sustainable Environmental Design major, and are supportive of the major, particularly as it will fill an important gap for students interested in Landscape Architecture (LDA). Our only concern was that the proposal made clear the relation of the new major to the existing pre-LDA track, and that has been addressed.

Sincerely,



Ken Shackel, Chair  
Undergraduate Majors & Courses  
Standing Committee

cc: Diane Ullman  
Patsy Owens  
Stephen Wheeler  
Ana Stevenson  
UMAC



DEPARTMENT OF HUMAN ECOLOGY  
LANDSCAPE ARCHITECTURE PROGRAM  
UNIVERSITY OF CALIFORNIA, DAVIS  
ONE SHIELDS AVENUE  
DAVIS, CALIFORNIA 95616-8638  
P: (530) 752-3907  
F: (530) 752-1392  
W: <http://lda.ucdavis.edu/>

Prof. Chris Calvert  
Chair, CA&ES Executive Committee  
150 Mrak Hall  
U.C. Davis  
Davis, CA 95616

Dear Chris:

We would like to respond to the three questions raised by the Executive Committee about our proposed Sustainable Environmental Design (SED) major:

*1. How many students are expected to be in this new major? (How many students do not pass the "portfolio" test now?)*

We anticipate that in its first several years the new major will have between 20-40 students per year, growing to 40-60 or more after five years. There will be two sources of students: those not accepted into the accredited BSLA degree, and others from all over campus who want to study sustainable development and environmental design but don't want to be landscape architects. We anticipate this major could also help to address the increase in students as a result of the 2020 initiative.

Our records show the following admissions rates for our BSLA major: 2007 43 out of 88; 2008 39 out of 77; 2009 43 out of 76; 2010 38 out of 64; 2011 31 out of 39; 2012 39 out of 55; 2013 37 out of 53. Over these seven years, in other words, we turned away an average of 26 students per year. However, the true size of the applicant pool is probably larger than these numbers indicate, since we have been trying hard in recent years to discourage students from applying to the BSLA unless they have a reasonable chance of admission. Also, students themselves choose not to pursue the pre-LDA track if they think their chances of admission to the BSLA are not good or if they hear stories about a previous year in which many applicants did not get in.

We don't want to view our new major as purely a fallback option for those not admitted to the BSLA, but believe that it will be of legitimate interest to many students interested in sustainability issues and urban design. We note that student interest in the Sustainable Agriculture and Food Systems major has grown greatly since that major was introduced two years ago, and believe that as the "#1 Cool School" UC Davis is well-positioned to draw applicants interested in sustainability topics. Since most professional education in urban planning, architecture, and landscape architecture is at the graduate level, we believe that our SED major will provide an attractive undergraduate preparation for students with these career tracks in mind, but not ready to commit to the intensive undergraduate landscape major.

2. What courses justify a B.S. rather than a B.A.?

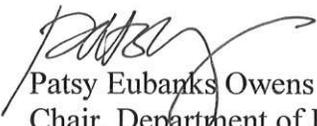
Consistent with the general approach of this College, the SED major would require students to have a foundation in the natural and social sciences and would emphasize design and planning strategies rooted in scientific knowledge. Students would be required to take Biological Sciences 2A and 2B as well as courses in Statistics, Physical Sciences, Political Science, Sociology, and Economics. Following those introductory requirements, our required LDA 50 Site Ecology course is a rigorous introduction to scientific analysis of real-world sites.

At the upper division level, the core required classes—LDA 140 Green Building, LDA 141 Community Participation, and LDA 142 Applying Sustainable Strategies—would apply knowledge from the natural and social sciences as well as professions such as urban planning, landscape architecture, architecture, and engineering to the solution of sustainability challenges. Students pursuing the honors track would take an additional Research Methods in Environmental Design class and prepare a Senior Thesis based on such research methods. Throughout the major, in other words, we feel that an SED education would be based on a strong grounding in the sciences.

3. Connection to the M.S. proposed as accredited?

Our program is not pursuing an M.S. degree currently, although we may do so eventually. Such a degree requires a lengthy approval process including acquiescence by the corresponding U.C. Berkeley department, which objected once before to a proposed graduate degree in our program. We also believe that there is value in maintaining our professional undergraduate degree, since there are only two accredited undergraduate landscape architecture programs in California and ours is the only in the UC system.

Sincerely,

  
Patsy Eubanks Owens  
Chair, Department of Human Ecology



DEPARTMENT OF HUMAN ECOLOGY  
LANDSCAPE ARCHITECTURE PROGRAM  
UNIVERSITY OF CALIFORNIA, DAVIS  
ONE SHIELDS AVENUE  
DAVIS, CALIFORNIA 95616-8638  
P: (530) 752-3907  
F: (530) 752-1392  
W: <http://lda.ucdavis.edu/>

Mary Delany, Acting Dean  
College of Agricultural & Environmental Sciences  
150 Mrak Hall  
U.C. Davis  
Davis, CA 95616

Dear Dean Delany:

The Department of Human Ecology would like to request approval of a new Sustainable Environmental Design major within its Landscape Architecture & Environmental Design program.

We ask that you forward this request to the CA&ES Undergraduate Majors and Courses Committee for its consideration, and then onward to the Undergraduate Council with your positive recommendation.

This proposal responds to the 2008 Landscape Architecture Undergraduate Program Review Report which stated "We recommend that the faculty move quickly to: 1) establish a non-accredited 'pre-LA' major (e.g. Sustainable Design and Planning); and/or 2) transition the accredited undergraduate LA major into an accredited graduate degree." As you know, our LDA major has been impacted for many years, with students turned away annually during our sophomore year admissions process. The new major allows us to serve a greater number of students with existing faculty resources, and also is a way to help CA&ES and UCD expand their sustainability course and curricular offerings, further solidifying UCD's role as the "#1 Cool School."

We have discussed this new major numerous times with Associate Dean Diane Ullman over the past five years, as well as with representatives of other programs and departments that might in any way be affected, including Community and Regional Development, Environmental Science and Policy, Design, and Civil and Environmental Engineering. We believe that this degree is significantly different from programs offered by these other units in ways spelled out in the attached proposal, and does not create conflicts.

Attached is the proposal for the new major as well as other supporting documentation. Please let us know if you need other materials or would like to talk in person.

Thanks very much for your assistance.

Sincerely,

A handwritten signature in black ink, appearing to read "Patsy E. Owens".

Patsy Eubanks Owens, Chair  
Department of Human Ecology

**SUSTAINABLE ENVIRONMENTAL DESIGN**  
**UNDERGRADUATE MAJOR PROPOSAL**

Landscape Architecture + Environmental Design Program  
Department of Human Ecology  
University of California at Davis  
One Shields Ave.  
Davis, CA 95616

**MARCH 2013**

## **Sustainable Environmental Design**

### **Undergraduate Major Proposal**

#### **Introduction**

This proposal describes a new Sustainable Environmental Design (SED) major that the Landscape Architecture + Environmental Design Program (LDA) proposes to run in order to meet the following objectives:

- 1) To respond to the 2008 Landscape Architecture Undergraduate Program Review Report which stated “We recommend that the faculty move quickly to: 1) establish a non-accredited ‘pre-LA’ major (e.g. Sustainable Design and Planning); and/or 2) transition the accredited undergraduate LA major into an accredited graduate degree.” This recommendation was made in light of the fact that enrollment in the Landscape Architecture major is limited due to studio space and faculty availability to teach the small design studios required for accreditation. Consequently students must enroll in a LA ‘pre-major,’ then apply to the LA major during their sophomore year. Many students who have completed the preliminary LA courses are turned away annually, and often have difficulty transitioning into another major. With the SED major, they would be able to continue in a non-accredited but rigorous environmental design major that would prepare them for professional work or graduate education in design, planning, policy, or related fields.
- 2) To expand the number of students LDA serves to include those interested in the design and planning of sustainable communities but not the very intensive and specialized professional education represented by the accredited BSLA degree; and
- 3) To help U.C. Davis expand its sustainability-related course and major offerings to play a leading role in meeting the challenges of the future.

By revising its existing major (accomplished through course revisions approved during the 2011-12 academic year) and adding three new courses (also approved during 2011-12), LDA believes that it can accommodate additional students in the new SED major with its existing resource base of faculty, staff, and facilities.

The Sustainable Environmental Design major is called for by LDA’s 2004 Strategic Plan and its 2009-2014 Academic Plan. Within LDA specific planning for the major has been underway since 2007. Initiation of this major is a long-planned step that allows the Landscape Architecture Program to play a larger role in helping the College of Agricultural & Environmental Sciences (CA&ES) and UC Davis meet the sustainability challenges of the twenty-first century. The new major meets the overarching goal of education “*toward environmentally sustainable food production, natural resources, and communities in a changing world*” (emphasis original) articulated by the CA&ES College Planning Committee in its 2010 report.

## Background and Rationale

With every passing year, public and student interest in sustainability topics grows stronger. This trend is reflected in the enormous growth of the Association for the Advancement of Sustainability in Higher Education (AASHE), which was founded in 2005 and now has more than 1,100 member and associate member institutions. It is also reflected in the recent emergence of 48 sustainability majors at North American universities as well as 45 sustainability related graduate programs (AASHE, 2011).

Within the past couple of years U.C. Davis has initiated a Sustainable Agriculture and Food Systems major as well as a Sustainability in the Built Environment minor within Civil and Environmental Engineering. The campus is also increasingly known for other sustainability oriented initiatives such as the zero-net-energy West Village development, cutting-edge bicycle planning, the student farm, native plant collections at the arboretum, a growing number of LEED-certified buildings, and sustainable food systems planning at campus dining facilities. These and other strengths led *Sierra* magazine to name U.C. Davis its #1 cool school in the U.S. in 2012. Given its historic strengths in environmental sciences and parallel sustainability initiatives undertaken by the City of Davis, this university is exceptionally well positioned to be a global leader in sustainability education. The new SED major can add to this leadership role.

The Sustainable Environmental Design major is intended to build student understanding and skills related to creation of sustainable communities and landscapes. Coursework emphasizes urban and environmental design, sustainable development theory and practice, green building, local government planning and decision-making, community dynamics and organizations, and written, graphic, and oral presentation of sustainability strategies. Students do not get the same studio-level design experience as within the BSLA major, but within the new major LDA will implement a lecture-lab format that does still provide hands-on design experience.

The curriculum includes breadth in the humanities, social sciences, and environmental sciences to help students understand the complex relationships between society, the built environment and natural systems.

Upon graduation many students will choose to pursue work in government, community organizations, education, or the private sector. They will also be well-positioned to pursue graduate education in city and regional planning, landscape architecture, architecture, public policy, public administration, law, real estate, and related fields.

The Sustainable Environmental Design major is particularly suited for students who are interested in the physical form and design of communities and related public and private processes. It differs from the Community and Regional Development (CRD) major in that it is more focused on the physical environment of communities and the process of designing, planning for, and regulating the built landscape. It differs from the Environmental Policy Analysis and Planning (EPAP) major in that it is less science-oriented and focused more on the place-making considerations involved in creating sustainable communities rather than environmental science and policy.

LDA has long sought to coordinate with both CRD and ESP units as it has developed the SED major (as well as other units such as Civil and Environmental Engineering and the Agricultural Sustainability Institute), and believes that the new major will complement their offerings and not place undue burdens on their course enrollments or faculty. In particular, coordination between LDA and ECI has expanded in recent years. The two units are collaborating on ECI 126 and 127 courses, and LDA 3 is a requirement of ECI's Sustainability in the Built Environment minor.

## **Educational Objectives**

We expect the students in the major to emerge with the following knowledge base and skills:

- Understand the complex, inter-disciplinary, problem-solving nature of sustainability planning and design
- Understand principles and technologies of sustainability as applied to the built environment and human society
- Understand principles, techniques, and historical background of urban design and physical planning, particularly in the California context
- Understand the needs of diverse human groups and techniques for involving them in planning and design processes
- Be able to analyze community environments, apply research from the social and natural sciences, and develop creative solutions
- Be able to present material to the public through written, oral, and graphic means

## **Curriculum**

### Introductory Requirements: (36 credits; GE requirements must also be met)

- 2 Written/Oral expression courses (8 credits)
- 1 course each in Statistics (4), Economics (4), Political Science (4), Physical Sciences (4), and Sociology (4) (20 credits total)
- BIS 2A, BIS 2B (9 credits)
- Additional GE Requirements: Arts and Humanities Choice (8)

### Core: (51 credits + 8 Honors Thesis optional)

- LDA 1: Landscape Meaning/Introduction to Environmental Design (4 credits. Fall)
- LDA 2: Place, Culture, and Community (4 credits. Winter)
- LDA 3: Sustainable Development Theory and Practice (4 credits. Spring)
- LDA 21: Visualization of the Built Environment (5 credits. Fall)
- LDA 70: Introduction of Spacemaking (5 credits. Winter)
- LDA 30: History of the Built Environment (4 credits Winter)
- LDA 50: Site Ecology (4 units. Spring)
- LDA 140: Green Building (5 units. Fall)
- LDA 141: Community Participation (5 units. Winter)
- LDA 190: Proseminar (required to attend 3) (3)
- LDA 142: Applying Sustainable Strategies (4)

- ESP 171: Urban and Regional Planning (4)

Honors:

- LDA 102 (4) Research Methods in Environmental Design (4)
- LDA 199 Senior Thesis (4)

Electives: (20 credits)

Restricted Electives: (20 credits) – electives chosen from courses related to community sustainability. (Community and Regional Development (CRD) and Environmental Policy Analysis and Planning (EPAP))

*Pre-Approved Electives; others can be included with permission of advisor*

LDA 150 Geographic Information Systems for Land Planners

Other upper division LDA classes on a space available basis.

CRD 20: Food Systems

CRD 118: Technology and Society

CRD 140: Dynamics of Regional Development

CRD 141: Organization of Economic Space

CRD 142: Rural Change in the Industrialized World

CRD 147: Community Youth Development

CRD 149: Community Development Perspectives on Environmental Justice

CRD 151: Community Field Research: Theory and Analysis

CRD 152: Community Development

CRD 153: International Community Development

CRD 154: Social Theory and Community Change

CRD 156: Community Economic Development

CRD 157: Politics and Community Development

CRD 158: Small Community Governance

CRD 162: People, Work, and Technology

CRD 164: Theories of Organizations and Their Role in Community Change

CRD 171: Housing and Social Policy

CRD 172: Social Inequality

CRD 180: Transnational Community Development

ECI 123: Urban Systems and Sustainability

ECI 126: Integrated Planning for Green Civil Systems

ECI 127: Integrated Design for Green Civil Systems

ECI 161: Transportation System Operations

ECI 162: Transportation Land Use Sustainable Design

ECI 163: Energy and Environmental Aspects of Transportation

ECI 165: Transportation Policy

PLS 150: Sustainability and Agroecosystem Management

PLS 160: Agroforestry: Global and Local Perspectives

PLS 162: Urban Ecology

PLS 163: Ecosystem and Landscape Ecology

ESP 160: The Policy Process

ESP 161: Environmental Law

ESP 162: Environmental Policy  
ESP 163: Energy and Environmental Aspects of Transportation  
ESP 167: Energy Policy  
ESP 169: Water Policy and Politics  
ESP 170: Conservation Biology Policy  
ESP 172: Public Lands Management  
ESP 173: Land Use and Growth Controls  
ESP 179: Environmental Impact Assessment

An internship is strongly recommended, and can be taken as:  
LDA 192: Internship (5 units)

Total credits: 107 (115 with Honors Thesis)

All required courses except ESP 171: Urban and Regional Planning are taught by LDA and approved by the Academic Senate. LDA has had extensive communication about ESP 171 with Susan Handy, the instructor and also the chair of ESP. She agrees to having LDA list ESP 171 as a required course in this application. In Spring 2012 that course moved to a larger room and so can accommodate more students than in the past. However, LDA will keep in close touch with Susan to monitor the number of SED students taking the course, and should that number exceed a level that she is comfortable with, LDA will offer its own course instead, most likely by adding an undergraduate section of its existing LDA 205 Physical Planning and Urban Design class.

### **Advising and Administration**

The Landscape Architecture + Environmental Design Program will administer the new major with existing faculty and staff. Advising will be handled by its existing Academic Advisor and Master Advisor.

### **Implementation**

The LDA program has developed a phased implementation strategy concurrent with revisions to the existing BSLA major. We are in the second year of this phasing strategy. First and second year offerings of SED are the same as for the BSLA, so the department is prepared to begin offering the major upon approval. In 2014-15 two courses, LDA 140 and LDA 141, will be offered for the first time as restricted electives for LDA students and, if approved, as required courses for students in the SED major. Beginning in Winter 2014 students not admitted into the BSLA program will have an easy transition into the SED major.

## Sample Course Sequence for the Sustainable Environmental Design Major

Notes:

- 1) Most courses have lab sections in which students do graphic and design work with TAs.
- 2) Many students would not start the major in Fall Quarter of their first year, and thus would be taking the first year courses listed here during subsequent years.

Year	Fall	Winter	Spring	Summer
<b>1</b>	LDA 1: Introduction to Environmental Design  (32 units of writing and introductory requirement courses)	LDA 2: Place, Culture, and Community  Remaining intro courses	LDA 3: Sustainable Development Theory and Practice  Remaining intro courses	
<b>2</b>	LDA 21: Visualization of the Built Environment  Remaining intro courses	LDA 70: Introduction to Spacemaking  LDA 30: History of the Built Environment  Remaining intro courses	LDA 50: Site Ecology  Remaining intro courses	
<b>3</b>	LDA 140: Green Building, Design, and Materials  Restricted Elective  LDA 190	LDA 141: Community Participation in Design  Restricted Elective  LDA 190	ESP 171: Urban and Regional Planning  Restricted Elective  LDA 190	
<b>4</b>	Restricted Elective  LDA 190	[LDA 102: Research Methods in Environmental Design – for students writing honors thesis]  Restricted Elective  LDA 190	LDA 142: Applying Sustainability Strategies  [LDA 199: Independent Study (for students writing honors thesis)]  LDA 190	

## Reference

AASHE (The Association for the Advancement of Sustainability in Higher Education). 2011. "Academic Programs in Sustainability." Web resource available at <http://www.aashe.org/resources/academic-programs-sustainability>.