Sustainable Agriculture and Food Systems

(Formerly College of Agriculture and Environmental Sciences)

Sustainable Agriculture and Food Systems is an interdisciplinary program hosted by the Department of Human Ecology.

Ryan Galt, Ph.D., Major Adviser
Program Office, 143 Robbins Hall; 530-752-3915; hasi.ucdavis.edu

Committee in Charge
Richard Sexton, Ph.D. (Agricultural & Resource Economics)
Anita Oberbauer, Ph.D. (Animal Science)
Michael Parrella, Ph.D. (Entomology and Nematology)
Susan Handly, Ph.D. (Environmental Science & Policy)
Patti Hanks, Ph.D. (Human Ecology)
David Campbell, Ph.D. (Human Ecology)
Randal Southard, Ph.D. (Land, Air & Water Resources)
David Rizzo, Ph.D. (Plant Pathology)
Chris van Kessel, Ph.D. (Plant Sciences)

The Major Program

The Sustainable Agriculture and Food Systems (SAFS) major serves students interested in improving the sustainability of agriculture and food systems. This major prepares graduates to understand the interdisciplinary and systems-based aspects of sustainability and provides them with the knowledge, leadership skills and experiences required to excel in agricultural and food systems professions.

The Program

This program is designed to develop students’ competencies for addressing the environmental, social, and economic challenges and opportunities associated with agricultural and food systems sustainability. The program emphasizes an experiential learning approach to sustainability education, allowing students to choose between three tracks within the major. Students in the Agriculture and Ecology track focus on crop and animal production systems, ecology, and practices that mitigate negative impacts while promoting the economic and social benefits. Students in the Food and Society track focus on issues related to the social, cultural, political and community development aspects of agriculture and food systems. Students in the Economics and Policy track focus on issues related to agricultural and resource economics, policy and management. The program provides students with practical experiences through courses with on- and off-campus fieldwork and through internship placements at sites related to students’ interests and focus of study.

Internships and Career Alternatives

Sustainable Agriculture and Food Systems students are required to complete an internship in the field before graduation. Internships have been arranged with local, county, and state agricultural agencies, production farms and commercial processors and retailers, domestic and international non-governmental organizations, and rural and urban community development agencies. Graduates are prepared to pursue a broad range of careers related to agricultural production and food system management, rural and urban community development, education and development, and agricultural and environmental sciences, as well as careers in agricultural, environmental, and economic policy and analysis. Positions may be in private industry, government and public service agencies and in the non-profit sector nationally and internationally. The major also prepares students for graduate studies in a wide range of fields related to agriculture and food systems.

B.S. Major Requirements:

<table>
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<tr>
<th>English Composition Requirement</th>
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<td>Communication 1: Oral and Written Courses</td>
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<td>Plant Sciences 1</td>
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<td>Community and Regional Development</td>
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<td>Plant Sciences 150</td>
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<td>Agricultural and Resource Economics 121</td>
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<td>Environmental Science and Policy 191A, 191B</td>
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Internship Requirement: 12

Students must complete at least 12 units of internship, eight of which must be completed off campus.

Applied Production: 6-9

Select 1 course from:
- Select 1 course from: Animal Science 49A, Animal Science 49B | 2-3 |
- Select 1 course from: Applied Biological Systems Technology 49, 52, 101, 142 | 2-3 |

Track I: Agriculture and Ecology
Focuses on crop and animal production systems, ecology, and practices that mitigate negative impacts while producing environmental and social benefits.

Track I Adviser: William Horwath, Ph.D.

Preparatory Subject Matter: 60-61

Mathematics 16A, 16B | 6 |
Plant Sciences 120 or Statistics 100 | 4 |
Chemistry 2A, 2B | 10 |
Physics 1A | 3 |
Biological Sciences 2A, 2B | 10 |
Plant Sciences 2 | 4 |
Animal Sciences 1 or 2 | 4 |
Food Sciences 1 | 4 |
Economics 1A | 4 |
Community and Regional Development 1 | 4 |
Select one course from: Philosophy 14, 15, 24 | 4 |
Select one course from: Anthropology 2, Political Science 4, Sociology 1, Sociology 3 | 4 |

Depth Subject Matter: 34-38

Agricultural and Resource Economics 120 or 147 | 4-3 |
Environmental Science and Policy 161 or 169 | 3-4 |
Soil Science 100 or Soil Science 109 | 4-5 |
Additional upper-division restricted electives chosen in consultation with the track faculty advisor | 20 |

Track II: Food and Society
Focuses on issues related to the social, cultural, political and community development aspects of agriculture and food systems.

Track II Adviser: Ryan Galt, Ph.D.

Preparatory Subject Matter: 57-64

Philosophy 3 or 31 | 4 |
Mathematics 16A, 16B | 6 |
Select one course from: Plant Sciences 2 or 2A, 2B | 4 |
Sociology 468 or Statistics 13 | 4 |
Select at least one course from: Community and Regional Development 10, 11, 12, Agricultural and Resource Economics 121, Applied Biological Systems Technology 180, Landscape Architecture 150, Statistics 103, Sociology 106 | 6-3 |

Chemistry 2A | 5 |
Biological Sciences 2A or 10 | 5 |
Plant Sciences 2 | 4 |
Select one course from: Evolution and Ecology 2 or Biological Sciences 28 or Environmental Science and Policy 1 or 30 or Wildlife, Fish and Conservation Biology 11 | 3-5 |
Food Science 1 | 3 |
Soil Science 10 | 3 |
Economics 1A | 4 |
Political Science 4 | 4 |
Select one course from: Anthropology 2, Sociology 1, Sociology 3 | 4-5 |
Community and Regional Development 1, 2 | 8 |

Depth Subject Matter: 43-44

Agricultural and Resource Economics 112 or 150 | 4 |
Select 1 course from: Agricultural and Resource Economics 147, 176, Environmental Science and Policy 160, 161, 169, 172, 179 | 34 |
Choose 12 units from: Anthropology 101, 102, Community and Regional Development 142, 152, Sociology 139, 144, 145A, 145B | 3-12 |
Select 1 course from: American Studies 101C, 155, History 172 or Philosophy 109 | 4 |
Additional upper-division restricted electives chosen in consultation with the track faculty advisor | 20 |

Track III: Economics and Policy
Focuses on issues related to agricultural and resource economics, policy and management.

Track III Adviser: Tom Tomich, Ph.D.

Preparatory Subject Matter: 60-64

Mathematics 16A, 16B | 6 |
Sociology 468 or Statistics 13 | 4 |
Select 1 course from: Agricultural and Resource Economics 106, Statistics 103, Sociology 106 | 4 |
Chemistry 2A | 5 |
Biological Sciences 2A or 10 | 5 |
Plant Sciences 2 | 4 |
Select one course from: Evolution and Ecology 2, Biological Sciences 28, Environmental Science and Policy 1, 30, Wildlife, Fish, and Conservation Biology 11 | 3-5 |
Food Science 1 | 3 |
Soil Science 10 | 3 |
Economics 1A | 4 |
Political Science 4 | 4 |
Select one course from: Anthropology 2, Sociology 1, Sociology 3 | 4-5 |
Community and Regional Development 1, 2 | 8 |
Select one course from: Philosophy 14, 15, 24 | 4 |

Depth Subject Matter: 43-44

Select one course from: Agricultural and Resource Economics 112 or 150 | 4 |
Select 11-12 units from: Agricultural and Resource Economics 120, 130, 147, 176, Environmental Science and Policy 160, 161, 169, 172, 179 | 3-11 |
Select 8 units from: Anthropology 101, 102, Community and Regional Development 142, 152, Sociology 139, 144, 145A, 145B | 8 |
Additional restricted electives chosen in consultation with an advisor | 20 |

Total units for the major: 140-163

Major Advisers: Ryan Galt (Human Ecology); Track I Adviser, William Horwath (Land, Air & Water Resources); Track II Adviser, Ryan Galt (Human Ecology); Track III Adviser, Tom Tomich (Human Ecology, Environmental Science & Policy)

Advising Center for the major is located in 1303 Hart Hall, Department of Human Ecology 530-752-2244.
Courses in Sustainable Agriculture and Food Systems (SAF)

### Lower Division

**92. Internship (1-12)**

Internship—3-36 hours. Prerequisite: consent of instructor. Restricted to Sustainable Agriculture and Food Systems majors or with consent of instructor. Lower-division internship for students enrolled in the Sustainable Agriculture and Food Systems program of study. Enrollment for non-majors by consent of instructor. May be repeated up to 12 units with consent of instructor. (P/NP grading only.)—I, II, III. (I, II, III.)

**98. Directed Group Study (1-5)**

Prerequisite: consent of instructor. Restricted to Sustainable Agriculture and Food Systems major or with consent of instructor. Group study on focused topics in Sustainable Agriculture and Food Systems. Varies according to instructor. Course plan is adapted to student need and interest in conjunction with the expertise of the instructor. Offered irregularly. (P/NP grading only.)—I, II, III. (I, II, III.)

**99. Special Study for Undergraduates (1-5)**

Independent study—3-15 hours. Prerequisite: consent of instructor. Under faculty supervision, students pursue a special or individualized course of study related to Sustainable Agriculture and Food Systems. May be repeated for credit. (P/NP grading only.)—I, II, III. (I, II, III.)

### Upper Division

**192. Internship (1-12)**

Internship—3-36 hours. Prerequisite: upper-division standing; consent of instructor. Restricted to Sustainable Agriculture and Food Systems majors or with consent of instructor. Upper-division internship for students enrolled in the Sustainable Agriculture and Food Systems Program of study. Enrollment for non-majors by consent of instructor. May be repeated up to 12 units for credit. (P/NP grading only.)—I, II, III. (I, II, III.)

**197T. Tutoring in Sustainable Agriculture and Food Systems (1-5)**

Tutorial—3-15 hours. Prerequisite: upper division standing; consent of instructor. Undergraduates assist the instructor by tutoring students in regularly scheduled courses that fulfill SAFS major requirements. May be repeated for credit. Offered irregularly. (P/NP grading only.)—I, II, III. (I, II, III.)

**197TC. S&AFS Tutoring in the Community (1-5)**

Tutorial—3-15 hours. Prerequisite: upper division standing; consent of instructor. Undergraduates assist the instructor by tutoring in the community in settings related to Sustainable Agriculture and Food Systems. May be repeated for credit. Offered irregularly. (P/NP grading only.)—I, II, III. (I, II, III.)

**198. Directed Group Study (1-5)**

Prerequisite: upper division standing; consent of instructor. Restricted to Sustainable Agriculture and Food Systems major or with consent of instructor. Group study on focused topics in Sustainable Agriculture and Food Systems. Varies according to instructor. Course plan is adapted to student need and interest in conjunction with the expertise of the instructor. May be repeated for credit. Offered irregularly. (P/NP grading only.)—I, II, III. (I, II, III.)

**199. Special Study for Advanced Undergraduates (1-5)**

Independent study—3-15 hours. Prerequisite: upper division standing; consent of instructor. Under faculty supervision, advanced students pursue a special or individualized course of study related to Sustainable Agriculture and Food Systems. May be repeated for credit. (P/NP grading only.)—I, II, III. (I, II, III.)

Sustainable Environmental Design

[College of Agriculture and Environmental Sciences]
[Department of Human Ecology]

Patsy Eubanks Owens, M.L.A., Chairperson, Human Ecology

Department Office. 131 Hunt Hall; 530-752-5907; http://sed.ucdavis.edu

Faculty

Elizabeth Boult, MLA Continuing Lecturer
David de la Pena, Ph.D., Assistant Professor
Steven E. Greco, Ph.D., Associate Professor
Eric Larsen, Ph.D., Associate Research Scientist
Jeff Loux, Ph.D., Associate Adjunct Professor
Brett Milligan, M.L.A., Associate Professor
N. Claire Napawan, M.L.A., Assistant Professor
Lorence Oki, Ph.D., Associate Specialist in Cooperative Extension

Patsy Eubanks Owens, M.L.A., Professor
Michael Rios, Ph.D., Associate Professor
Sheryl-Axinn Simpson, M.L.A., Assistant Professor

The Major Program

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.

The Program

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 is focused on the physical environment of communities and the process of designing, planning for, and regulating the built landscape and the place-making considerations involved in creating sustainable communities.

Career Alternatives

Graduates 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.

B.S. Major Requirements:

**Preparatory Subject Matter ........................ 63**

- English Writing/Oral Communication ................................. 8
- Biological Sciences 2A, 2B ........................................... 9
- One course each in: Statistics, Economics, Political Science, Physical Sciences, and Sociology .......................... 20
- Landscape Architecture 1, 2, 3, 21, 30, 50 ........................................... 70
- Other ................................. 26

**Depth Subject Matter ................................. 21**

- Landscape Architecture 140, 141, 142, 14 .......................... 14
- Environmental Science and Policy 171 .......................... 4
- Landscape Architecture 190 (three quarters) ..................... 3

- Restricted Electives .............................................. 20-25
- Select 20 units of upper division courses chosen from courses related to community sustainability ........................................... 20

**Total units for the major .......................... 104-109**

**Major Adviser.** Stephen Wheeler

Advising Center is located in 135 Hunt Hall; 530-754-8628

Technocultural Studies

See Cinema and Technocultural Studies, on page 195.

Textile Arts and Costume Design

See Design, on page 219.

Textile Science

See Fiber and Polymer Science, on page 311.

Textiles

(A Graduate Group)

Gang Sun, Ph.D., Chairperson of the Group

Department Office. 129 Everson Hall
530-752-8035; jblevins@ucdavis.edu
http://textiles.ucdavis.edu

Faculty

Susan Avila, M.F.A. Professor (Design)
Colin A. Carter, Ph.D., Professor (Agricultural and Resource Economics)
James Challant, Ph.D. Professor (Agricultural & Resource Economics)
Hidergarde Heymann, Professor (Viticulture and Enology)
You-Lo Hsieh, Ph.D., Professor (Textiles and Clothing)
Joel T. Johnson, Professor (Psychology)
Susan B. Kaiser, Ph.D., Professor (Textiles and Clothing, Women and Gender Studies)
Ning Pan, Ph.D., Professor (Textiles and Clothing, Biological and Agricultural Engineering)
Tingrui Pan, Ph.D. Associate Professor (Biomedical Engineering)
Diana Strazdes, Associate Professor (Art History)
Gang Sun, Ph.D., Professor (Textiles and Clothing)
Susan Verba, M.F.A., Associate Professor (Design Program)

Emeriti Faculty

Stephen Jeit, Ph.D., Professor Emeritus (Textiles and Clothing, Geography)
Gyongy Laky, M.A., Professor Emeritus (Textiles and Clothing)
Margaret H. Rucker, Ph.D., Professor Emeritus (Textiles and Clothing)
Howard G. Schultz, Ph.D., Professor Emeritus (Consumer Science)
James F. Shackleford, Ph.D., Professor Emeritus (Chemical Engineering and Materials Science)
Charles F. Shoemaker, Ph.D., Professor Emeritus (Food Science and Technology)
Jo Ann C. Stabb, M.A., Senior Lecturer Emeritus (Design)
S. Haig Zeronian, Ph.D., Professor Emeritus (Museum Studies)

Graduate Study.

The Graduate Group in Textiles offers a program of study and research leading to the M.S. degree. Students in the program use an interdisciplinary approach emphasizing the physical and behavioral science aspects of textiles. Research areas include chemical, physical, biochemical, and mechanical properties of fibers and polymers as well as weaving, knitting, and printing processes.